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1 BEFORE THE OHIO POWER SITING BOARD 2 3 In the Matter of the Application of American 4 Municipal Power - Ohio, Inc. for a Certificate 5 of Environmental : Case No. 06-1358-EL-BGN Compatibility and Public : 6 Need for an Electric Generation Station and 7 Related Facilities in Meigs County, Ohio. 8 9 10 PROCEEDINGS 11 before Mr. Gregory A. Price and Ms. Kimberly W. 12 Bojko, Hearing Examiners, at the Public Utilities 13 Commission of Ohio, 180 East Broad Street, Room 14 Columbus, Ohio, Columbus, Ohio, called at 1:00 p.m. 15 on Monday, December 17, 2007. 16 17 VOLUME III 18 19 20 21 ARMSTRONG & OKEY, INC. 185 South Fifth Street, Suite 101 22 Columbus, Ohio 43215-5201 (614) 224-9481 - (800) 223-9481 23 (614) 224-5724 24

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| | | | · | 4 |
|----------|--|---------|-------|---|
| 1 | INDEX | | | - |
| 2 | | | | |
| 3 | WITNESSES | PAGE | | |
| 4 | David A. Schlissel | 7 52 | | |
| 5 | Direct examination by Ms. Jaiswal Cross-examination by Mr. Bentine | | | |
| 6 | | | | |
| 7 | AMP-OHIO EXHIBITS | D'D | REC'D | |
| 8 | 10 - Synapse/Oberlin document | 112 | | |
| 9 | 11 - R.W. Beck Initial Project Feasibility Study | 116 | | - |
| 10 | 12 - City of Cuyahoga Falls, Ohio | 127 | | |
| 11 12 | Council Meeting 9/17/07 document | J. 22 / | | |
| 13 | 13 - Burns & Roe Consulting Engineer's Report | 188 | | |
| 14 | | | | |
| 15 | CITIZEN GROUPS' EXHIBIT | ID'D | REC'D | |
| 16 | 6 - Direct Testimony of D.A. Schlissel | 9 | | |
| 17 | D.A. SCHIISSEL | | | |
| 18 | | | | |
| 19 | | | | |
| 20 | | | | |
| 21 | | | | |
| 22 | | | | |
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| 24 | | | | |
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Monday Afternoon Session,

December 17, 2007.

EXAMINER PRICE: Good afternoon. The

Power Ohio Siting Board has set for this time and
this place case number 06-1358-EL-BGN, In the Matter
of the Application of AMP-Ohio, Inc. for a

Certificate of Environmental Compatibility and Public
Need for an Electric Generation Station and Related

Facilities in Meigs County, Ohio.

My name is Gregory Price, with me is
Kimberly Bojko, we are the administrative law judges
assigned to today's hearing. I'll note this is our
third day of hearing in this particular matter.

Let's go ahead and take appearances today beginning with the company.

MR. BENTINE: Thank you, your Honor. On behalf of the applicant in this case, AMP-Ohio, Inc., the law firm of Chester, Willcox & Saxbe, LLP by John Bentine, April Bott, Nate Orosz, and Matt White, Mr. Steve Fitch has also entered an appearance in this matter.

MR. FISK: Good afternoon, your Honor.

Shannon Fisk on behalf of Natural Resources Defense

Council. I also have with me Anjali Jaiswal from the NRDC.

EXAMINER PRICE: Staff.

MR. JONES: Good afternoon, your Honor.

On behalf of the staff of the Ohio Power Siting

Board, Ohio Attorney General Marc Dann, William

Wright, John Jones, Assistant Attorneys General, 180

East Broad Street, Columbus, Ohio 43215.

MS. MALONE: And Margaret A. Malone, 30
East Broad Street, Columbus, Ohio and Christina
Grasseschi has also entered an appearance.

EXAMINER PRICE: Thank you.

As a preliminary matter I would like to note for the record that today's hearing is being filmed by Evening Star Productions. The parties and Evening Star Productions have agreed that the filming will only take place while we are on the record in order to preserve confidential materials and attorney-client privilege issues. They have agreed to terminate their filming while we are off the record.

With that do we have any other preliminary matters that we need to address before we take our first witness?

7 1 (No response.) 2 EXAMINER PRICE: Seeing none, Mr. Fisk, 3 call your next witness. 4 MS. JAISWAL: Good afternoon. Anjali 5 Jaiswal on behalf of Natural Resources Defense 6 Council. The citizen groups call David A. Schlissel 7 to the stand. 8 (Witness sworn.) 9 EXAMINER PRICE: Please be seated and 10 state your name and business address for the record. 11 THE WITNESS: My name is David, middle 12 initial A, last name Schlissel, S-c-h-l-i-s-s-e-l. 13 My business address is Synapse, S-y-n-a-p-s-e, Energy 14 Economics, 22 Pearl Street, Cambridge, Massachusetts. 15 EXAMINER PRICE: Please proceed. 16 17 DAVID A. SCHLISSEL 18 being first duly sworn, as prescribed by law, was 19 examined and testified as follows: 20 DIRECT EXAMINATION 21 By Ms. Jaiswal: 22 Good afternoon, Mr. Schlissel. You've Q. 23 introduced yourself for the record. Did you prepare

written testimony for this proceeding?

24

A. Yes.

б

MS. JAISWAL: Your Honor, I'd like to introduce this and mark this as Citizen Groups'
Exhibit 6. I believe that's what we're on. May I?

EXAMINER PRICE: Yes, please. Just, for clarification, are you marking the redacted portion?

MS. JAISWAL: Yes. My understanding is that AMP-Ohio has agreed to use the confidential version that discusses production materials at today's hearing.

Is that correct, Mr. Bentine?

MR. BENTINE: Yes, we've waived any claim to confidentiality on the materials as they appear in Mr. Schlissel's confidential version, so we're perfectly all right with using that as the public version in today's proceeding.

EXAMINER PRICE: In its entirety.

MR. BENTINE: In its entirety.

EXAMINER PRICE: Thank you very much.

MR. BENTINE: I have some motions later.

EXAMINER PRICE: I'm sure.

MR. BENTINE: For that purpose, I'm fine.

EXAMINER PRICE: Thank you.

MS. JAISWAL: And in accordance with the

court's protective order we originally only provided copies of these to the parties that entered into the protective order, and now we will be providing them to the rest of the parties and I would like to approach to provide the marked copy to the court reporter.

EXAMINER PRICE: Please proceed. Just to clarify, we're at Exhibit 6, Citizen Groups' Exhibit 6?

MS. JAISWAL: Yes, your Honor, Exhibit 6.

And these are colored copies because the scanned one may not have been. Unfortunately, with them being single sided, it was too large to use the binder clips so we had to use rubber bands.

(EXHIBIT MARKED FOR IDENTIFICATION.)

MS. JAISWAL: For the record, I've shown Exhibit 6 to counsel and it was also served and submitted to the Board on December 3rd, 2007.

- Q. (By Ms. Jaiswal) Mr. Schlissel, do you have Exhibit 6 in front of you?
 - A. Yes.
 - Q. Do you recognize this document?

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A. Yes.

O. Please tell us what it is.

1 Α. This is the testimony that I wrote and 2 the exhibits that are attached thereto. 3 Q. Thank you. And what is it dated? 5 Α. December 3rd, 2007, two weeks ago 6 today. 7 Ο. Did you personally prepare this 8 testimony? 9 Α. Yes. 10 MS. JAISWAL: Your Honor, we offer 11 Citizen Groups' Exhibit 6 in evidence on behalf of 12 NRDC and Sierra Club. 13 One notation, too, the citizen groups 14 filed a notice of errata regarding this document 15 where it crossed out the Ohio Environmental Council 16 so if you see, this testimony is submitted on behalf 17 of NRDC and the Sierra Club. 18 EXAMINER PRICE: So noted. 19 Mr. Schlissel, do you have any additions 20 or corrections to your testimony?

THE WITNESS: No, sir.

22

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EXAMINER BOJKO: Just for clarification, is the copy that you just provided to us the same as the one filed on December 4th with the exception of

the Ohio Environmental Council name removed as well as I guess the protective status removed?

MS. JAISWAL: What we filed, just to answer the question fully, what we filed were two versions, we filed this version and then a redacted public version. This version is the confidential version that AMP-Ohio has agreed to provide for the hearing.

The correction that we made, we did a two-page notice of errata noting the corrections that we were making, this does not strike out what those corrections were, but they were very simple. What they did was they corrected the first page and took off "Ohio Environmental Council" on there, and then on the first page of the testimony itself or where Mr. Schlissel discusses who he is representing on page 2, lines 13 and 14, striking "Ohio Environmental Council" from the record. That was the notice of errata and correction that we requested.

EXAMINER BOJKO: Okay. So the confidential version that you filed on December 4th is the same as the version that you just marked as Citizen Groups' Exhibit 6?

MS. JAISWAL: Yes, your honor. Thank you

for the clarification.

EXAMINER PRICE: Mr. Bentine.

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

I have some motions with regard to the testimony that
I would like to make at this time.

EXAMINER PRICE: Please proceed.

MR. BENTINE: I'll be going through the testimony serially and I'll try to give you page and line numbers and reasons. There are quite a number of them so I don't know whether, and many of them are based on the same matters, the same bases, so I don't know whether the Bench cares to take them all and rule on them individually or whether you want to wait till the end and then look at all of them.

EXAMINER PRICE: Let's take them one at a time and we'll rule on them as we go.

MR. BENTINE: Okay. Page 6 is the first motion, lines 1 through 7, and I'll make the primary argument in support of this on this one and there will be a number of others.

This witness has determined in his testimony to comment on the status of the responses to discovery which was undertaken in this proceeding and our responses to that discovery, frankly that

doesn't include a number of the discovery items that we've given to NRDC and Sierra Club after your Honors ruled on the motions to compel.

As your Honors are currently aware, we have no further motions to compel, which the parties have agreed to. As you'll recall, your Honor, we objected in most strenuous terms to the late intervention of these three parties and, as the record has already shown, these parties knew about this proceeding well in advance of their intervention.

They made public records requests with regard to this proceeding and our members, Cleveland and others, well in advance of their intervention in this proceeding, and they got a number of documents from those public records requests, some of which answer some of the questions that Mr. Schlissel has now taken issue with our not providing under discovery.

Secondly, we objected on a broad range of terms on nearly all of the items that Mr. Schlissel comments on, including undue burden, vagueness, as well as relevancy. The undue burden on this was significant due to the lateness of the intervention.

In Re: 06-1358-EL-BGN

We compressed preparation and discovery for this massive case in a little over four weeks. We complied with an accelerated discovery schedule in which we agreed to answer within 15 days. We provided thousands and thousands and thousands of pages of documents, each of which had to be reviewed for privilege, confidentiality, and other matters by counsel before they were turned over.

We bent over backwards to respond in the short time that everybody agreed had to be done to get this hearing done on time, but the problem here was the late intervention of these parties.

To now have one of their witnesses beat us up in his testimony because he didn't get information in discovery is outrageous.

Additionally, we object to simply putting in whole pieces of discovery all of which, not all of which, but nearly all of which was objected to and it was provided over objection. Simply providing those as an exhibit to his testimony, again, I believe is improper.

MS. JAISWAL: To clarify, are you referring to -- which exhibit?

MR. BENTINE: DAS-2, which includes our

responses to the discovery pretty much in toto, including instructions and general objections.

So I believe it irrelevant and I believe it unfair for this witness now to be able to beat us up on the record for discovery responses, some of which they got after this original set of responses that he's attempting to put in, some of which they had before from public records requests and, therefore, I object and I move to strike lines 1 through 7 on page 6 as a result.

EXAMINER PRICE: Counsel, I would like you to respond, but I just want you to keep in mind the reason I asked him if he had any additions or corrections is I anticipated this was going to come up. He should be answering his questions as if he was giving his testimony today, and they've responded -- last I understood, they responded to all of your discovery disputes -- or, all your discovery requests. There were no pending discovery disputes.

MS. JAISWAL: May I respond?

EXAMINER PRICE: Sure.

MS. JAISWAL: Thank you. First,
Mr. Bentine's issue with our intervention. Your
Honor, you have properly granted our intervention.

Mr. Bentine is taking a second bite at the apple regarding our intervention. As you ruled, it is proper, we followed the court's proceedings for intervention and we intervened as a party and have all of the rights of a party.

Parties are afforded the right to conduct discovery; that's exactly what happened in this case. It is not unusual in any other case. We sent out requests for production of documents. We sent out other requests for discovery. They were largely objected to with the exception of the responses we got in Exhibit 2.

The inclusion of Exhibit 2 is entirely proper to Mr. Schlissel's testimony because it falls under a party admission under the rules of evidence.

Moreover, aside from that, the Power Siting Board's rule 4906-7-09(A) explicitly requires the admission of all material and relevant evidence. These responses are statements by AMP-Ohio. In terms of these documents, Mr. Schlissel reviewed them on the short time schedule; he answered them as he knew them. Mr. Schlissel has reviewed new documents that have been provided by AMP-Ohio.

If the court would like, I can lay a

foundation for why his testimony has not changed based on that information and why this answer remains true.

EXAMINER PRICE: I don't want you to -- I want you to explain to me why this answer remains true. You don't need to lay the foundation, but explain to me why this remains true.

MS. JAISWAL: As an offer of proof -- I certainly will, your Honor. As an offer of proof, Mr. Schlissel today, we have identified him as an expert to discuss CO2 costs, to discuss the increasing costs of construction for a power plant, and the cost of alternatives.

Mr. Schlissel, as he will testify today, if asked, and as provided in his testimony, and his Exhibit 1 show that Mr. Schlissel is an expert and has reviewed applications and materials that go with those applications for proposed power plants.

Mr. Schlissel's testimony is that in reviewing these documents as well as in reviewing what was offered after the initial request for discovery does not match up with what is typically provided in these types of cases, that there is a certain amount of information that AMP has refused to

1 provide.

We understand that we had a motion to compel before this court and your Honor ruled on the motion to compel. In order to follow the court's proceedings as well as not to further delay this proceeding, we set-aside our objections to the motion to compel.

However, Mr. Schlissel does have sufficient information to support his conclusions that he presents here today as well as in this written testimony.

EXAMINER PRICE: I'm not worried about the conclusions, I'm worried about his answer to lines 3 to 7.

MS. JAISWAL: To support his answer. So for the record, the question is "Has AMP-Ohio provided all of the documents necessary to conduct a full investigation of this proceeding?

"Answer: No. AMP-Ohio has refused to provide almost all of the documents that we requested, other than providing a limited number of narrative answers and promising to provide a few documents, some of which we received on December 1st and others of which have not yet been provided

In Re: 06-1358-EL-BGN

19 1 as this testimony is being finalized on December 2 3rd." 3 EXAMINER PRICE: Thank you. 4 We're going to grant the motion to 5 strike, this particular motion to strike. 6 EXAMINER BOJKO: For the record, on page 7 6, lines 1 through 7 will be stricken. 8 EXAMINER PRICE: Yes. 9 Mr. Bentine. Next motion. 10 MR. BENTINE: The next one may seem 11 silly, your Honor, but I think it's necessary. Lines 12 8 and 9, it's not a question, it's not an answer, 13 it's some sort of editorial comment. It's not 14 appropriate to be in the middle of testimony. 15 EXAMINER PRICE: I think they're just 16 trying to break up -- this is the nature of headings 17 in testimony. We'll allow this. 18 MR. BENTINE: Next is on page 9, line 4, 19 first a portion of that is after the word "No," the 20 rest of that line down to line 6, the end of the 21 sentence, and the footnote. Same basis as previously 22 argued, your Honor. 23 THE WITNESS: But they've not provided 24 those documents.

EXAMINER PRICE: I'm sorry. Your counsel will respond.

MS. JAISWAL: Your Honor, in response, as I explained in the previous motion, AMP-Ohio has not provided all of the documents, they have not answered the question "Does the risk analysis presented in the Initial Project Feasibility Study provide an adequate consideration of the risks and uncertainties associated with the proposed AMPGS Project?" They have not provided these documents and, therefore, this testimony stands true and correct today.

MR. BENTINE: If I might, your Honor, I did not move to strike the "No"; they can stand on that answer. My problem is the balance of this.

They've deposed our witnesses, we've given them all kinds of documents, and I object to this.

MS. JAISWAL: Your Honor, this is direct testimony, it is not cross-examination, therefore, an explanation is entirely proper.

EXAMINER PRICE: I understand that, but again, you have no outstanding motion to compel. All those issues were resolved one way or the other. Frankly, I think at the time we actually only ruled on about three questions on the motion to compel;

everybody represented to us that parties had worked out an arrangement on those documents. You can't now turn around and start alleging that AMP-Ohio has refused to do this or refused to do that.

The motion to strike will be granted.

MR. BENTINE: Next, your Honor, is a little bit different, but the same page, same answer beginning on line 9, the phrase beginning "given the reductions in CO2 emissions that will be necessary to stabilize atmospheric temperatures," I move to strike that on the basis that this gentleman is not -- there's no foundation in his testimony with regard to whether or not he's a meteorologist or a climatologist or other scientist that is appropriate to make the statement that "given the reductions in CO2 emissions that will be necessary to stabilize atmospheric temperatures," and I believe it also irrelevant to this proceeding.

EXAMINER PRICE: Counsel.

MS. JAISWAL: Your Honor, we have not or the basis of these objections have not been set forth by Mr. Bentine. He has not cross-examined
Mr. Schlissel. He has not asked him about his expertise. It has been provided to this court. And

Mr. Schlissel is an expert on increasing CO2 costs as well as what the present bills are in Congress.

These statements are appropriate.

EXAMINER PRICE: We're going to defer ruling on this one. When you do your cross-examination, you can either set up the cross and then we'll rule on it then, or we'll go from there.

MR. BENTINE: Thank you, your Honor.

Next is on page 15, and again, you may want to defer this one too, your Honor, but this is very similar, two motions with regard to portions of the answer, and I'll skip my motion on the first two lines, but on line 6 beginning "and the resultant widespread climate changes."

Again, I have no problem with this witness talking about the prospect of global warming, but he hasn't been qualified to talk about the resultant widespread climate changes, I think that's outside his expertise.

Similarly, on that same page, line 20, after the word "developments," the phrase "combined with the growing scientific understanding of, and evidence of, climate change." That may be true, but

it's not relevant to this proceeding and this witness certainly is not qualified to make that conclusion.

EXAMINER PRICE: As you noted, we'll defer that until after you've had a chance to examine the witness.

MR. BENTINE: Next on page 22, and the motion is really in two parts, your Honor, but I'm going to move to strike lines 1 through 9 on this page including the chart.

MS. JAISWAL: On what basis?

MR. BENTINE: I'm about to get there.

MS. JAISWAL: Thank you.

MR. BENTINE: First, with regard to the chart, I don't believe that this witness indicates that he either verified it or did anything other than reproduce it, so I'm not sure it has a foundation. The World Resources Institute is at least not an entity that I am aware of that is generally relied on in the literature by experts and, therefore, I would move to strike it.

The second item, then, is line 7 through 9 that talks about the shaded area represents the 60 to 80 percent range of emission reductions from current levels that many -- whoever that is -- now

believe will be able to stabilize atmospheric CO2 concentrations by the middle of this century.

Again, I believe this legally goes to global warming and not to whether or not there's going to be a CO2 regulation in this country, and I believe this should be stricken.

EXAMINER PRICE: Mr. Schlissel, who is the World Resources Institute?

THE WITNESS: It's an environmental group in Washington, DC, an international environmental group.

And, for the record, I did verify these charts; I said that during my deposition. I checked that the numbers -- that the emission levels in each of the provisions was what is included in the bill and what is also reported for the bill, that we've specifically reviewed the numbers that underlay an earlier version of this chart that was produced in the spring, and then within the last month or so I went back and I looked at, again, the emission levels that are mandated under each -- would be mandated under each of the bills and I compared it to what is in this chart.

EXAMINER PRICE: Mr. Bentine.

MR. BENTINE: It wasn't in his direct testimony, but I believe it was in his deposition, and since it's on the record, I'll withdraw the motion with regard to the chart. I will not withdraw the motion with regard to 7, 8, and 9.

MS. JAISWAL: Your Honor, if I may briefly respond, please.

EXAMINER PRICE: Pardon me?

MS. JAISWAL: If I may briefly respond.

EXAMINER PRICE: Sure.

MS. JAISWAL: My understanding is
Mr. Bentine is moving to strike portions of
Mr. Schlissel's testimony. Ohio Power Siting Board
rule 4906-7-09 provides the administrative law judge
shall admit all relevant and material evidence,
except evidence that is unduly repetitious, even
though it would be inadmissible under the rules of
evidence applicable to judicial proceedings.

What this means is that the Ohio Power Siting Board rules require admissibility of all relevant and material evidence; this evidence includes Mr. Schlissel's testimony. The rules favor inclusion. It is a "shall" provision, it is not a "may" provision in these rules.

We prepared a pocket brief today for the court, I'm happy to provide it to the court, on these issues.

Even if this court chooses to ignore the rules governing here, rule 4906-7-09, and I have a copy of the rule here too if you would like to review it regarding inclusion of admissibility, that means for our proceeding here today that evidence can only be excluded, one, if it is shown to be not relevant and not material, and two, the evidence is unduly repetitious. AMP-Ohio has not proven that today.

Moreover, the "shall" provision and as well as the rest of rule 4906-7-09(A) favors inclusion. Mr. Schlissel's testimony should come in. Any doubts regarding any credibility or reliability this court, of course, may consider in weight.

Moreover, putting these rules aside, if you turn to the federal rules of evidence as well as the Ohio rules of evidence and what the rules are for expert witnesses, that's what you have before you today is an expert witness and testimony in written format. There are special rules for expert witnesses.

Under the federal rules, the federal

rules clearly rely, the federal rules, that's rule 703, allows --

EXAMINER PRICE: I don't think the federal rules are going to get you too far. You probably ought to focus on the Ohio rules.

MS. JAISWAL: Certainly. I just want to point out under the federal rules all this type of material is admissible and allowed and this board can also using the federal rules.

Also under the Ohio rules -- would you like a copy of this brief? I'll hand it out, it has pertinent language in it, and I'll provide a copy to counsel, of course, at the same time.

Following your instruction and moving beyond what Federal Rule 703 is, if you go to Ohio rule -- and that begins on page 3. I also have the rules of evidence here if the court would like those.

Ohio Rule of Evidence 703 varies from the federal rule which, your Honor, I think you were pointing out, and it provides "The facts or data in the particular case upon which an expert bases an opinion or inference may be those perceived by the expert or admitted in evidence at the hearing."

Mr. Bentine is misapplying this rule. As

the plain text of the rule, the plain text of the rule permits admissibility of expert opinion even if not based on otherwise admissible evidence.

In particular, the Ohio Courts of Appeal clarified, in Nilavar versus Osborn, the Court of Appeals explained, and this is a quote, I also have this case with me here today, the facts or data referred to in evidence rule 703 refers to the facts and data in the particular case, not to facts and data underlying scientific, technical, or otherwise specialized information referenced in Ohio Rule 702(C).

So we're talking about the fact in this particular case -- think about it like how the case is often used is in a personal injury case or a medical malpractice case in terms of examining a patient. The rule says for the facts of this case, as pertains to the patient, the expert must have conducted an examination of the patient.

But otherwise for the testimony, as experts are known, this is why these rules exist, to allow experts to come in and provide their knowledge to the court to aid the court, and that goes to 702(C), specific technical or otherwise specialized

information.

The Nilavar court explicitly rejected the argument that is being made today. In that case -- and I'm sorry, I will try to hurry up here.

EXAMINER PRICE: Take your time.

MS. JAISWAL: Thank you. I appreciate

that.

In that case the argument was made that the expert's testimony is inadmissible, and what happened in that case is the particular point of testimony that they wanted to strike; so there's two things, there's the testimony here and there's the evidence.

This is Mr. Schlissel's testimony, not an exhibit to it. This is his opinion, what he's relying on, his inference of these documents, what he concludes here today; that similarly happened in the Ohio Court of Appeals case. In that case there were actuary charts that were used by the expert witness. There were damages being calculated in a medical contract dispute and the doctor, excuse me, the expert was calculating how much damages the doctors had, and in calculating those damages the expert relied on actuary charts known as Gamboa, they were

provided by A.M. Gamboa.

Those charts were allowed in and were allowed permissible because under 702 those are the type of documents that experts regularly rely on. This is analyzed fully in the case, and that kind of argument that Mr. Schlissel didn't actually review this document, these don't pertain to the facts, the particular facts of this case as explained by the court of appeal. These pertain to these charts and are the type of information that experts rely on regularly.

EXAMINER BOJKO: Counsel, isn't there a distinction between relying on something to produce your own document as opposed to just attaching works of other people, hearsay so to speak?

MS. JAISWAL: Well --

EXAMINER BOJKO: I think that's what those courts were referring to.

MS. JAISWAL: Well, in terms of this proceeding here today, Ohio Siting Board 4906-7-09(A), which I've quoted here, says that an administrative law judge shall admit all relevant and material evidence, irrespective of hearsay. So this testimony is, putting that aside -- did you want me

1 | to put that aside or can I go on?

EXAMINER PRICE: I'm not sure. You're saying at this point that all the hearsay objections that we have granted so far in this proceeding were incorrectly granted and all the hearsay that we've previously stricken in this proceeding on both sides should be allowed back in?

I mean, I think that we would like to be consistent. I certainly view our position as one of the ability to keep out hearsay and other evidence that flies in the face of the evidence rules.

So I think I'd like to give Mr. Bentine a chance to respond, but let's be clear, at the moment the only thing before us is lines 7, 8, and 9, not the chart. Mr. Bentine's withdrawn his motion on the chart.

MR. BENTINE: Yes.

EXAMINER PRICE: So right now we're really on lines 7, 8, 9, and from what I understand from Mr. Bentine to be primarily the phrase that "many now believe," at least the phrase that begins that "many now believe." We're having a lot of argument over three words, so let's hear Mr. Bentine's response and then we'll go on from

there.

I understand you're --

MS. JAISWAL: Goes to weight.

EXAMINER PRICE: We'll apply them later when further motions come up.

MR. BENTINE: First of all, I believe that counsel for NRDC has greatly expanded Ohio's rules of evidence as it pertains to experts and certainly as it's been practiced around here for quite a period of time.

The logical conclusion of the argument raised by counsel is this, that an engineer can get on the stand and take a medical text, open the medical text and say "I'm relying on that to determine that this injury was caused by the car hitting this person in this way and it did this to their body and this was the cause of death for that person."

Engineers can rely on engineering things, they can rely on what they perceive, they can rely on facts as they're admitted in the record, and they're allowed wide latitude, but what they can't do, what they can't do is go outside of their kin to conclusions reached by others in areas that they have

not shown expertise to in order to form opinions and then simply parrot that as testimony under the guise of being experts. That's what the basis really is for this objection and many of the others.

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EXAMINER PRICE: What I hear you saying is with respect to lines 7, 8, and 9 on page 22, it, again, is the argument you previously made and we have deferred, which is he's not an expert in this particular field.

MR. BENTINE: That's correct, your Honor.

EXAMINER PRICE: Well then, we'll be consistent. We'll continue to defer on that question until after you've completed your cross-examination.

MR. BENTINE: Thank you, your Honor.

Page 25 is the next one, your Honor. And I might add, I agree with much of what counsel has said, if I didn't agree with it, I probably would have moved to strike the entire testimony.

The motion to strike next on page 25 is the entire page including the footnotes, and then on page 26 down to line 5. I don't believe a poll taken by Zogby or anybody else is appropriate evidence in this proceeding. Whether or not X percent of the population believes in creationism or not is not

In Re: 06-1358-EL-BGN

34 1 relevant. Whether X percent of the population 2 believes that a certain group of folks ought to be 3 denied rights does not make it appropriate for expert testimony, unless we're talking about expert 5 testimony on what polls mean. 6 Polls are irrelevant to this proceeding 7 and should be stricken. 8 MS. JAISWAL: Your Honor, if I may 9 respond. 10 EXAMINER PRICE: Briefly. 11 Thank you. MS. JAISWAL: We are not 12 moving to have the poll introduced into evidence. 13 are moving to have Mr. Schlissel's expert testimony 14 moved into evidence, his opinion here, which is 15 allowed under the Ohio rules. 16 And under the Ohio rules any questions as 17 to the reliability of information that forms the 18 basis of Mr. Schlissel's testimony goes to weight; it 19 does not go to admissibility. And this is consistent 20 with the Ohio state court rule regarding expert 21 testimony and reliability and introduction of 22 evidence.

just told us a few minutes ago that, and I'll quote

EXAMINER BOJKO: Counselor, I thought you

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from your document, that the information has to be both reliable and does not refer to the facts of a particular case. Now you're telling me that anything can be admitted and it just goes to the weight, the reliability of it goes to the weight? Which is it?

You can't have it both ways. You can't

You can't have it both ways. You can't tell us to admit everything and then just put proper weight or associate proper weight to a particular document or a particular opinion and then also tell us it has to be reliable. I mean, could you respond?

MS. JAISWAL: Yes, your Honor. As a general matter the federal rules of evidence require some indications of reliability. That is this court's authority, to rely on -- to discuss the reliability and see whether this information cited in the report is reliable information, the types that experts use.

Certain types of evidence, for expert witness testimony, for testimony -- not the documents themselves, but for the expert witness testimony the Ohio rules, the federal rules, this board's rules allow these documents to come in, unless they're not relevant, unless they're immaterial, or if they're duplicative.

So in terms of any question that this court may have on reliability, and that of course will be set forth by the foundation, the foundation that this evidence is not reliable, we will proffer it during our redirect, but Mr. Bentine can also go after the reliability during his cross-examination.

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At that time the judges in this case, the administrative law judges in this case, can use those questions of reliability. How reliable is this evidence in deciding how it wants to weigh the evidence in reaching its final decision in this case.

EXAMINER PRICE: I'm more concerned about relevance. Understanding the statutory requirements, I don't understand the relevance of the American people of the question and the answer to this particular proceeding.

MS. JAISWAL: I'm sorry, can you please repeat the question?

EXAMINER PRICE: Understanding the statutory requirements, what the Power Siting Board has to review, the determinations it has to make, I do not understand the relevance of a polling question about the opinions of the American people to our statutory duties.

MS. JAISWAL: Well, that can be established during both cross and redirect in examining Mr. Schlissel, but if you are asking for an offer of proof, what I can tell you is --

EXAMINER PRICE: I'm asking you for a legal argument as to why it's relevant.

MS. JAISWAL: Why that information is relevant, because the questions here before the Board today are the questions regarding CO2 costs, carbon dioxide costs, which are linked to carbon dioxide regulation, carbon dioxide legislation.

Legislation and regulations are often passed with public opinion whether the public, the constituents, the citizens of our states of Ohio and others support this legislation or do not support this legislation. So the likelihood of a CO2 cost increase is shown by the legislation and whether that legislation is supported by the public; it is relevant to the questions before this court, and we can lay that foundation properly on redirect and it can be asked again on cross.

EXAMINER PRICE: We're going to go ahead and grant the motion to strike on this issue. I think we've heard enough.

1 Mr. Bentine. 2 MR. BENTINE: Thank you, your Honor. 3 Page 28, similar to earlier motions, your Honor, line 4 4 after the word "No" down to line 10, "CO2 price forecasts," I will move to strike that on the same 6 basis as previously discussed. 7 EXAMINER PRICE: Granted. 8 EXAMINER BOJKO: I'm sorry, to where, 9 Mr. Bentine? 10 MR. BENTINE: Line 10, the end of the 11 sentence beginning "forecasts." 12 EXAMINER PRICE: Motion to strike will be 13 So the answer now would read "No. AMP-Ohio granted. 14 only gave the following narrow answer"; is that 15 correct? 16 MR. BENTINE: Yes, your Honor. 17 EXAMINER PRICE: Thank you. 18 MR. BENTINE: The next motion to strike, 19 your Honor, is really just the footnote on line 28. 20 EXAMINER PRICE: Which footnote? 21 MR. BENTINE: Thirty-four. 22 EXAMINER PRICE: Id? 23 MR. BENTINE: Yeah. Just referring back

to our interrogatory responses.

1 EXAMINER PRICE: Could you explain why 2 you want to --3 MR. BENTINE: The footnote? EXAMINER PRICE: Yeah. 5 MR. BENTINE: I'm going to move to strike 6 all of that exhibit that includes those responses, 7 your Honor. I have no problem with him saying "No," 8 I can cross him on that. I don't believe it 9 appropriate to have our interrogatory responses as a 10 part of --11 EXAMINER PRICE: We'll deal with that 12 when we deal with your interrogatory responses. 13 you can make a note of that to come back to this. 14 MR. BENTINE: The next item is on page 15 30, your Honor. Again, anything after the "No." 16 EXAMINER PRICE: Granted. 17 MS. JAISWAL: For the record, may we 18 please clarify the lines exactly? 19 That would be, at least my MR. BENTINE: 20 motion was lines 12 beginning "AMP-Ohio" and ending 21 on page 31, "Feasibility Study" with the footnote on 22 line 2. 23 EXAMINER PRICE: All of line 2. 24 you.

Next.

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MR. BENTINE: Page 33, the answer after "No" and to the end of the answer with the footnote.

MS. JAISWAL: Can you please provide the

basis, Mr. Bentine? I didn't catch that.

MP RENTINE: The same basis

MR. BENTINE: The same basis as previously argued with regard to our responses.

EXAMINER BOJKO: Where are you ending on this one?

MR. BENTINE: At line 30 and the footnote

EXAMINER PRICE: Can you explain why we would delete 24 through 30? That was your interrogatory response.

MR. BENTINE: I believe -- I'll withdraw that portion, 24 through 30.

EXAMINER PRICE: I'm not sure if that will make any sense in the record.

EXAMINER BOJKO: I think we need to leave in line 20 instead, "provided the following narrative response."

MR. BENTINE: That's acceptable. I will amend my motion, your Honor.

EXAMINER PRICE: So we will grant the

motion as relates to beginning on line 3, the words
"The Citizen Groups," and ending on line 20 with
"documentation."

EXAMINER BOJKO: And then remove --

MR. BENTINE: I was going to say, I think the "and" referred back to two earlier narrative responses that also contained no calculations engineering.

EXAMINER BOJKO: So the only thing remaining in on this page would be answer "No. Instead, it provided the following narrative response," and the answer?

MR. BENTINE: Yes. And then the quote beginning on line 24.

MS. JAISWAL: To clarify, your Honor, questions 43 and 44 are provided, or to the extent that they are provided in AMP's response to discovery, they are a party admission because they are part of the document.

EXAMINER BOJKO: I'm sorry, the questions?

MS. JAISWAL: Yes; to the extent the questions are posed. They are also posed, you know, the way that the discovery responses were submitted

here where AMP-Ohio stated the question and then provided --

EXAMINER BOJKO: That's the requirement for this board is in discovery you have to restate and then put your response underneath. It's not a party admission because it was your question.

MS. JAISWAL: It is their document and the document is their admission, but I understand. We can move forward.

EXAMINER PRICE: Okay. Just to clarify for the record, on page 33, and I hope I get this right, we're going to strike everything beginning line 3 beginning with "The Citizen Groups," through line 20, the word "documentation," inclusive. Then beginning again on line 20, "and referred back" through line 23, "estimate" inclusive.

MS. JAISWAL: For the record, if I may just clarify my objection.

EXAMINER PRICE: Sure.

MS. JAISWAL: Our objection is that AMP-Ohio provided an entire discovery response and that is a party statement; that is their document; that is their statement and, therefore, all of the matters in question as set forth come in. I just

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    wanted to restate the objection.
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                Thank you.
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                EXAMINER PRICE: I understand.
                                                 Thank
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    you.
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                Mr. Bentine.
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                MR. BENTINE: Yes, your Honor.
                                                 Page 36,
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    similar objection beginning on line 5, "The Citizen
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    Groups" and ending with footnote 51 on line 8.
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                EXAMINER PRICE: Motion will be granted.
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                MR. BENTINE: Next, your Honor, on page
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    51 --
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                EXAMINER PRICE: Mr. Bentine, I need to
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    see this one second to make sure I'm getting my notes
14
    correct.
15
                Page 51?
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                MR. BENTINE: Page 59. We're going to
17
    skip 51.
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                EXAMINER PRICE: Fifty-nine?
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                MR. BENTINE:
                               Yes, 59.
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                 That, your Honor, page 59, the question
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    beginning on 4 and going on to line 2 on the next
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    page, no foundation and relevance. This is a
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    chemical construction industry graph.
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                 EXAMINER PRICE: We appear to be having
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In Re: 06-1358-EL-BGN

44 the triple hearsay here, the Chemical Engineering 2 Magazine graph republishing an Electric Power 3 Institute Graph, but why don't --4 MR. BENTINE: Or vice versa. Or EPRI 5 publishing in Chemical, which I think probably is --6 EXAMINER PRICE: Or vice versa; very 7 good. I hadn't thought of that possibility. Why don't you seek to clarify on cross-examination with 9 the witness before we rule on this one. 10 MR. BENTINE: Yes, your Honor. 11 Page 61, that one, your Honor, I was 12 going to move the entire answer, but that would leave 13 the question, so I'll move the question and answer 14 beginning on line 1 and ending on line 5 and the 15 footnote. 16 EXAMINER PRICE: I think we're going to 17 grant the motion, but I think on redirect I will give 18 counsel some leeway if she would like to re-pose this 19 question in a manner that gets the idea through 20 without editorializing the discovery response. 21 MR. BENTINE: Thank you, your Honor. 22 EXAMINER PRICE: All the other ones were 23 so much easier to rule on.

Next, Mr. Bentine.

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                MR. BENTINE: The next one, your Honor,
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    on line 9, beginning with the word "AMP-Ohio" and
3
    ending with the word "assessments."
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                EXAMINER PRICE:
                                 Granted.
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                MS. JAISWAL: Excuse me, which one again?
                MR. BENTINE: Line 9.
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                MS. JAISWAL: On page 62?
                MR. BENTINE: Sixty-one. Still on 61.
9
                MS. JAISWAL: If I may respond, your
10
    Honor.
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                EXAMINER PRICE: Be my quest.
12
                MS. JAISWAL: Sure.
                                     Your Honor, this
13
    portion does reference and discuss documents that
14
    were produced here, the initial project feasibility
15
    study, and that portion should stay.
16
                MR. BENTINE: I didn't move that portion.
17
                EXAMINER PRICE: He left the "No" in.
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                MS. JAISWAL: Okay. Had he left in the
19
    reference to the R.W. Beck Initial Project
20
    Feasibility Study?
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                MR. BENTINE: Yes. My motion, if your
22
    Honor please, was just "AMP-Ohio refused to provide
23
    such assessments," and then I did not move "other
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    than the June."
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In Re: 06-1358-EL-BGN

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                EXAMINER PRICE: Okay. I understand.
                MR. BENTINE: Maybe I should have.
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                EXAMINER BOJKO: So just to clarify the
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    record, the answer will now read "No, other than the
5
    June 2007 R.W. Beck Initial Project Feasibility
6
    Study."
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                MR. BENTINE: Line 20 and 21, the
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    language after the word "No."
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                EXAMINER PRICE: Granted.
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                MR. BENTINE: Next is on page 66, your
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    Honor, line 14 beginning with "AMP-Ohio" and ending
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    on line 16 with footnote 95.
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                EXAMINER PRICE: Granted.
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                MR. BENTINE: Page 68, your Honor.
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                EXAMINER PRICE: We should have taken the
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    motions while we were waiting for Mr. Schlissel to
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    arrive.
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                EXAMINER BOJKO: Good point.
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                EXAMINER PRICE: What's done is done.
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                MR. BENTINE: Had I been sure.
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                Line 6 after "No" through line 8 and the
22
    footnote; same basis.
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                EXAMINER PRICE: Granted.
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                MR. BENTINE: Line 11 and 12, your Honor,
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1 beginning with the word in line 11 "and," I would 2 move "and the few answers that AMP-Ohio did provide 3 for our discovery" and the comma after discovery. 4 EXAMINER PRICE: Granted. 5 MR. BENTINE: Page 70 --6 MS. JAISWAL: Your Honor. 7 EXAMINER PRICE: Yes. 8 MS. JAISWAL: Just to clarify the record 9 and the objections, that provides the basis for the 10 answer, the few answers that were received. 11 both the power supply plans and the answers. 12 Thank you. 13 EXAMINER PRICE: I see. She's exactly 14 correct. I'm going to reverse my prior ruling and 15 strike only the word "few," so it will now read "and 16 the answers that AMP-Ohio did provide in discovery." 17 THE WITNESS: With all respect, that's 18 not my testimony. That may be your testimony, but

EXAMINER PRICE: I'll go back and strike the whole thing.

that's not my testimony.

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THE WITNESS: Well, it's --

EXAMINER PRICE: I'll reverse myself again. I mean, again -- first of all, your counsel

In Re: 06-1358-EL-BGN

48 1 should be making these arguments. Second of all, I've tried to be consistent and eliminate the editorializing regarding the discovery responses, but 4 if your position is that I'm unfairly changing your 5 testimony, I will strike the whole phrase. 6 So I will reverse my previous reversal of 7 my ruling and we'll strike "and the few answers that 8 AMP-Ohio did provide for our discovery." 9 MS. JAISWAL: I restate our objection. 10 Thank you, your Honor. 11 Thank you. EXAMINER PRICE: 12 Next, Mr. Bentine. 13 MR. BENTINE: Yes, your Honor. 14 is next, your Honor. Again, line 3 after the word 15 "No," the balance of that answer down to line 6 and 16 the footnote. 17 EXAMINER BOJKO: Where are you, 18 Mr. Bentine? 19 MR. BENTINE: I'm sorry. Page 70, line 20 3, all the way through 6 and footnote 99. 21 EXAMINER PRICE: Granted. 22 MR. BENTINE: Line 9 after the word "No," 23 the balance of that answer including the footnote. 24

Granted.

EXAMINER PRICE:

MR. BENTINE: Lines 13 through 17, I wasn't a good enough surgeon to do anything but move to strike the entire question and answer.

EXAMINER PRICE: Again, we're going to grant that, but on redirect if counsel for NRDC would like to ask a question in a manner that's more precise, we will give you some leeway on that.

MR. BENTINE: Page 72, your Honor, line
22 after "No" through the end of line 24, the balance
of that answer.

EXAMINER PRICE: Granted.

MR. BENTINE: And, your Honor, finally, I would move to strike all of DAS-2, I believe it inappropriate to grossly put in with objections, I might add, on nearly every one of these --

EXAMINER PRICE: I understand where you're going with this. What I would like the parties to do at the next convenient time is to sit down, examine through the testimony where the footnotes may have stayed in and see if you can reach an accommodation as to portions of the discovery that are being admitted rather than striking the entire exhibit at this point.

It's fair enough for them in the

if there's testimony that we have allowed in referencing the discovery answers, I think it should be kept in the record.

MR. BENTINE: As long as we'll have an opportunity to preserve the objections. The reason you put objections in discovery answers is to make sure that they're not necessarily construed as admissions.

EXAMINER PRICE: I understand that. And then if the parties can reach an understanding of what is not subject to being stricken, then we'll rule on the objections at that point.

MR. BENTINE: Thank you, your Honor. Be happy to do so.

EXAMINER PRICE: Thank you.

MR. BENTINE: That, your Honor, is the extent of my motions to strike.

EXAMINER PRICE: Thank you.

MS. JAISWAL: Your Honor, for the record.

EXAMINER PRICE: Yes.

MS. JAISWAL: First I would like to restate and make clear our objection that this is Mr. Schlissel's opinion, expert opinion testimony,

In Re: 06-1358-EL-BGN

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1 and under the Ohio rules, under this board's rules, 2 and under the federal rules it is allowable and 3 proper. I'm just restating the objection for the 4 record. 5 EXAMINER PRICE: Noted. Thank you. 6 MS. JAISWAL: And I would also like to 7 request a ruling from the board or from the 8 administrative law judge as to the applicability of 9 Board rule 4906-7-09(A) and whether that rule applies 10 in this proceeding, especially with respect to 11 Mr. Schlissel's testimony. I'd like a ruling on 12 that, and in the event that it's already come up 13 today --14 EXAMINER PRICE: You'll have to refresh 15 my recollection as to what precisely that rule is. 16 I've not committed them to memory; sorry. 17 MS. JAISWAL: I'm sorry? 18 EXAMINER PRICE: Which rule is that? 19 MS. JAISWAL: Certainly. I'm happy to 20 provide a copy. 21 EXAMINER PRICE: Just read the rule to me 22 is fine. 23 MS. JAISWAL: Certainly. Okay. 24 Rule 4906-7-09(A) provides "The

In Re: 06-1358-EL-BGN 52 administrative law judge shall admit all relevant and material evidence, except evidence that is unduly repetitious, even though inadmissibility under the rules of evidence applicable to judicial I think that all of our EXAMINER PRICE: rulings today have been in the spirit of that rule. MS. JAISWAL: So this rule applies. **EXAMINER PRICE:** Yes. MS. JAISWAL: Okay. EXAMINER PRICE: Mr. Bentine. MR. BENTINE: Yes, your Honor. EXAMINER PRICE: You may proceed.

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CROSS-EXAMINATION

17 By Mr. Bentine:

proceedings."

Thank you.

Q. Mr. Schlissel, you've been patient.

Mr. Schlissel, first of all, a couple questions. You're no longer testifying on behalf of the Ohio Environmental Council; is that correct?

- Α. That's what I understand, yes.
- Ο. Do you know why you're no longer testifying on their behalf?

- A. No. You asked me this during the deposition, and I wasn't aware then and I haven't asked since.
- Q. And you are being compensated for your appearance here today?
 - A. Yes, sir.

- Q. And you were retained in August/September time frame for purposes of this case?
- A. I believe it was September. The contract may be a little later, but counsel from NRDC called me I believe it was sometime in September.
- Q. And you were engaged to provide an independent review of the application of American Municipal Power in this case?
 - A. Yes.
- Q. And you pride yourself on this independence; is that correct?
- A. Yes.
- Q. You approach all of your engagements that way; is that correct?
 - A. I try to.
 - Q. And is that true for your firm; Synapse?
- A. I believe the firm does. It's 20 people and everybody does a lot of projects so I can't

really speak for how they approach them. It's my sense that that's the kind of people they are, but I can't answer for every single person in every single project.

- Q. And how long have you been a part of that firm?
- A. Been a member of Synapse since November 1st, 2000.
- Q. What percentage of your time, say in the last five years, Mr. Schlissel, have you spent on expert witness testimony or as a nontestifying expert in various proceedings and engagements?
- A. I don't know how to answer that question. A lot of my work involves analyses that end up in testimony. A lot of my work involves analyses that don't end up in testimony. So I wouldn't know how to give you any kind of breakdown. The actual time I spend in the hearing, as you can expect, is very small, but other than to say some of my work ends up as testimony and some doesn't, I wouldn't know how to break it down.
- Q. And I'm sorry, maybe I didn't make myself clear.
 - A. Okay. Sorry.

- Q. I'm trying to gather how much of your time has to do with litigation or evaluation of potential litigation or permit hearings, things that are going on in the regulatory scene where you may be engaged to evaluate something to do with one of those kind of proceedings, either current or proposed.
- A. I would say that most of my work involves review of proposed projects or legislative proposals, analyses of planned generation, transmission/distribution system lines, energy efficiency plans, CO2 legislation, power plant costs which may at some point end up in a litigation forum, if that's helpful.
 - Q. That's helpful. Thank you.
- Now, your Exhibit DAS-1 includes a lengthy résumé and I'd like to talk about it just for a moment if I could. You have a engineering degree from MIT?
 - A. Yes.

- Q. And was that engineering degree in any specialty or any area of concentration?
- A. Yes. It was from the Department of Aeronautics and Astronautics.
 - Q. So as you say from time to time, you were

the proverbial rocket scientist.

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- A. Yes. And as I told you during my deposition, my clients, the staff of the Vermont commission, actually cited that in a court appeal, that they had had -- the issue was a power plant, nuclear power plant decommissioning was complicated, but they weren't worried because they had the proverbial scientist as their consultant.
- Q. And you received an advanced engineering degree from Stanford?
 - A. Yes.
 - Q. And was there a concentration in that?
 - A. It was the same field.
 - Q. And that was a master's in engineering?
- 15 A. Yes.
 - Q. And then you also received a law degree from the Stanford Law School; is that correct?
 - A. Yes.
 - Q. And you are not appearing here today as a lawyer?
 - A. That's correct.
 - Q. And you are admitted in the state of New York I believe?
 - A. Yes.

- Q. And you're current in that membership?
- A. Yes.

- Q. And you are not admitted in the state of Ohio.
 - A. That's correct.
- Q. Okay. Are you a professional engineer in any state?
 - A. No.
- Q. Did you ever sit for the professional engineering exam?
 - A. No.
- Q. Correct me if I'm wrong, but I'm going to try to paraphrase what I believe to be the case, you started out practicing law and then got into the consumer side of the utility industry and that sort of led you, then, as you morphed from a lawyer into an expert into various kinds of proceedings in which you acted as a consultant and as an expert witness rather than as a lawyer; is that right?
- A. I'd probably say it differently, but the transition was I was involved in energy work as an attorney and I enjoyed putting together the technical and economic side of the case more and I started over time doing more of that work.

Q. Have you ever designed any sort of power generation, transmission, or distribution facilities?

- A. No, I have not designed or worked at one.
- Q. Have you ever been directly involved on behalf of an engineering firm or an owner with the construction of any sort of electrical generation or transmission or distribution facility?
- A. The answer would be no, but as we discussed in my deposition, I've been involved in reviewing construction of power plants on behalf of owners and I've been involved in reviewing operation of power plants on behalf of owners and vendors.
- Q. Have you ever been involved directly for an owner or an engineer for an owner in the planning of a generation facilities?
- A. The planning of a specific facility? I'd have to say "no." We have been involved in -- "we" meaning Synapse and I've been part of the project team -- have been involved in resource planning for utilities that have ended up, will end up in power plants, but with regards to any one specific plant I have to say "no."
- Q. And what utilities have you done power supply planning for, directly?

- A. We've been involved in power supply planning for Nova Scotia Power recently, one confidential case I'm doing now, and I'd have to say that's it for my involvement.
- Q. Now, you were provided by your clients in this proceeding with certain documents regarding the city of Cleveland; were you not?
 - A. Yes.

- Q. And you were provided with a Burns & Roe study for the city of Cleveland with regard to the AMP generating station?
 - A. That was one of the documents, yes.
- Q. And you have quoted that in your testimony, have you not?
 - A. Yes.
- Q. You were also provided with a power supply plan that was presented to the city of Cleveland by AMP-Ohio and its consultant R.W. Beck; is that correct?
- A. Yes, but that wasn't provided by my client, that was provided by AMP-Ohio in discovery.
 - Q. My mistake.

You were also provided a copy of the Cleveland power sales contract with regard to this

station, the AMPGS station?

- A. I don't recall that. I recall seeing the draft -- the contract language in the back of the initial project feasibility study that I received, but I don't recall that it was specific to Cleveland.
- Q. And were you given access by your clients to several power supply presentations and plans for various AMP-Ohio communities with regard to the AMPGS station?
- A. I was provided a number of presentations. I recall one or two I looked at were for the city of Cleveland. I honestly don't remember whether it was for any other communities. If you represent that they were, I'm happy to accept that, I just don't remember whether it was Cleveland and others or just Cleveland.
- Q. I want to ask you a few questions about what you know about AMP-Ohio, Mr. Schlissel. Do you know what AMP-Ohio's corporate structure is?
- A. No. I've read that it's a nonprofit corporation.
- Q. And when did you learn it was a nonprofit corporation?
 - A. When I read the annual report.

- Q. And did you do that before or after my deposition of you?
- A. You deposed me a week ago Friday; I think it was after that.
- Q. Do you know whether or not AMP-Ohio or its member communities are under the jurisdiction of the Public Utilities Commission of Ohio?
- A. No. I know it's one or two states where public utilities actually are under the jurisdiction of the state regulatory commission, generally they're not, but I don't know whether Ohio is one of those.
- Q. Are you aware of whether or not AMP-Ohio has, quote, project partners associated with the construction of and development of AMPGS?
- A. The project documents I've seen refer to two other agencies I believe that would be partners in the plant.
- Q. And that's Michigan South Central Power Agency; is that one of them?
- A. I believe. I seem to recall the other may be in West Virginia.
 - Q. The Blue Ridge Power Agency perhaps --
 - A. Yes.
 - Q. -- in West Virginia?

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|----|--|--|--|--|--|--|--|--|
| 1 | A. Yes. | | | | | | | |
| 2 | Q. Do you recall those? Do you know what | | | | | | | |
| 3 | kind of organizations those are? | | | | | | | |
| 4 | A. No. | | | | | | | |
| 5 | Q. Do you know what the jurisdiction of | | | | | | | |
| 6 | their state commissions are over them or their | | | | | | | |
| 7 | members? | | | | | | | |
| 8 | A. No. | | | | | | | |
| 9 | Q. Have you researched the extent of the | | | | | | | |
| 10 | Ohio Power Siting Board's jurisdiction over | | | | | | | |
| 11 | AMP-Ohio's members? | | | | | | | |
| 12 | A. No. I assumed that because you were all | | | | | | | |
| 13 | spending your time here that the Siting Board had | | | | | | | |
| 14 | jurisdiction over the application for the AMPGS | | | | | | | |
| 15 | project; that was all that was relevant to my | | | | | | | |
| 16 | testimony. So I looked at the statute when I started | | | | | | | |
| 17 | the project. | | | | | | | |
| 18 | Q. Thank you. | | | | | | | |
| 19 | What do you know about strike that. | | | | | | | |
| 20 | What do you know about AMP-Ohio's current | | | | | | | |
| 21 | generation facilities? | | | | | | | |
| 22 | A. I know that there's a 213-megawatt coal | | | | | | | |
| 23 | plant, Gorsuch is that the way you pronounce it? | | | | | | | |

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Q.

Yes.

| Α. | G- | 0-1 | c-s- | u-c | -h, | Ι | think. |
|----|----|-----|------|-----|-----|---|--------|
|----|----|-----|------|-----|-----|---|--------|

- -- there are some combustion turbines fired by gas and some by diesel, there's some hydro, and there's a small wind project near Bowling Green.
- Q. Do you know what generation any AMP-Ohio members may own and operate?
- A. I know a number of the AMP-Ohio members own small coal plants, but I've not done a study to look at which member owns what plants. I tried to find some on the internet, but wasn't able to find that information.
- Q. Do you know how much power AMP-Ohio currently purchases on the market on behalf of its members?

MS. JAISWAL: Objection, your Honor.

EXAMINER PRICE: Grounds?

MS. JAISWAL: For the record, Mr. Bentine here is trying to present a legal argument regarding AMP-Ohio and its structure.

EXAMINER PRICE: Could you raise your voice a little bit? Our heating and cooling system leaves much to be desired.

MS. JAISWAL: Mr. Bentine wants to make a legal argument here about AMP-Ohio's structure, that

it's a nonprofit organization, and he's entitled to make that argument, but he's not entitled to make that argument through our witness.

Our witness doesn't have -- is an expert here on CO2 costs as well as increasing construction costs with respect to this plant. So he's entitled to make that argument, but he cannot make it through our witness.

EXAMINER PRICE: Could I have the last question read back, please, before I take

Mr. Bentine's response?

(Question read.)

MS. JAISWAL: The objection is to the series of questions.

EXAMINER PRICE: Okay.

Mr. Bentine, response?

MR. BENTINE: Well, your Honor, I'm trying to get a handle on what this gentleman knows in order to make those recommendations, and I think I'm entitled to explore that.

EXAMINER PRICE: Overruled.

- Q. (By Mr. Bentine) Do you know what states AMP-Ohio members are in?
- A. Yes.

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EXAMINER PRICE: I'm sorry, I think there was a question.

MR. BENTINE: You're absolutely right.
Senior moment.

EXAMINER PRICE: I'd like to know the answer.

- Q. The question was on market, how much is purchased on the market.
- A. I don't recall the percentage, but I do recall that it's in an exhibit of one of AMP-Ohio's witnesses that I read yesterday. I'm sorry I can't tell you, I just don't remember the number. If you want me to go and look at the testimony, I could pull up the exhibit. I know it's in the record, I'm sorry, I just don't remember the exact number.
 - Q. We'll get --

- A. I think it's fairly high, but I just don't remember the number.
 - Q. We'll get to that later.

Do you know, in fact, my question -- I almost stepped on the last one -- do you know how many states AMP-Ohio has members in?

- A. I believe it's five.
- Q. And that would be Michigan, Virginia,

1 | West Virginia, Ohio, and --

- A. Pennsylvania.
 - Q. -- and Pennsylvania.

MR. BENTINE: And, for the record, we just had a Kentucky municipal join.

- Q. Do you know -- strike that.

 Could you tell me what an RTO is?
- A. A regional transmission organization.
- Q. And do you know what RTOs AMP-Ohio operates in?
- A. I would imagine they operate in PJM and MISO.
 - O. PJM RTO stands for what?
- A. Well, it stands -- the honest answer, as I'm on the witness stand, is "PJM" stands for PJM, but it used to be the Pennsylvania-Jersey-Maryland Interconnection that morphed into a independent system operator for that area and now it's grown by leaps and bounds to include up through western Pennsylvania and then over in Illinois. I mean, there may be other pieces, some in Ohio as well, but generally it's the eastern quarter of the country except for the area in New England.
 - Q. Specifically do you know what

transmission areas in Ohio are included in PJM?

- A. I'd have to look at a map to see exactly which. I know that MISO and PJM are somewhat -- are in different areas of Ohio, but, again, I'd need a map to look at.
- Q. And MISO is Midwest Independent System Operator?
- A. That's correct. It was started after PJM by, I think AEP. No. AEP joined PJM. It's a very confusing story.
 - Q. You should try to operate it.
- A. I was actually here the day that MISO was formed meeting with AEP people. But it's like -- it's an independent system operator similar to PJM although not quite as advanced.
- Q. And just to make it clear, you're not sure exactly who is in Midwest ISO of AMP-Ohio's members or the transmission systems that they're hooked up to.
- A. That's correct. I would think that they're probably PJM given the area, some of them PJM and some MISO, but I don't know which are in which.
- Q. Do you know whether there is something called the seam that goes between those two RTOs?

A. Yes.

- Q. And what is your understanding of what a seam is?
- A. The seam is how they relate to each other and interact with each other, that there are seams issues regarding if you're on one side and you want to sell to the other side, and it's very complicated given the almost futile-like map and reach of PJM and MISO, that they're not block areas, it's -- as I say, a large portion of PJM is the Commonwealth Edison service territory, Exelon service territory in Illinois, and AEP in Ohio. So it's very complicated, the seams issues.
 - Q. On that I believe we can agree.
- Do you know with regard to -- PJM let's talk about a moment. Do you know whether or not there are capacity markets that are being made by PJM?
- A. Yes. PJM has set up something called RPM, I don't exactly recall what it stands for, but there are regional capacity markets in which you basically bid to sell capacity and there will be prices set for offering capacity into those local regional markets. I think there's 16 or 19 of them

1 | the number sticks in my head.

- Q. Now, with regard to that capacity, do you know what a load-serving entity is?
- A. Yes, it's an entity that serves load, the ultimate load-serving entity.
- Q. And if you know, are load-serving entities required to have certain amounts of capacity?
 - A. Yes. Capacity and reserve, yes.
- Q. And if they don't have that amount, they have to buy it at whatever the rate is that is set by the RTO?
- A. That's correct. As a capacity deficiency charge.
- Q. Now is there a separate energy market in PJM?
- A. Yes. My area of work, I did a lot of work related to PJM for a couple of years, I'm a year or two behind right now, I'm not sure whether there's one energy market, there may be several regional or there's at least a plan to set up regional energy markets.
- Q. And how do those regional markets currently work, if you know?

A. Well, you bid into the market to sell power into the market.

- Q. And at any particular hour if I have bid into the market at 5 cents and another generator has bid into the market at 6 cents and that other generator at 6 cents is needed to fulfill the load in that hour, what is the price that is paid by everyone that hour?
- A. Well, the price that's paid by everyone that hour is called the market clearing price, it's basically the last or the most expensive generating unit or bid into the market that's needed to serve load in that hour. So in your example if the two of you were the only two who were serving power or providing power, bidding into the market in that hour, then the market clearing price would be the 6 cents from the other entity.
- Q. Now, do you know whether or not, in terms of PJM again, whether or not there is transparency in that market currently?
- A. That's I think beyond what I've looked at. I know, in fact, that the bids -- the bids are not made public for six months, and I don't believe there's any way that you can identify the bidding

parties directly from the bids. Now, having said that I also know that we've done some analyses that you basically can identify the various bidders by looking at the bids over a large number of hours and you can see what entities are bidding at what hours, but I wouldn't call the process transparent.

- Q. And, in fact, if you know, isn't there a Federal Energy Regulatory proceeding going on as we speak with regard to allocations that there was market manipulation and the market monitor of PJM, in effect, was, at least according to his claims, stifled in his ability to monitor the market?
- A. Yes. I know that that has been going on, it may have been resolved recently, but I'm not a hundred percent positive of that. But I am aware of what was going on.
- Q. Are you in a position here today to tell us whether or not long-term bilateral contracts based on anything other than market price are available in the PJM area?
- A. When you say "market price," you mean the -- I don't know what you mean by "market price."
- Q. Well, as an example, a 15- or 20-year contract for the purchase of power or energy, are

those kind of bilateral agreements available, to your knowledge, today?

- A. I've not looked at that recently.
- Q. Would you agree with me, if you know, that there has been significant increases in the cost of electricity on the market in the last four or five years?
 - A. Yes.

- Q. Now, let's switch for a moment to Midwest ISO.
 - A. Okay.
- Q. Are you aware of whether or not the Midwest ISO is pursuing a capacity market as well?
- A. I think the way you state it is correct, it is pursuing. There is not a capacity market in the Midwest ISO as of now, but they are in the process of setting up the rules for establishing a capacity market.
- Q. Midwest ISO does have an energy market, correct?
 - A. Yes.
- Q. And it operates much the same as PJM energy market?
 - A. That's my understanding.

MS. JAISWAL: Your Honor, objection.

This goes beyond the written testimony and beyond the scope. It's the same objection that we've made, I just have a standing objection to this line of questioning and I'm restating the standing objection.

EXAMINER PRICE: Mr. Bentine.

MR. BENTINE: Well, your Honor, under the Ohio rules of evidence and the rules of the Commission and, by implication, this board, the witness is available to answer -- a witness on direct -- excuse me, on cross-examination of his direct, this may be limited for rebuttal, but is available to answer questions within his knowledge for any relevant issue in this case.

EXAMINER PRICE: Overruled.

Q. Mr. Schlissel, if I could, I want to just sort of summarize your testimony in my own words and, of course, you're more than willing and capable of correcting me. As I understand your testimony, you believe that AMP-Ohio and its consultant R.W. Beck underestimated the potential costs of CO2 into the future and also underestimated or failed to take into appropriate account the possibility of increases in construction costs of AMPGS into the future and,

therefore, you believe that the review and support for AMPGS is lacking.

- A. Almost right.
- Q. Go ahead.

- A. Okay. The way I would summarize my testimony is that I believe AMP-Ohio and its consultant Beck failed to consider the full range of possible risks associated with CO2 costs and capital cost increases. The reason why I've restated from what you've said is it's not only understating CO2 costs, but I believe you need to look at a range of costs, and that the R.W. Beck study does not look at a range of costs.
 - Q. Fair enough. Thank you.

And I believe you also make a point that there was not adequate or any, I don't want to put words in your mouth, consideration of energy efficiency and other renewable alternatives; is that correct?

- A. That's correct. In the power supply plans and the feasibility study that I saw there was no consideration of energy efficiency, that's correct.
 - Q. And you made at least some passing

suggestions in your testimony about alternatives that
you believe should be considered, correct?

A. Yes.

- Q. And what exactly are you talking about specifically when you talk about alternatives?
- A. Well, there's energy efficiency, there's wind and biomass I would think would be three alternatives that could contribute. There's -- I list them in my testimony I believe. Not "I believe." I list them in my testimony.
- Q. You say wind and biomass and as a sort of last resort natural gas combined cycle?
 - A. That's correct.
 - Q. In addition to energy efficiency.
 - A. That's correct.

MR. BENTINE: Your Honor, I'm about to start a line of questioning on some confidential material that I'm going to at least ask to be marked. I can defer that till a later time and go on to something else or I can go into it now, whatever your Honor's pleasure is.

EXAMINER PRICE: Is this the only line of questioning that involves confidential material?

MR. BENTINE: Now, that's a hard

1 question, but let me check.

I can't say that for sure. There may be another area that has that as well. I can save all that till the end.

EXAMINER PRICE: Let's save all of that for the end and then we'll take that up all at once.

MR. BENTINE: Sort of blows my big ending, though.

EXAMINER PRICE: It's administrative law, the Board will read the transcript in the proper order to get your big ending.

MR. BENTINE: Thank you.

- Q. (By Mr. Bentine) Mr. Schlissel, you believe you have gotten enough information to reach the conclusions that you have made in your testimony; is that correct?
 - A. Yes.
- Q. And that conclusion was that without additional work, the certificate should be denied, correct?
 - A. That's correct. My conclusion might be different if I had seen more information, but I believe it supports that conclusion.
 - Q. I want to turn to your Exhibit DAS-1 and

specifically page 3 of that. Just a couple quick questions before we do turn to that since I'm skipping over some stuff here, Mr. Schlissel. You did not perform a load forecast for AMP-Ohio or any of its members, did you?

A. That's correct.

- Q. Now, I understand you've been retained by NRDC to do some other work to make a presentation to the city of Cleveland; is that correct?
 - A. Yes.

- Q. And the point of that presentation to the city of Cleveland is to attempt to get them to, in effect, decline to be in the AMPGS; is that correct?
- A. You'll have to ask NRDC. They asked me to make a presentation about my testimony here and about my thoughts and Synapse's thoughts on possible supply alternatives to the AMPGS project.
- Q. And have you done a load forecast for the city of Cleveland?
- A. No. I have accepted that there's a need for action to be taken. I'm not sitting here today saying, "Wow, you guys should go on vacation. You don't need to do anything." I've accepted for the purpose of this testimony that, in fact, there is a

need to take action.

Q. Now, you talk about the potential for energy efficiency. You would agree, would you not, that with regard to energy efficiency over a broad range of communities like AMP-Ohio serves, that about the best we could expect is 1, 1-1/2, or possibly 2 percent a year in energy efficiency savings?

MS. JAISWAL: Objection, your Honor. He is not -- the best that AMP-Ohio could have? That is your -- are you asking about his opinion?

EXAMINER PRICE: What's your grounds for objection?

MS. JAISWAL: My objection is he is not

MS. JAISWAL: My objection is he is not testifying for AMP-Ohio. What AMP-Ohio believes and thinks, AMP-Ohio knows that.

Please read back the question if I misunderstood it.

EXAMINER PRICE: Go ahead and read back the question.

(Question read.)

EXAMINER PRICE: Your grounds?

MS. JAISWAL: I remove the objection.

EXAMINER PRICE: Thank you.

A. That's generally considered good

performance to achieve that, yes.

EXAMINER PRICE: Can you sustain those gains over more than a period of years? Is it 2 percent per year for 10, 20 years, or does that curve flatten out after some period of time?

THE WITNESS: There's no evidence to indicate that. Nobody's been doing it long enough to be able to answer that question.

EXAMINER PRICE: Thank you.

THE WITNESS: That's probably the most important question around or one of the most important questions, and there's no evidence. In California when they had the rolling blackouts, they had a lot of conservation and then they discovered that people started using power again. Now they're involved in many efforts to try to keep load growth flat or declining.

EXAMINER PRICE: Thank you.

Q. (By Mr. Bentine) If, then, the growth that one otherwise might expect in energy consumption would be around 2 percent, one might hope that one could keep energy consumption flat over some period of time?

A. Yes. That's what would be hoped if --

using your example.

- Q. To add any big chunk of a baseload resource takes some lengthy period of time; does it not?
 - A. Yes; depending on the resource.
- Q. So if we were going to look at adding several hundred megawatts of wind, how long do you think that would take?
- A. Maybe four or five years from initial planning through getting it on line.
- Q. Do you know, Mr. Schlissel, whether or not with the increase in wind around the United States, whether or not there are manufacturing capacity issues that is stretching out the deliverability?
- A. Yes. I believe -- the answer is yes, I know there are, and yes, there are. It's similar to what I discuss regarding the manufacturing constraints on coal. There are similar constraints on wind. I've seen estimates that they expect the manufacturing capacity for wind turbines to open up by 2010, but right now, yes, there are.
- Q. And do you understand, if you know, is there some "not in my backyard" backlash against

large wind farms in populated areas?

- A. Yes, in some areas indeed there are.
- Q. What about several hundred megawatts of biomass; how long do you think that would take?
- A. I don't know. I would imagine it would probably be the same, maybe a little longer.

EXAMINER PRICE: Mr. Bentine, I have a couple questions about wind, I was going to save them to the end, but now seems an opportune time.

Is it your understanding, it's my understanding, is it your understanding that AMP-Ohio operates a 7.2 megawatt wind farm? Is that correct?

THE WITNESS: I'm not sure of exactly the size of the wind farm they operate.

EXAMINER PRICE: Do you know how many other wind farms are in this state?

THE WITNESS: I believe there's only a very small amount of wind in the state of Ohio. For some reason 9 or 10 megawatts comes into my mind.

It's pretty small.

EXAMINER PRICE: And in your testimony you are recommending that a substantial portion of the power generating station could be replaced by wind power.

THE WITNESS: No.

EXAMINER PRICE: I misunderstood that.

that a portfolio of approaches needs to be looked at that would include energy efficiency, wind, and to the extent necessary gas capacity, and biomass, but that I'm not sitting here saying you can replace a thousand megawatt coal base-load plant with wind.

No, I'm not making that position.

EXAMINER PRICE: One more wind-related question.

THE WITNESS: Sure.

EXAMINER PRICE: In your testimony I think you disputed or at least you said that the 25 percent capacity factor that AMP-Ohio says it's currently getting on wind, that they could do better with that with current technology. What would be the capacity factor that you believe they can achieve?

THE WITNESS: We're seeing wind turbines achieving 35, 40 percent capacity factors. Again, it depends on the wind regime. If there's better wind, you get a higher capacity factor.

EXAMINER PRICE: In Ohio.

THE WITNESS: In Ohio? I would say it's

reasonable probably to assume a 30, 35 percent. As I was preparing my testimony I looked at some wind maps of the wind areas in Ohio along the shore of the lake and if you get up to I think it's 80 meters or something like that, there's fairly good wind. Not great wind, but fairly good wind.

EXAMINER PRICE: There was great wind yesterday in Columbus. Thank you.

Mr. Bentine, please proceed.

MR. BENTINE: Thank you.

- Q. (By Mr. Bentine) Just following up, do you know the capacity factor on the AMP-Ohio Green Mountain wind farm in Bowling Green?
 - A. No.
- Q. Do you know what specific site monitoring in terms of projected capacity factors for Ohio wind generation has shown?
- A. I'm sorry, I don't understand the question.
- Q. Have you done specific or are you aware of anyone that has done specific wind monitoring studies in Ohio currently to determine the projected capacity factors of wind?
 - A. No. I attempted to find that data and I

| couldn't.

- Q. Do you know how tall the current AMP-Ohio Green Mountain wind farm is up near Bowling Green?
 - A. No.
- Q. Would you accept, subject to check, it's the only commercial wind farm in Ohio?
 - A. Sure.
- Q. In terms of a, and I know you don't promote it necessarily, but how long from the light going on in your head to flipping the switch and it comes on would it take, in your estimation, to put up a 600-megawatt integrated gasification combined cycle unit?
- A. I think you and I talked about, during my deposition, a coal plant of roughly eight to ten years. I said, "Eight to ten," and you said "Eight?" as if it was too short. I think that siting an IGCC plant is the same.
- Q. And would you agree with me that over that time in a planning horizon, before the light goes on in someone's head and the switch being flipped on a coal-fired power plant or a coal power plant that utilizes IGCC, that one would expect that there would be increases in the estimated

1 construction cost? 2 Α. Yes. 3 MR. BENTINE: Your Honor, this is a 4 convenient breaking point for me, but I'm happy to go 5 We've been going a couple hours. 6 EXAMINER PRICE: No; I think it's a good 7 time for a break. Let's reconvene at 5 after 3 8 according to this clock, however accurate that might 9 be. 10 Thank you all. 11 (Recess taken.) 12 EXAMINER PRICE: Let's go back on the 13 record. 14 One more item on energy efficiency. Q. Are you familiar with the Vermont Energy Investment 16 Corporation? 17 Α. Yes. 18 And what do you know about them? 19 I work with them on a number of projects Α. 20 looking at the potential for energy efficiency. 21 Q. And would you call them a national leader 22 in energy efficiency programs? 23 Sure. They're good folks. I think they Α.

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do fair, good work.

- Q. Fair or good?
- A. Both.
 - Q. Fair and good?
- A. Yep.
- MR. BENTINE: May I approach the witness,
- 6 | your Honor?

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- EXAMINER PRICE: Yes.
- Q. I'm going to hand you a news release,
- 9 Mr. Schlissel. Have you seen that before?
- A. No, I have not. I've heard about it, but
 I've not seen it.
- Q. And what did you hear?
- A. I heard that the AMP had retained Vermont

 Energy Investment Corporation to develop its energy

 efficiency programs for its members.
 - Q. Okay. Did you read the testimony of Mr. Kiesewetter?
 - A. Yes.
 - Q. And Mr. Kiesewetter testified on some of the energy efficiency programs that AMP-Ohio had previously undertaken; is that correct?
 - A. I don't recall that, but I do recall reading the testimony.
- Q. Clear up one other thing. I asked you a

question about the Cleveland power sales contract,
Mr. Schlissel.

MR. BENTINE: May I approach, your Honor? EXAMINER PRICE: Yes.

- Q. I'm going to hand you a copy of what I will represent to you to be the AMP-Ohio Cleveland power sales contract for the AMPGS station and ask you, Mr. Schlissel, is that the contract that you looked at or at least some form of that contract that you looked at in your review of certain documents in connection with this case either from Cleveland or from AMP-Ohio?
- A. Yes, I believe this is -- what I saw, again, is in the back of the initial project feasibility study, at least the document I have is a copy or proposed copy of these contracts and attached agreements. I don't recall that it lists the city of Cleveland on the cover.
 - Q. Okay.

- A. It could, I just don't remember.
- Q. Okay. I have a yellow sticky in there and a paragraph that is marked in there; would you just read that to yourself? I'm going to ask you a question about it after you read it to yourself.

A. Okay.

- Q. Does that paragraph indicate that the participants or at least a supermajority of the participants would have the ability to cancel the project?
 - A. Yes. Under two specific circumstances.
 - O. And those circumstances are?
- A. One is prior to giving a notice to proceed to the primary contractor for the construction, and then second, after such notice but prior to the commercial operation date if in a report to the participants and AMP-Ohio the consulting engineer concludes that AMPGS cannot economically be placed into commercial operation.
- Q. So at any time prior to -- at any time, and if you need it back, I'll give it back to you, if at any time prior to the execution and the notice of the EPC contractor or the notice to proceed the participants would want to cancel this project because of costs or anything else, they could, correct?
- A. A supermajority can vote to do so prior to the notice to proceed, yes.
 - Q. And a supermajority is determined by

- weighted vote of the members according to their take
 out of the project, if you know?
 - A. That's what I believe. To be honest, I wasn't quite sure of exactly how it was calculated.

 I don't think it's in the contract.
 - Q. It would be quite an error if it's not.
 - A. Okay, then I just missed it. I tried to find it.
 - Q. And then after the notice to proceed it could still be cancelled but will require the certificate of a consulting engineer, correct?
 - A. Correct. But obviously an individual member participant can't pull out.
 - Q. Correct.

Let's back up. Part of the reason that you've been retained by NRDC to talk to the Cleveland city council is up until March 1st of this year they can back out; can they not?

- A. Yes. That's correct.
 - MS. JAISWAL: Objection.
 - **EXAMINER PRICE:** Grounds?
- MS. JAISWAL: The basis of Mr. Schlissel is testifying on behalf of NRDC but he is not an NRDC representative and that question goes to NRDC's

motivations for retaining Mr. Schlissel.

EXAMINER PRICE: Well, he might get to that, but he hasn't gotten to that yet. Overruled.

- Q. Mr. Schlissel, do you know whether or not there will be an updated cost estimate from the consulting engineer and the EPC contract -- excuse me, the EPC bidders will have submitted their bids prior to March 1st?
- A. It's my understanding they will be, the contract or some of the documents I read said that a project feasibility study rather than the initial will be completed in February, and I read somewhere else that the EPC bids would be in by that relative time frame as well.
- Q. So, once again, to the extent that costs have exceeded what one otherwise might expect or was comfortable with, each of the communities can either lower their take out of the project or completely get out of the project, correct?
- A. Yes, that's true. But it depends on what information they're provided as to alternatives and what a cost increase means. I mean, to tell them, as a hypothetical, the cost of the project went up by 25 percent may not mean anything to them unless

they're given a sense of what is the cost of the project compared to possible alternatives.

EXAMINER PRICE: Mr. Schlissel, I'm not going to do anything about that prior answer, but generally if he asks a "yes" or "no" question, you should answer "yes" or "no" or explain why you cannot. If there's additional information that needs to be put into the record, your counsel can do that on redirect.

THE WITNESS: Okay. I generally, sir, I wait for the lawyer to tell me I'm going too far, but I'll do that from now on.

EXAMINER PRICE: I'm pretty assertive on the bench.

- Q. Now, Mr. Schlissel, I believe you indicated you don't know much about the corporate governance of AMP-Ohio, correct?
 - A. That's correct.
 - Q. Do you know who sits on its board?
- A. I believe representatives of the participants.
- Q. Representatives of members; would you accept that?
- A. Yes.

- Q. And would you accept that they're elected by the members?
- A. I would assume they are, yes. It's similar to other organizations of public power entities in other states.
- Q. And would you also assume that that same elected board of directors made up of members of AMP-Ohio direct the organization, hire its staff?
 - A. I would expect so, yes.
- Q. Do you know how many engineers there are on AMP-Ohio's board?
 - A. On the board?
 - Q. Yes.

- A. No.
- Q. Do you know how many utility directors and utility professionals there are on the board?
- A. I looked at the members of the board, it doesn't describe their backgrounds. Sorry.
- Q. Let's turn to Exhibit DAS-1. We're going to go through that tedious thing that we did once before here, Mr. Schlissel. I want to start with page 3, the top of page 3 where you start talking about testimony, affidavits, depositions, and comments.

A. That's correct.

- Q. First of all, with regard to the West Virginia Public Service Commission engagement, would you tell me by whom you've been engaged?
- A. The Consumer Advocate division of the commission staff.
- Q. And that case is about a certificate of public convenience and necessity for a 600-megawatt IGCC plant proposed by AEP in West Virginia?
 - A. That's correct.
- Q. The estimated cost of that plant, I believe, as indicated in your testimony in that case was 2.23 billion dollars?
- A. I don't recall, but I'll accept that.

 I'm sure, I mean, I can certainly check it easily enough.
- Q. Is that project designed for carbon capture and sequestration?
- A. No. I mean, it's capture ready, but it doesn't have any capture equipment.
- Q. When you say "capture ready," does that mean that the combustion turbines are designed to accept a hydrogen-rich syngas that has been stripped of CO2?

- A. No. I don't know that. All I know is that a lot of coal plants are called capture ready when all they've done is really allow some space that 10 years, 20 years down the road they may put in some equipment.
- Q. Now, you provided testimony in that case, did you not, that AEP's projections with regard to projected costs of CO2 in the future were too low?

 Correct?
- A. No. Again, it was that they didn't look at a range for that uncertainty.
- Q. We'll come back that, but you also indicated that they had not adequately taken into account projected increases in construction cost, correct?
 - A. That's correct.

- Q. And your recommendation in that case was that if the Commission approves it, that it should cap at current cost estimates any recovery from the ratepayers; is that correct?
- A. That's correct. It wasn't the ultimate -- it wasn't a denial.
- Q. Now, with regard to that recommendation, did that recommendation go to, your recommendation,

- go to capital costs or capital costs and their projected CO2 costs?
 - A. Capital costs.

- Q. So despite the fact that they may have underestimated CO2 cost, you did not recommend, in that case, that the certificate be denied.
 - A. That's correct.
- Q. Did you testify in that case that -well, let's strike that. Let's ask this first: This
 was an Appalachian Power Company certificate proposal
 that was being litigated, correct?
 - A. Yes. That is being litigated, yes.
- Q. And Appalachian Power is a wholly-owned subsidiary of American Electric Power?
 - A. Yes.
- Q. And American Electric Power has over 30,000 megawatts of generation?
 - A. That sounds ballpark.
- Q. Did you recommend that the West Virginia commission condition the certificate in that case on AEP undertaking studies of biomass and wind?
- A. No. My assignment in that case was more limited than in this case.
- MR. BENTINE: I'm going to move to

strike. My question was did he recommend it, not
what his assignment was.

EXAMINER PRICE: Can I have the question

(Record read.)

and answer again?

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Q. Can you answer my question, sir?

EXAMINER PRICE: I have not ruled on your motion.

MR. BENTINE: Sorry.

EXAMINER PRICE: Read it again.

(Record read.)

EXAMINER PRICE: Overruled.

- Q. You indicated earlier in answer to one of my earlier questions that you were independent and you prided yourself on that independence, correct?
 - A. Yes.
- Q. Do you believe that AEP should have taken into account energy efficiency, biomass, and other renewables and as a last resort natural gas combined cycle instead of building that IGCC plant?
 - A. Yes, but --
- Q. I'm satisfied with the "yes,"
 Mr. Schlissel.
 - Let's go to the Iowa Utility Board

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And I believe you said, back on West Virginia, that proceeding is still going on, there hasn't been a decision, correct?

- A. That's correct. The hearings were last week.
- Q. With regard to the Iowa Utility Board, could you tell me, first of all, who you represented?
- A. The office of the consumer advocate that's in the office of the attorney general of the state.
 - Q. And what was the Marshalltown plant?
 - A. 600-megawatt pulverized coal plant.
- Q. And was that plant going to be set up to capture, compress, and sequester carbon dioxide as proposed?
 - A. No.
- Q. In that case that Interstate Power and Light is a subsidiary of Alliant?
 - A. Yes.
- Q. And Alliant is what is commonly referred to as a vertically integrated utility?
- A. Since I'm only answering "yes" or "no," I
 have to answer "no."

- Q. Does Interstate Power and Light, the subsidiary of Alliant, does it own or have control of coal-fired generation?
 - A. Yes.

- Q. Now, in that case what issues did you testify about?
- A. I testified about CO2 costs, construction cost increases, I also presented the results of modeling that Synapse did along with the staff of our client using a capacity expansion model. We looked at -- we changed some of the inputs that the company had assumed to see what plans would be produced by the model.
- Q. And is it true that you found in that case that Interstate Power and Light had not projected CO2 costs at appropriate levels; they were too low?
- A. Again, if I'm limited to "yes" or "no," the answer would be no, that wasn't my testimony.
 - Q. What was your testimony?
- A. It was that they hadn't considered a reasonable range of CO2 costs, they hadn't considered the potential for further increases in construction costs, and that when you put into the model those

different inputs plus a couple of what we consider to be mistakes in the way they input the data, when you corrected all that the model produced least-cost plans that did not include the Marshalltown plant.

- O. Has that decision been rendered?
- A. No. The hearings in that case will not be until next month.
- Q. Let's talk about the next one here, Virginia State Corporation Commission regarding Dominion Virginia Power.
 - A. Yes.

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- Q. And who were you retained by in that case?
- A. Three or four parties including the Southern Environmental Law Center.
 - Q. And do you recall the other parties?
- A. No. I think Sierra Club may have been one of them, but I'm not positive.
- Q. And what was the plant that was proposed there?
 - A. Wise County coal plant.
 - Q. And how big was that?
- A. I think it was on the order of 600 megawatts.

- Q. And that was a PC plant?
- A. It's a circulating fluid bed plant.
 - O. CFB.
 - A. CFB in southwestern Virginia.
- Q. And your testimony in that case was similar, that the ranges of CO2 that they considered were too low and not appropriate and construction cost estimates were too low?

MS. JAISWAL: Objection; vague.

EXAMINER PRICE: Grounds?

MS. JAISWAL: Objection; vague. Similar

to what?

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EXAMINER PRICE: Overruled.

- A. Again, I think if I have to answer "yes" or "no," I have to say "no" because it wasn't just that they were too low, it was that the range wasn't reasonable; that, due to uncertainty, they needed to look at a wide range of CO2 costs.
- Q. But you also found that their range was too low; did you not?
 - A. Yes. Correct. But the issue is a range.
- Q. Now, Dominion of Virginia, they have significant coal-fired generation already?
 - A. Yes.

Q. Let's talk about the Louisiana case with regard to the Little Gypsy -- by the way, let me back up. I apologize.

There has not been a decision issued in that case, correct?

A. That's correct.

- Q. Let's talk about the Entergy proposal to repower Little Gypsy unit 3. Who were you retained by in that case?
 - A. Sierra Club.
- Q. And what was the repowering of Little Gypsy unit 3?
- A. Little Gypsy unit 3 is an old gas-fired power plant that Entergy is planning to repower into a CFB plant.
- Q. Just for the record, would you give your understanding of what a CFB plant is?
- A. It's a plant that has the -- the boiler has a bed of limestone ash in the fuel and you run air through it and, depending on the velocity, it acts as like a fluid, so you get a circulating fluid bed. Generally CFBs, well, to date they've not been built in larger units than like 400 megawatts and they generally can burn a wider range of fuel, they

have -- they're a little less efficient, have higher
heat rates than supercritical PCs, probably
comparable to a subcritical in terms of the
performance.

- Q. Okay. But it combusts the coal.
- A. Oh, sure. I didn't realize that -- I'm sorry if I went into too much detail.
- Q. Now, is your testimony in that case similar?
 - A. Yes. Except --
 - O. Go ahead.

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- A. Except that I addressed economic studies that Entergy had put into the record in my testimony in that case.
 - Q. But you did not recommend the certificate be granted, correct?
 - A. That's correct, based on their studies I did not recommend it.
- Q. Let's talk about the next document, the Arkansas -- and that case still hasn't come out, correct, or has it?
 - A. It has.
 - Q. It has?
 - A. The commission approved the certificate

for the Little Gypsy plant. I understand it's going to court, but the commission has approved it.

- Q. Okay. Arkansas Public Service Commission with regard to Southwestern Electric Power Company's Hempstead coal-fired power plant. What's the Hempstead plant?
- A. It's, again, about a 600-megawatt pulverized coal plant in southwestern Arkansas.
- Q. And who were you retained by for that case?
- A. The commission staff. The staff of the regulatory commission.
- Q. And was your testimony similar in that case?
- A. I'd have to say "yes and no"; if I could explain.
 - 0. Sure.

- A. It dealt with similar issues, but it was not -- the commission staff specifically asked me to review the economics of the proposed plant and I didn't reach a conclusion yes or no as to whether the plant should be built, but I did address the same construction cost issues and CO2 issues.
 - Q. And you found, in your review, that,

again, they hadn't adequately addressed CO2 or increasing construction costs.

- A. That's correct. A lot of the numbers in the case are confidential, so I can't kind of explain my reasoning, but that was a conclusion I reached.
- Q. Now, Southwestern Electric Power is, what is that? Is that an investor-owned utility?
 - A. It's a wholly-owned subsidiary of AEP.
- Q. And, I'm sorry, has there been a decision issued in that case?
- A. Yes. I think two weeks ago the commission voted to approve the certificate 2 to 1.
- Q. Now, let's talk about the North Dakota
 Public Service Commission case that's next listed
 there. That's the Big Stone project?
 - A. Yes, sir.
- Q. And you've had, actually, a number of brushes with Big Stone project, correct?
- A. Yes. It's a project that had seven owners in three states and it's still going on. I mean, the regulatory approvals are still continuing, the issue.
- Q. On the lawyer side somebody would call that a lawyer's dream, but --

A. No; on my side I call it a recurring nightmare.

- Q. Now, what was the Big Stone II generating project?
- A. Again, it's a 600-megawatt pulverized coal plant. Actually, it was originally proposed as a 600-megawatt pulverized coal plant. When each of the cases you're about to ask me about wore on, there were seven proposed owners, two of the seven have since withdrawn and now Big Stone is being proposed as somewhere between a 500- and 580-megawatt plant.
- Q. Now, with regard to the commission case that you cite here, I know there have been several of them, what was the -- let me ask you to strike that and I'll ask it this way: Was your testimony similar in that case with regard to construction costs and CO2?
- A. The answer is yes, and we'll have to explain later. There is an explanation, but the answer is yes.
 - Q. I'm agreeable to it.
- A. There was specific information in that case related to internal estimates that indicated the cost was already higher than the applicants were

acknowledging. So it was different than in a case such as this case where I have no evidence that AMP-Ohio believes costs could be higher. In that case I actually had evidence that the owners had been told the cost would be higher.

- Q. But with regard to CO2, it was similar?
- A. Well, actually, that's even more complicated of an explanation because the state of North Dakota in its infinite wisdom has a statute that says that the company -- utilities cannot consider federal environmental regulations that haven't been passed yet, so the state of North Dakota doesn't allow its utilities to consider CO2. So I filed testimony that included testimony on CO2, but it was stricken and now there's an appeal to the North Dakota Supreme Court which will eventually end up in the U.S. Supreme Court.
- Q. In any of the other cases in which you testified on Big Stone II did you find that their cost estimates with regard to CO2 either inappropriate in terms of range or too low?
 - A. Yes.
 - Q. The Indiana Regulatory Commission.

 Back up. Who did you represent in the

Big Stone cases?

- A. In the Big Stone cases in North Dakota it was, I think the client's name is Dakota Resource Council. And the other cases, South Dakota and Minnesota, it was -- it is Minnesota Center For Environmental Advocacy is one of our clients, the Izaak Walton League.
- Q. And are you still waiting for a decision in the North Dakota case?
 - A. Yes, as I mentioned, if I --
 - O. Go ahead.
- A. Two of the owners withdrew and basically the case is up in the air. It's being litigated again in Minnesota, and once that's done it will be re-litigated in North Dakota. So I get to go to Bismarck, North Dakota, in the middle of the winter.
- Q. By the way, do you know when the light went on and somebody decided it was a good idea to build Big Stone II?
- A. My guess is it was sometime around 2002-2003.
- Q. Let's go to the Indiana proceeding here.

 That was a case brought by Duke Energy and Vectren about an IGCC?

In Re: 06-1358-EL-BGN

108 Α. Yes. 2 And who did you represent in that case? 3 Our clients included the Hoosier, 4 H-o-o-s-i-e-r, Environmental Council, and Citizens 5 Action Coalition of Indiana. 6 And that was a 600-megawatt IGCC? 7 I think you're right. 8 Q. And Duke Energy is a vertically 9 integrated utility. 10 Α. Duke Energy - Indiana is, yes. 11 And it has other coal-fired assets. Ιf Ο. 12 you know. 13 Α. Yes. 14 Now, Vectren has pulled out of this deal; Q. 15 is that correct? 16 Α. Yes. 17 So Duke is pursuing it on its own. 18 That's what I understand. Α. I've not 19 followed in the last six months, but I think you're 20 correct. 21 Ο. The Indiana -- excuse me. In that case 22 you rendered similar testimony with regard to CO2 and construction costs; did you not? 23

Construction costs, again, no.

Construction costs was specific to evidence in that
case and it was confidential. CO2 costs, it was
similar, yes.

- Q. And the Indiana commission has approved a certificate for that particular proposal?
 - A. Yes, they have.
- Q. I'm going to skip one, mercifully, go to Florida Power and Light Company's Glades Power Park.
 - A. Yes.

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- Q. And who did you represent in that case?
- A. My clients, there were three or four of them, the one I recall is Sierra Club.
 - Q. And what was the Glades project?
- A. It was two 960-megawatt coal plants were proposed.
 - Q. And they were PCs?
 - A. Yes.
 - Q. Was your testimony similar in that case?
- A. If I could explain, there were similarities and there were differences. The similarities was the CO2 piece was very close. The differences were I had company economic analyses that I could discuss and could present to the commission and explain what some of the results of the company's

own studies showed.

- Q. So the CO2 testimony was similar, but the construction cost estimates you were able to use the company's data in a different fashion.
- A. I could be wrong, but I don't recall challenging their construction cost estimate. Again it was six, nine months ago. I don't remember exactly everything I testified to in the case, but the main piece of that case was looking at the company's own studies and showing that even if the company was right, the plant wouldn't break even until like 2049 or something like that.

MR. BENTINE: Could I have the question and answer reread, please?

(Record read.)

MR. BENTINE: Thank you. I'll move on.

- Q. The Florida commission denied the certificate in that case; did it not?
 - A. Yes, it did.
 - Q. Is that on appeal?
- A. No, I don't believe it is. I think the company has accepted the order.
- Q. Turn the page, if you would, please.
 We'll skip Michigan. The Minnesota commission,

that's another Big Stone II proceeding, correct?

- A. Yes; that's the case we're back in.
- Q. And the North Carolina commission, who did you represent in that case?
 - A. Southern Alliance for Clean Energy.
- Q. And in that case Duke was proposing two new 800-megawatt supercritical PCs?
 - A. Yes.

- Q. And you had similar testimony in that case with regard to CO2 and construction costs?
- A. Well, the answer is yes with an explanation.
 - O. Go ahead.
 - A. Thank you.

As we discussed during my deposition, in the first phase of the case I testified about, similar as I had testified here regarding construction cost uncertainties and CO2 cost uncertainties, after the record closed the company announced a billion dollar cost increase in the project. The commission reopened the case and in the second part of the case I don't recall discussing either of those subjects. I might have mentioned that there was a potential for further increases,

In Re: 06-1358-EL-BGN

112 but -- so I filed two pieces of testimony in the 2 case; that's why I wanted to explain. 3 And the North Carolina commission has 0. acted in that case? 5 Yes. 6 Q. And they approved one of the units? 7 Α. They've approved one and rejected Yes. 8 one, yes. Q. Half full, half empty. 10 Α. What? 11 Half full, half empty. Q. 12 Α. I know, you would say they approved one 13 and I also wanted to point out they rejected one. 14 0. Thank you. 15 I want to turn back to your testimony 16 now, Mr. Schlissel. 17 MR. BENTINE: May I approach, your Honor? 18 EXAMINER PRICE: Yes. 19 MR. BENTINE: Your Honor, I have a 20 multipage document that's a Synapse Energy document 21 I'm going to ask be marked as AMP-0 10, please. 22 EXAMINER PRICE: So marked. 23 (EXHIBIT MARKED FOR IDENTIFICATION.) 24 Take a moment to look at what has now Q.

- been marked as AMP-Ohio Exhibit 10, please. Have you had a chance to look at it?
 - A. Yes.

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- Q. Have you ever seen this before?
- A. In this form, no, but as a draft, yes.
- Q. And this is a proposal to the city of Oberlin, Ohio, correct?
 - A. Yes.
- Q. And it's a proposal to look at their power supply?
 - A. Yes.
- Q. You know the city of Oberlin has passed an ordinance and signed an agreement with AMP-Ohio with regard to the AMPGS project?
 - A. Yes.
- Q. As a part of this proposal you would be evaluating the AMPGS project?
- A. I guess we would be. We would be looking at the AMP project relative to alternatives.
- Q. And you've already come to a conclusion with regard to the AMP project, have you not, that it shouldn't be granted a certificate?
- A. Until it's compared in a reasonable set of resource plans to alternatives. That's what my

1 | testimony is.

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- Q. I want you to turn to -- well, strike that. Let me ask this: You were proposed as one of the analysts on this particular project; were you not?
- A. That's correct. We were contacted by the city of Oberlin who asked us to submit it.
- Q. I want you to turn to the last page, page
 - A. Sixteen? Okay.
 - Q. And that is a scope of work and a budget?
 - A. Yes.
 - Q. Would you read line 2?
 - A. "Review AMPGS project analysis data."
 - Q. And how much is proposed for that?
 - A. \$4,800.
 - Q. Well, Mr. Schlissel, if you can come to this board and testify with regard to a certificate for AMPGS with the data that you have here that was sufficient to allow you to form conclusions with regard to AMPGS, why do you need another \$4,800 in this particular proposal to evaluate that same data?
 - A. Because --
 - MR. BENTINE: I'll withdraw that.

115 Α. You don't want me to answer? 2 I said I withdrew it. Ο. 3 Go back to the first page. Α. Of which, my testimony or --5 0. Of 10. I'm sorry. 6 Α. Okay. 7 Q. Same exhibit. Now, that first page 8 indicates that you've also been engaged, and Synapse, 9 to look at possible alternatives for Cleveland 10 instead of the AMP project, correct? 11 Α. Yes. 12 I believe you indicated you received a 13 copy of the initial project feasibility study, 14 correct? 15 Α. Yes. 16 Ο. And you reviewed that. 17 Α. Yes. 18 And you received that -- how did you Ο. 19 receive that; do you know? 20 From counsel. 21 Q. From counsel? Do you know whether or not 22 it arose from a public records request? 23 Α. I don't know exactly how we got it. I 24 assumed he didn't steal it. I figured it had to be

1 | something legal.

Q. Well, there may be something -- no. I'm kidding.

Let me represent to you that this document was included in your NRDC, OEC, and Sierra Club's petition to intervene in this case.

MR. BENTINE: May I approach, your Honor? EXAMINER PRICE: Yes.

MR. BENTINE: I'm going to ask this document be marked as AMP-O 11.

(EXHIBIT MARKED FOR IDENTIFICATION.)

- Q. Now, Mr. Schlissel, does what has now been marked as AMP-O 11, does that appear to be the initial project feasibility study that you saw?
- A. I think -- well, the answer is I think this is the executive summary from the project feasibility study.
- Q. Did you receive the entire study at the time you received this?
- A. Yes. I have a thicker document that has several chapters to it in addition to the executive summary.
- Q. All right. Well, we'll talk about this one right now. I have the thicker document if you

1 | need to refer to it.

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- A. Oh, no, I wasn't saying I needed it. I just wanted to let you know that I had seen more.
 - Q. So what we have here, then, is a portion of, but as far as you can tell an accurate portion of that report consisting of the executive summary.
 - A. Yes.
 - Q. I'm going to ask you a few questions about this document and, again, about when did you get this document?
 - A. I don't remember exactly when I received it. I know I didn't look at it until after I returned from vacation on November 4th or 5th.
 - Q. But you had it prior to preparing your testimony?
 - A. Yes.
 - Q. Would you turn to page ES-2, please?
 - A. Yes.
 - Q. Under History and Development there, what does the -- strike that.
 - Does it indicate that in 2002 AMP-Ohio completed a strategic plan which included a 20-year power supply needs analysis there?
- 24 A. Yes.

- Q. And that led to an identified need for new baseload generating capacity?
 - A. That's what it says, yes.
- Q. And also indicates that a conceptual feasibility study and other studies, including evaluation of baseload power supply options, technology considerations, site alternatives, and fuel availability. Do you see that?
 - A. Yes.

- Q. By the way, do you know whether or not AMP-O's fuel availability study included a determination of biomass, whether biomass was viable?
- A. I think I've seen this study by Sargent & Lundy and I don't recall whether it did or not.
- Q. Would you accept, subject to check, it did include an estimation of biomass availability for baseload in Ohio?
 - A. Sure.
- Q. Do you know what technology considerations were included in that study?
- A. I think it was gas, several types of coal plants I recall.
 - Q. And you saw that study, correct?
 - A. I believe I saw it. I seem to recall

- looking at a Sargent & Lundy report from sometime in that time frame.
 - Q. And in the next paragraph under there there's a discussion, is there not, of certain work that was contracted with Sargent & Lundy in 2003?

 Correct?
 - A. 2003, yes.
 - Q. Now, the report goes on to give a project time line and project description, correct?
 - A. Yes.

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- Q. And it includes an estimated capital cost and financing requirements section?
 - A. Yes.
- Q. And that estimated capital cost exclusive of financing costs is 2.5 billion dollars?
 - A. Yes.
- Q. And this report in June of 2007, was that available to AMP-Ohio's members and participants prior to them being asked to execute a power sales contract?
 - A. I believe it was.
- Q. Okay. On page ES-8 there's an estimated bond amount of 2.9 billion dollars?
 - A. Yes, I see that.

Q. And if you know, were there further breakdowns of the costs making up the 2.9 billion dollars in other portions of the report?

A. I don't recall.

- Q. Do you know whether or not these estimates included escalation costs and contingency costs?
- A. I believe they did, yes. If you look on -- if I might, if you look on page ES-7, you'll see that escalation and contingency for the owner's costs are there and I, maybe I haven't seen it and I was just assuming that the 2.2 billion-dollar capital cost would also include escalation and contingency because it's been in other estimates I've seen.
- Q. And were you able to look at the deposition of Mr. Clark?
- A. I looked at portions of the deposition of Mr. Clark, yes.
- Q. Do you know whether or not he addressed that in his deposition, as to whether there were those costs?
- A. No, but I'd be surprised if they weren't in here.
 - Q. With regard to the technology selection,

do you recall what other technologies were reviewed by Sargent & Lundy?

- A. No. I looked at that study back in November, but, I'm sorry, I just don't recall. I mean, I recall seeing coal and gas, and you've asked me to accept that biomass was in there, but I don't recall what others were in there.
- Q. What I've asked you to accept, just so the record is clear, is that the fuel availability study looked at biomass.
 - A. Oh, I'm sorry. I apologize.
- Q. I just wanted to make it clear, I didn't want you to be under some misapprehension of what I've represented.

Going on in that report --

MR. BENTINE: And, your Honor, some of these charts will be given to you in living color -- EXAMINER PRICE: Thank you.

MR. BENTINE: -- at some point as we discuss these things. So this happened to be -- I knew this one was all public because they made it so, so I copied it in its entirety.

Q. Table 6 in that has projected operating costs; does it not?

122 1 Α. Yes. 2 Q. Now, I want you to turn to page ES-17. 3 Α. Seventeen? Ο. Yes. 5 Α. Okay. 6 ο. And is there a discussion there of 7 AMP-Ohio's current resources? 8 Yes, in the middle of the page. 9 And figure 5, even though it's not in Q. 10 color, contains a projection of projected load and 11 existing capacity resources, correct? 12 Α. Yes. 13 Ο. Now turn to page ES-20. 14 Α. Okay. 15 ES-20 is a description of a development Q. 16 of participant need for the project, correct? 17 I'm sorry, I don't understand what you Α. 18 mean by "development of participant need." 19 ٥. Well, let's go into it. It indicates, 20 first of all, that AMP-O contracted with R.W. Beck to 21 determine long-term power supply plans for 119 of its 22 members?

A. Yes, sure.

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Q. And you have seen at least a smattering

of those power supply plans?

- A. Well, I think six.
- Q. Six? And if you know, with regard to Attachment C of those power supply plans, was your counsel given the 113 you didn't see?
- A. I'm sorry, I'm confused by the -- I don't -- Attachment C --
- Q. Not to this study, but to the power supply plan.
- A. I'm sorry, I don't recall what Attachment C is. If you show me an example, I might remember, but I just don't recall what it is.
 - Q. We'll get to that in a bit.
 - A. Okay.
- Q. Let's go on here one exhibit at a time.

 But you have seen at least the Cleveland
 and some other power supply plans.
 - A. I think six.
- Q. Now, if you go on down to the next-to-the-last line and the sentence beginning on the next-to-the-last line, that sentence indicates there were generating resource options included in the study including generic baseload coal, natural gas-fired combined cycle, peaking resources, AMPGS,

- Prairie State Energy Campus, and some proposed

 AMP-Ohio hydroelectric plants as well as future wind,
 correct?
 - A. That's correct.

- Q. At least this would be some evidence that AMP-Ohio considered some alternatives, wouldn't it?
- A. Are you referring to the future wind as some alternatives?
- Q. I'm referring to all of those as alternatives, sir.
- A. Okay, yes, they looked at a -- I never said -- the answer is yes, they looked at alternatives.
- Q. Let me ask this: Did you find any fault with the conclusion by R.W. Beck or AMP-Ohio or going back to Sargent & Lundy that there was approximately a 2,000-megawatt hole in AMP-Ohio's power supply in terms of baseload?
- A. I thought the 2,000-megawatt hole was for the regional. If I'm wrong, I'm sorry, I thought the 2,000-megawatt hole was for the region and that this plant was to supplant market-based purchases.
- Q. You say you believe that the 2,000-megawatt hole was regional?

A. Yeah. I recall one of your witnesses talked about the most recent NERC filing for the region and discussed a capacity deficit of 2,000 megawatts. I don't recall which one of your witnesses, but I do recall -- I'm pretty sure it was in the testimony that one of your witnesses filed.

- Q. Would you turn to page ES-23.
- A. ES-23?

- O. Uh-huh.
- A. Okay.
- Q. Would you read the paragraph beginning "In summary"?
- A. Okay. I'm not -- maybe that's where I read it. I'm not taking issue with the need or the magnitude of the need.
- Q. Well, Mr. Schlissel, you're suggesting that this plant should be turned down because we didn't consider energy efficiency. Can we energy efficiency ourselves out of a 2,000-megawatt hole?
- A. No. And could we look at the conclusion

 I actually reached on the last page of my testimony

 to see --
 - Q. We can look --
 - A. -- to see what my conclusion is?

| 1 | MR. | BENTIN | NE: I' | 11 | move | to | strike | that. |
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| 2 | EXA | MINER I | PRICE: | Su | ıstain | ıed. | | |

- Q. Is it reasonable, in your estimation, to think -- well, strike that. Let me ask this: You are aware, are you not, that AMP-Ohio is aggressively pursuing hydroelectric capacity and energy?
 - A. Yes.
- Q. And if you know, are we pursuing it to about the greatest extent possible?
 - A. I believe that's true.
- Q. And we are also suggesting to our members that they should sign up for as much of that as we can get?
- A. I don't know about the discussions between AMP-Ohio and the members, but I'm willing to accept that that sounds reasonable.
- Q. Well, we've included slices of that hydro in all of our power supply recommendations that I believe you've seen or had access to, at least six of them, haven't we?
- A. I don't recall whether there was hydro in all of them, but, again, I'm willing to accept it.

MR. BENTINE: May I approach, your Honor?

EXAMINER PRICE: You may.

1 MR. BENTINE: We'll get some color 2 charts. 3 We're up to 12, I believe. This would be AMP-0 12. 5 (EXHIBIT MARKED FOR IDENTIFICATION.) 6 (Discussion held off the record.) 7 Q. I'm showing you a document that has now 8 been marked as AMP-Ohio Exhibit 12, and by the Bates 9 stamp CWS 00220 I will represent to you that that is 10 a document that was made available to your counsel 11 and copied to your counsel, and I'll also indicate 12 that this is one of the six that I believe you've 13 reviewed. 14 Yes, I have looked at this. This was 15 provided after I filed testimony, but yes, it was 16 provided. 17 I want to ask you to, first of all, turn ٥. 18 to the third page of that presentation. 19 Α. Okay. 20 First of all, do you have any disagreement with the definitions for baseload, 21 22 intermediate, and peaking that is on that slide?

A. No disagreements. I think intermediate power is not necessarily limited to 5 by 16, it could

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be different hours, but generally this is right.

- Q. And would you also agree that the sample load duration curve on the next page is a typical load duration curve that is utilized for power supply?
 - A. Yes.

- Q. I want you to turn to the next page. In percentage terms would you agree that this page displays that currently AMP-Ohio is on the market for 62 percent of its baseload needs?
 - A. Yes.
- Q. And would you also agree that, with regard to the next slide, that that slide shows that AMP-Ohio is on the market for 95 percent of its intermediate needs?
 - A. Yes.
- Q. Would you also agree on the next sample load duration curve and, I'm sorry, these pages aren't numbered. Yes, they are. CWS 00229. They are numbered.
 - A. Yes, I'm there.
- Q. That with regard to the intermediate, that that intermediate load is currently closely tied in terms of market price to natural gas? If you

know.

- A. That's correct, but some baseload also is natural gas. Gas CCs are baseload as well.
- Q. Are you aware of any natural gas combined cycle that is currently being used in Ohio for baseload?
- A. No. There's a glut of CC in the area is my understanding.
- Q. So the answer is no, you're not aware of any that's being used in Ohio.
 - A. That's correct.
- Q. Are you aware of any natural gas combined cycle in Michigan, Indiana, Kentucky, West Virginia, or Pennsylvania that's being used for baseload?
 - A. No.
- Q. Now, would you turn, please, to CWS 00235?
 - A. 235, okay.
- Q. And that slide shows, does it not, an identified need for 2,000 megawatts of additional baseload capacity within the membership by 2012-2013?
- A. That's correct. I must have been wrong about the 2,000 being the regional.
 - Q. Now, you're aware of the approximate

- magnitude, are you not, of AMP-Ohio's peak load for its members?
 - A. 3,200 megawatts, I think.
 - Q. That's a significant deficit in baseload generation; is it not?
 - A. That's correct.
 - Q. Now, the next slide is 00236; would you turn to that?
 - A. Yes.
 - Q. Would you have any disagreement with this power supply strategy that's stated there?
 - A. No.

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- Q. Would you turn to the next page, please?

 Now, that sheet shows what is titled a Balanced

 Portfolio Timeline; does it not?
- A. Correct.
- Q. And that shows additional wind and landfill gas resources?
 - A. Correct.
- Q. It shows current wind resources; does it not?
- A. Correct.
- Q. It shows additional hydro?
- A. It does include some, the magnitudes are

less than the coal, but it does.

- Q. Well, we'll get to the hydro later and how much might be available. It also shows the shutdown of an existing -- the Gorsuch plant we talked about earlier; does it not?
 - A. Yes.

- Q. And would you turn to the next page?
- A. Okay.
- Q. And that shows a projection of market power after the in-service date of AMPGS; does it not?
 - A. Yes.
- Q. And that shows that, at least that projection shows that we would still be on the market for 13 percent of our baseload needs after the in-service date of the AMPGS project.
 - A. That's what it shows.
- Q. Now, I'm going skip a few pages. Turn to page 260, CWS 260.
 - A. 260, yes.
- Q. And this chart should be familiar to you. This is an R.W. Beck chart?
 - A. Yes.
 - Q. And that shows projected annual power

costs out of AMPGS with no CO2.

A. Yes.

- Q. The next page shows the projected, again, the R.W. Beck numbers showing the projected annual power costs of AMPGS versus market with CO2. Do you see that?
 - A. Yes.
- Q. Back to your testimony, again, your argument -- your conclusion, excuse me, your conclusion is that AMP-O's estimate was too low and didn't use a wide enough range of potential CO2 costs, correct?
 - A. That's correct.
- Q. Now, I want to point you to the top black line there. That top black line has indicated that's the projection of average market price. Do you see that?
 - A. Correct.
- Q. To the extent that CO2 costs in the future are greater than that projected by R.W. Beck, would one expect that market price line to at least move in the same direction?
 - A. Yes.
 - Q. So if one were to, in fact, do you know

- what R.W. Beck projected on that for every \$10 increase in CO2 cost, what the market price would move?
 - A. I don't recall the number.
 - Q. Well, hypothetically let's say it's \$7, something less than the 10. Let's just pick a year here. In 2025.
 - If the CO2 cost went up \$10 from 83 to
 - A. Okay.

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- Q. -- first of all, it would still be under the projected market price at that time, correct?
 - A. Other things remaining equal, yes.
- Q. And if, indeed, there was movement of market prices that were in the same direction as increases in CO2 costs, one would expect that 97 to be something higher than 97; would it not?
 - A. Correct.
- Q. Now, are you familiar with R.W. Beck's beneficial use analysis?
 - A. I've looked at it.
- Q. And while you may not agree with the inputs and what they did, it did attempt to look at risks and costs into the future and minimize those;

did it not?

A. Well, you should have the R.W. Beck people testify as to what they tried to do. I looked at the analysis and wanted to try to look at the underlying data for it and wasn't able to do so.

MR. BENTINE: May I have my question reread?

(Question read.)

- Q. Can you answer my question?
- A. And I can't answer what they attempted to do.
- Q. You looked at the power supply plans; did you not?
 - A. Yes.
- Q. Did the power supply plans not have in it an analysis of risks and costs into the future?
- A. Well, yes, that's the way you do a plan is you analyze the costs into the future.
- Q. And in any of the power supply plans that you looked at did the risks and costs go down with AMPGS according to R.W. Beck?
- A. I think, if I might, I think you're getting the two documents confused. I think that the beneficial use analysis you're talking about is not

in the power supply plans. I think that's in the project feasibility study.

- I'll stand corrected.
- A. So that I think we need to put the two of them -- separate them and talk about them.
- Q. Let's talk about the feasibility study and the beneficial use analysis.
 - A. Okay.
- Q. I apologize. You're absolutely correct, sir.

Didn't the beneficial use analysis that was part of the feasibility study show that for at least the ones you examined, those six, there was a decrease in risk and a decrease in cost for those folks getting onto AMPGS?

- A. And that's Beck's conclusion, yes.
- Q. And that conclusion was confirmed by the Burns & Roe report for the city of Cleveland that you cite liberally in your testimony; was it not?
- A. In terms of the project cost estimate, yes.
 - Q. Let's go back to AMP-O Exhibit 11.
 - A. Eleven?
 - Q. Turn to page ES-25.

- Α. Okay.
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- Α. That's what it says, yes.
- Q. And on page 31 --

- Starting at the bottom of page 25 and going on over to the next page there is some discussion of what we were just talking about with regard to costs and risks, and would you read on page 26 the conclusion there under figure 8?
 - Α. Okay.
- And it indicates that, based on that power supply analysis, projected power costs for every AMPGS participant are lower under the portfolio of AMPGS than the existing portfolio, correct?
 - Α. That's what it says, yes.
- And following then on page 27 is an explanation of how costs and risks were interrelated and taking into account in R.W. Beck's stochastic analysis, correct?
- That's what it describes. That's what Beck describes here, yes.
- And then following in the next several Ο. pages is an explanation of the qualitative and quantitative risks that R.W. Beck took into account, correct?

A. Thirty-one.

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- Q. -- those bullets there under Quantitative
 Risk Assessment, the second bullet is construction
 cost risks, correct?
 - A. Correct.
- Q. And the fourth bullet is environmental cost risks, correct?
 - A. Correct.
 - Q. And that includes CO2?
 - A. That includes CO2.
 - Q. Turn to page 6 of your testimony, sir.
- A. Six. Okay.
- Q. Now, in the answer beginning on line 12
 you discuss risk and then further on down in that
 same answer you talk about a number of risks
 including costs and restrictions on CO2 emissions and
 fuel prices. Do you see that?
 - A. Yes.
- Q. Would one also consider market risk in such an evaluation?
- A. If you were going to consider buying from the market, sure.
- Q. Well, let me explore that a moment. You said if we want to consider buying from the market.

If AMP-Ohio's members don't come up with some generation resources, they're going to have to buy a lot from the market, aren't they?

- A. That's correct. As I said to you before, I'm not sitting here saying don't do anything. I don't think that buying from the market long-term is a viable strategy, a prudent strategy. I'm not saying don't do anything.
- Q. Do you think reliability risks should be included in the analysis that you're talking about here?
 - A. Sure.

- Q. Do you think that spreading risks across technology so that you don't have all your eggs in one basket is an appropriate risk to take into account?
- A. Sure. It's usually talked of in terms of fuel diversity, but yes, absolutely.
 - Q. Turn to page 7 of your testimony.
 - A. Seven? Okay.
- Q. On line 26 you use the term "other available alternatives." Are those the alternatives we talked about earlier, the wind, biomass, and possibly natural gas combined cycle?

- A. And energy efficiency. Yes, that's the range of alternatives.
- Q. Tell me this, Mr. Schlissel, do you really believe that the 2,000 baseload megawatt hole faced by AMP-Ohio and its members can be filled with renewables, energy efficiency, biomass, and natural gas combined cycle?
 - A. There was one we left out.
 - O. Wind.

A. Repowering. And renewables.

Do I? Yes, I -- do I think there's a possibility? Yes. Have I done the study? No. So I can't sit here and say yes there's an alternative.

Do I think there may be a portfolio of alternatives?

Yes. I think it should be studied, and if the answer is no, there's no alternative that can fill that hole and that AMPGS is the most economic, lowest-risk option, then you should get a certificate.

- Q. How much wind do you think -- you have in your testimony an estimation that your firm had done some time ago about how much wind was available in Ohio.
 - A. Yes. We indicated 900 megawatts.
 - Q. 900 megawatts. Do you know of the total

- load in Ohio, do you know what approximate percent
 AMP-Ohio members in Ohio represent of that total?
 - A. No, I don't know that number. I imagine it's not minor, but it's -- Ohio's probably got a much larger load than 3,200 megawatts.
 - Q. Well, just to make it clear, AMP-Ohio's 3,200 megawatts is in all five states.
 - A. I understand that. But I assume Cleveland and the area and some of the other AMP-Ohio members in Ohio are larger cities.
 - Q. Well, let's explore that. Let's talk about Cleveland for a moment. Do you think Cleveland serves the entire city of Cleveland?
 - A. No. FirstEnergy serves a lot of the city of Cleveland.
 - Q. And CPP has door-to-door competition with FirstEnergy; does it not?
 - A. That's correct.
 - Q. And while we're doing this study on wind and biomass and those sorts of things that may take four years for the wind maybe, or five, as you said, or eight years for something longer, is Cleveland going to be stuck on the market?
 - A. I hope not.

| Q. | Do y | ou know | what | happer | ns to t | he city | of |
|-----------|---------|---------|-------|---------|---------|---------|-------|
| Cleveland | Public | Power | if th | e rates | s of Fi | rstEner | gy |
| for any s | ustaine | d perio | d of | time a | re lowe | r than | CPPs? |

- A. I imagine they're in trouble. I imagine they lose customers, but the same would happen if AMPGS is built and the capital cost is higher and their CO2 costs are higher.
- Q. What is Cleveland in this project for?

 Do you know?
- A. Is it 80 to a hundred megawatts? Something in that range.
- Q. Do you know what their projected peak load is in 2013?
- A. I'm sure it's in the power supply plan, but I just don't recall the number.
- Q. Your belief is that there is less risk associated with biomass and wind to serve that baseload need?
- A. No. Absolutely not. That's not my position. My position is the risks, full range of risks need to be studied to determine what is the lowest-risk plan.
- Q. Tell me this, sir, when do you stop studying those alternatives?

| | A | . Whe | en y | ou do | a | full | rang | ge o | of ris | sk | |
|---|-----|-------|------|-------|------|------|------|------|--------|---------|----|
| analysis. When the world changes, you acknowledge | | | | | | | | | | | |
| that | the | world | is | chang | jing | and | you | do | your | studies | to |
| view | the | world | as | it is | to | day. | | | | | |

- Q. And how often do you update those studies when you're building something?
- A. Well, if your cost goes up, I assume that prudent management updates its studies periodically.
- Q. And those updates of those studies would, again, go back to a full panoply of site investigation, full diversity and availability, technological choices, every time?

MS. JAISWAL: Can I have the question read back, please?

(Question read.)

MS. JAISWAL: Thank you.

- A. Depends on -- no, not every time. What you study depends on the magnitude of the change and circumstance that you encounter.
- Q. Now, let's go back to the wind just a moment. You indicated that there was 900 megawatts available in Ohio. What was the capacity factor that was used in that estimate; do you recall?
 - A. I don't recall. It was a 2001 study that

was done, actually done at Synapse before I got there. I don't know the numbers that were used in there. And I didn't say that there's 900 megawatts of wind. I actually indicated during my deposition that newer numbers may actually be somewhat lower.

- Q. Now, let's go back for a moment. I'm going to represent -- would you accept, subject to check, that AMP-Ohio's load in Ohio is less than 10 percent of the load? Less than 10 percent of load, less than 10 percent of customers?
- A. I'm sorry, less than 10 percent of the load of the state?
 - Q. Yes.
 - A. I'll accept it subject to check, sure.
- Q. Now, how much, if there is, say there is 900 megawatts of wind available in Ohio, how much do you think it would be prudent for AMP-Ohio to try to tie up?
- A. Well, you'd have to do a system integration study to determine how integrating the wind fits into your member systems first. It's not strictly an economic question, it's a technical issue as well. And you'd want to do an economic study.

If, in fact, wind was the most -- excuse

- me. If, in fact, wind was the lowest-cost option,
 then your members should try to get as much of the
 wind as they can.
- Q. Mr. Schlissel, AMP-Ohio is pursuing wind;
 is it not?
 - MS. JAISWAL: Asked and answered.
 - A. Some wind, yes.

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- Q. Do you know how much?
- A. We went over -- it's on one of those slides.
- Q. Yes, up to a hundred megawatts of wind and landfill gas.
- A. I don't know how much is wind, how much is landfill gas sitting here. I don't recall seeing that number.
- Q. We've established that AMP-O is pursuing hydro, correct?
 - A. We agreed upon that before, yes.
- Q. And we've established that they're pursuing at least some amount of wind, correct?
 - A. Some amount of wind.
- Q. Do you think in the pursuit of the hydro and the pursuit of the wind that we have some idea what those things might cost?

A. I can't answer that question because I asked for information about it and don't have that information.

MR. BENTINE: I move to strike.

EXAMINER PRICE: Sustained.

Actually, let me rephrase that.

Everything after "I can't answer that question"

8 | should be stricken.

While Mr. Bentine is contemplating his next question, his previous line of questions raised an issue that I've been wondering about so I'm going to interject here. You indicate in your testimony that construction costs for coal power plants are escalating, correct?

THE WITNESS: Yes.

EXAMINER PRICE: And you indicate in your testimony that there is no end in sight for those escalating costs, correct?

THE WITNESS: Correct.

EXAMINER PRICE: If AMP-Ohio were to undertake further studies would that not expose them to greater escalating costs if they delay AMPGS or whatever they're going to do for two or three years while they do further studies, won't they just be

farther down the line in the escalating costs? 2 THE WITNESS: That's a possibility. 3 There may be higher costs, but it may be that by 4 comparing the cost escalation of coal and gas and 5 other alternatives and seeing what happens with federal CO2 regulation, that it may be that coal 7 plant is not the most economic choice. 8 EXAMINER PRICE: And what standard would 9 you recommend the Board use to make that decision? 10 THE WITNESS: What standard? 11 How should the Board EXAMINER PRICE: 12 resolve this conundrum that you're posing? 13 THE WITNESS: Ask them to do new studies 14 quickly. 15 EXAMINER PRICE: And what would be the 16 reasonable time frame to complete those studies? 17 THE WITNESS: Three to six months. 18 EXAMINER PRICE: Three to six months? 19 THE WITNESS: Six months. Do studies, 20 look at a wider range, come back, and if it's still 21 the most economic option among likely alternatives, 22 approve the plan. 23 EXAMINER BOJKO: And in your discussions 24

with Mr. Bentine you were talking about continued

studies. Are you suggesting that once they start building the plant that you halt construction to do more studies?

THE WITNESS: No. No. No. No. Not at all, ma'am. I think we were talking -- Mr. Bentine was posing the hypothetical what happens if two years, I'm putting some words in his mouth and I apologize, but if two years down the road they find out the cost of the plant is going up by 15 percent, should they reevaluate it then? The answer is they should think about it. It depends on what the magnitude of the cost increase is.

EXAMINER BOJKO: So even though they've started construction they should stop constructing because costs have gone up and reevaluate the situation and determine to continue to move forward or not?

THE WITNESS: Correct. That's what happened with a lot of the nuclear power plants in the '70s and '80s and '90s is that even though a huge amount of money had been spent -- the Zimmer plant in this state by Cincinnati Gas & Electric, even though a huge amount of money had been spent already, it was more economic not to finish the plant.

Now, I'm not proposing that for the coal plant at all. I'm just saying that I believe prudent management in light of changed circumstances reevaluates its plan, and that I believe the circumstances I set forth in my testimony on CO2 costs and capital costs are dramatically changed circumstances and that perhaps to avoid a train wreck down the road it's prudent to step back and to say "Have we looked at all the risks?" and then proceed.

EXAMINER BOJKO: Thank you.

EXAMINER PRICE: Thank you, Mr. Bentine.

Q. (By Mr. Bentine) Is it your testimony that AMP-Ohio -- strike that.

Your testimony is you don't believe, based on what you've seen, that AMP-Ohio has evaluated those different alternatives and those different costs, correct?

A. No. I understood you most of the way.

It's not my testimony other than energy efficiency
that AMP-Ohio hasn't looked at alternatives. You and
I have gone and explained they have looked at
alternatives.

It's my testimony that sitting here today in 2007 there's significant risk associated with CO2

and capital costs that warrant examination, full examination, of those risks.

- Q. Now, let's go back to capital costs for a second. All those other alternatives that we have talked about have not escaped significant capital cost estimate increases; isn't that true?
 - A. That's correct.

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- Q. And would you also agree with me that, for example, wind is more capital intensive than a coal-fired plant?
- A. No. Well, it depends on how you define that. Wind capital costs are not the same -- are lower than coal capital costs but they basically, wind has no fuel costs so it's fixed O&M and your capital costs.
- Q. Let's ask it this way: Per available megawatt on baseload -- strike that.

Let's ask it this way: Would you agree that to be considered a baseload resource wind must be paired with something else?

- A. That's correct.
- Q. Wind's not dispatchable.
- A. That's correct.
- Q. Wind can't follow the load.

- A. That's correct. It's intermittent.
- Q. In order to be sited, wind of any substantial size must be located in a place that it can be connected to a transmission system?
 - A. Correct.

- Q. It's got to get into the grid somewhere.
- A. Correct.
- Q. In order to make wind a baseload resource for Ohio, what would you think we need to pair it with?
- A. You might pair it with some of the hydro you're looking to build. Xcel Energy is pairing hydro and wind as baseload. You might pair it with gas capacity so that you would have the wind operate as much as possible so you don't incur the high gas fuel price costs for -- you have the gas capacity operate less.
- Q. What kind of gas? Just straight combustion turbines?
- A. No. Because you're talking baseload, you'll probably want to do CCs.
- Q. Let's take the hydro example. Have you studied the capacity factors and the seasonal availability of making megawatt-hours from the

- run-of-the-river projects that are available in this
 area of the country?
 - A. No, I've not done a study. I've said that several times.
 - Q. Well, you're aware that AMP-O has done studies on hydro; has it not?
 - A. On hydro and wind, I wasn't aware that they looked at that study, a hydro-wind combination.
 - Q. That's not what I asked you.
 - A. I thought it was.

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- Q. I said it had studied hydro.
- A. And I said I hadn't seen it, and you said, well, accept subject to check it had been done, and I said "yes."
 - Q. Well, do you know what the capacity factors on run-of-the-river hydro are at least on the Ohio River?
- A. No, I haven't looked at that data.

 Sorry.
 - Q. And are you aware that AMP-Ohio is pursuing natural gas combined cycle?
 - A. Yes, I've seen some references to it.
- Q. So what else do you want us to analyze, sir?

| A. I want you to analyze take the |
|---|
| resource plans with a wider range of CO2 costs and |
| the possibility of higher capital costs and include |
| what Vermont Energy Investment Corp. tells you is the |
| potential for energy efficiency, put that into your |
| studies and see what plans it produces for the |
| members and for AMP-Ohio. |

- Q. Let's go back to your testimony, I think that would be good for both of us. Page 10, please.
 - A. Okay.
- Q. Now, on page 10 you indicate a number of cancellations of power plants beginning with your answer on line 5; is that correct?
- A. No. This page is referring to instances where companies have announced that they're not going to undertake new coal plants. It's not a cancellation.
 - Q. I'm sorry. I misled you.

Nonetheless, we'll talk about it anyway. The first one is a recently filed resource plan in Colorado, Xcel announced that, and then you quote, that they're not proposing any new coal-fired generation facilities.

Did you know Xcel Energy -- what exactly

153 1 is Xcel Energy? 2 It's a large holding company. Xcel owns, 3 I think it's either Northern States Power - Xcel Energy in Minnesota, and Public Service of Colorado 5 in Colorado and New Mexico. 6 And it has a large generation portfolios; 7 does it not? 8 It has load and it has generation. 9 And Idaho Power? Q. 10 Same, it has load and generation. Α. 11 ٥. And Minnesota Power? 12 Α. Load and generation again. 13 Avista Utility? Q. 14 Avista is in the northwest, it has load Α. 15 and generation. 16 Has a significant amount of hydro up 17 there too, doesn't it? 18 I'll bet, yes. 19 Now we get to the cancelled. The first Ο. 20 one you mention here is Tenaska? 21 Α. Yes. 22 ٥. Does Tenaska have a load, sir?

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They're a merchant. They were

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No.

selling into the market.

- Q. And Westar Energy?
 - A. It has load and capacity.
 - Q. And it indicated it was deferring?
 - A. Yes.

- Q. You quote, and I always find this interesting and I'm sure you'll have an answer, but you quote this president, I guess it was president of Westar --
 - A. Yes.
- Q. -- the company explained in any event that the coal-fueled power plant equipment's at full capacity and, therefore, costs continue to escalate. With all these cancellations do you think that maybe that capacity is easing at least domestically?
- A. The answer is maybe, but you've got a set of nuclear power plants that are coming down the road, you've got competition from the chemical industry, the refining industry. So I think the answer is yes, it may lighten a bit, but everything I've seen is that the resources are so strained -- constrained now that I don't think that these delays or cancellations will affect much likely future escalation.
 - Q. Well, if all these coal plants are being

cancelled at least domestically, and I believe your testimony indicates they are 20, 25 years away from any significant nuclear generation, what's going on in all the boiler shops around the United States?

A. Well, it's not -- the boiler shops around the United States are designing plants for China and India and for the U.S., they're designing nuclear plants because to have a nuclear -- and they're starting to line up manufacturing slots for the nuclear plants.

So there's plenty of work going on in the -- you said "boiler shops." I think you meant the EPC contractors. But there's plenty of work for them, and everything indicates that that workload is not limiting because while you've got 20 new coal plants being cancelled in 2007, you've still got 130 planned for the next 15 years.

Q. Now, you discuss Xcel then, next, and that was an IGCC plant that was cancelled, correct?

Or deferred indefinitely.

A. Yes, sir.

MS. JAISWAL: If you could please identify where you are for me as well.

MR. BENTINE: Page 12.

MS. JAISWAL: Thanks.

MR. BENTINE: Line 13. Going to line 16.

- Q. TXU cancelled 8 of 11.
- A. Yes.

- Q. And they cancelled that 8 of 11 as part of a settlement for a takeover of TXU by another firm, correct?
- A. A large Wall Street firm, KKR, as part of the buying out, the deal to buy it out, KKR agreed with environmental groups that they would cancel 8 of 11 coal plants.
 - Q. And they're still building three, though.
- A. They're still building three and they're planning to build a couple of nuclear power plants.
- Q. Now by the way, back on that for a moment, do you know whether or not any of those cancelled boilers were going someplace else?
- A. I don't know whether the boilers had been ordered, I don't know whether the manufacturing slots were given up to somebody else, no.
- Q. So you don't know whether or not two of those boilers are going to the Prairie State project?
 - A. No, I don't know that they are or aren't.
 - Q. Now, Tampa Electric, let's talk about

that. Tampa Electric cancelled an IGCC plant?

A. Yes.

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- Q. And what plant was that?
- A. I forget the name of it. It's located by their Polk station which is just north of my in-laws, that's how I know where it is.
- Q. And that was a companion to the current Polk --
 - A. Yes.
- Q. -- IGCC plant that is there and operating, correct?
 - A. Yes, sir.
- Q. Tampa Electric had other generation resources; did they not?
 - A. Yes, load and resources.
 - Q. And TXU had other resources, correct?
- A. I believe that's true. Texas, you know, is deregulated and you have to sell into the market.

 I'm not exactly clear on the relationship of resources and load in Texas.
- Q. But TXU had other resources. They may or may not have had obligations to serve load with those resources, correct?
 - A. Well, they have obligations to serve

- load, it may not be specifically with those resources, but they have load and resources.
 - Q. Tondu Corporation, that's a merchant plant?
 - A. Yes.

- Q. And the Taylor Energy Center, what was that?
- A. It was a, I can't remember whether it was one or two coal plants, and there were four municipal power agencies with load and resources who decided to suspend permitting activities following the denial of the Glades permit.
- Q. And that was JEA, Jacksonville Electric Authority was one of those?
- A. I believe that's true, yes. And Tallahassee I think was another.
- Q. And JEA has significant coal-fired resources currently; does it not?
- A. Yes. And significant load.
- Q. Now, let's go to page 13, line 12. The Oregon Public Utility Commission there, what was that?
- A. Two proposed coal plants by the PacifiCorp subsidiary, I believe it's Pacific Power,

- were rejected on the basis of they hadn't demonstrated a need for the capacity.
 - Q. And who was building that plant? Was that PacifiCorp, you said? I'm sorry?
 - A. I think it was a subsidiary of PacifiCorp, yes.
 - Q. And, again, they've got significant assets in terms of generation and significant load.
 - A. Responsibilities in terms of load, and it's the relationship between the two I think that you need to consider.
 - Q. By the way, of any of these that we've talked about are you aware of any of those that were on the market for more than 60 percent of their baseload needs?
 - A. I've not looked at that, but -- I've not looked at whether they would have to go on the market if they didn't build the plant. They may have decided there were cheaper alternatives.
 - Q. The next one is the Florida Public
 Service Commission, that's the Glades case that we've
 discussed, correct?
 - A. Yes.
 - Q. And then the Oklahoma Corporation

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- A. That's the Red Rock plant.
- Q. Red Rock plant. And what happened there?
- A. The commission found that they hadn't looked at a reasonable range of alternatives including gas. At the commission I talked about concerns about uncertainties.
- Q. And did that commission approve or disapprove the proposal?
- A. It rejected the application for the power plant.
 - Q. Was that a two-unit plant?
 - A. I don't think so.
- Q. And the North Carolina commission, we're talking about the Duke Energy case that we talked about earlier, correct?
 - A. Yes.
- Q. Now, on the next page, the Minnesota

 Public Utilities Commission and Xcel, we talked about
 that previously; did we not?
 - A. No.
 - Q. We talked about Xcel; I'm sorry.
- A. We talked about Xcel in the other state;

 Colorado. This is the same Xcel. They were going to

enter into a purchase power agreement with the proposed IGCC plant. The purchased power agreement had to be approved by the commission.

- Q. And that IGCC plant had not been constructed.
 - A. That's true.

- Q. And who was going to build that plant?
- A. I think it's called Mesaba, M-e-s-a-b-a, Power.
 - Q. And they were building a merchant plant.
- A. Yes; that was going to sell power to Xcel. They still want to build a merchant plant.
- Q. And next you talk about Kansas and that's the Sunflower plant throughout?
- A. Sunflower Co-op is the party seeking to build the plants, yes.
- Q. And in that case the Department of Health and Environment has rejected that application, but that's being appealed; is that correct?
- A. Yes; I understand that there's a dispute in the legislature.
- Q. Let's talk about CO2 forecasts for a moment.

EXAMINER PRICE: Let's go off the record

for one minute.

(Discussion held off the record.)

EXAMINER PRICE: Back on the record.

- Q. I believe I was about to start talking about CO2 cost projections and forecasts. Would you agree with me that with regard to all of the forecasts, whether it's R.W. Beck's or Synapse or MIT or anybody else, that there's no way to tell right now what the right forecast is?
- A. That's correct. There is no right forecast.
- Q. And would you also agree it's impossible to accurately predict what those prices are going to be?
 - A. That's correct.
- Q. Would you agree with me that forecasters with regard to the prices for SO2 when SO2 first became a regulated emission and allowances were available and tradeable, that forecasts were all over the place for what those prices were going to be?
- A. I don't know all over the place. They were higher than they turned out to be.
- Q. Now, you indicate on page 16 in the answer on line 11, you talk about ignoring future

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carbon regulations and indicate that ". . . a utility that ignores future carbon regulations is implicitly assuming that the allowance value will be zero. The question is whether it's appropriate to assume zero or some other number."

Well, AMP-Ohio and R.W. Beck did assume a number, did it not --

A. Oh, sure.

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- Q. -- you just don't agree with it?
- A. Sure. Yes.
- Q. On page 17, on line 8 I'm not sure whether there's a disconnect here or not. You're talking about, in the previous sentence, the Powerspan technology.
 - A. Yes.
- Q. And then you go on, "However, it is expected to be years, if not decades, before there will be viable post-combustion technology for the removal and sequestration of greenhouse gas emissions "

Let's separate for a moment sequestration from removal, and let's just ask for a moment are you talking about Powerspan there or are you talking about all potential technologies for postcombustion

CO2 capture and compression?

- A. All proposed technologies that are being -- all proposed technologies that are being considered today.
- Q. Now, when you say "However, it is expected," is that your expectation or someone else's?
- A. It's my expectation confirmed by others that it will be years if not decades.
- Q. Now, would you agree with me that other folks don't necessarily agree with that?
- A. No. You'd have to show me who believes that there will be a viable technology and I mean commercially, technically and commercially within less than five or ten years at a minimum. I've not heard anybody say that.
- EXAMINER BOJKO: Which do you think it is? That's a big span, five to ten years.
- THE WITNESS: What do I think? I think it will be 10 to 20 years before you actually have operating technology on power plant scales. It certainly is a big range, but the problem is we don't have any tests at power plant size. The Powerspan looks promising, but it's only in a lab.

EXAMINER BOJKO: What does "power plant size" mean to you?

THE WITNESS: 5-, 600-megawatt size plants. That's what they're going to put it on, and larger for like the AMPGS project.

- Q. Well, the AMPGS project is two units, correct?
 - A. Yes.
 - Q. Two net 480s.
 - A. Okay, I didn't -- that's correct.
- Q. Let's talk about that for a second. Now, you have made some predictions, forecasts, let me call them that, on future carbon costs, correct?
 - A. Correct.
- Q. Do you believe that the ultimate level of future carbon costs is going to be influenced in any way by the expectation that it will be impossible to come up with any postcombustion carbon capture technology for 10 to 20 years?

MS. JAISWAL: Could I have the question read back? I'm sorry, Mr. Bentine, you turned away from me.

MR. BENTINE: I tend to pace. I'm sorry. (Question read.)

| 1 | A. I don't understand the question. I think |
|----|---|
| 2 | that the cost of CO2 regulation will be influenced by |
| 3 | the expected cost of carbon capture. So I guess I |
| 4 | would agree with the opposite of what you're saying. |
| 5 | I think that the cost of carbon capture will set a |
| 6 | cap on what CO2 emission allowance prices will |
| 7 | ultimately be. |
| 8 | EXAMINER PRICE: Let's go off the record |
| 9 | for one minute. |
| 10 | (Discussion held off the record.) |
| 11 | EXAMINER PRICE: Back on the record. |
| 12 | MR. BENTINE: I'm not going to get done |
| 13 | tonight. I just thought I would tell you that. I'll |
| 14 | go as late as you want to go. |
| 15 | EXAMINER PRICE: I would like to forge on |
| 16 | to 5:30 at least. |
| 17 | MR. BENTINE: Okay. |
| 18 | EXAMINER PRICE: Then we'll see where |
| 19 | you're at. |
| 20 | Q. (By Mr. Bentine) Page 18 of your |
| 21 | testimony. |
| 22 | A. Yes, sir. |
| 23 | Q. At the top of the page there on line 1 |
| 24 | you say "Even if such technology were available" |

and I believe we're referring to carbon capture -"retrofitting an existing coal plant with the
technology for carbon capture and sequestration is
expected to be very expensive." Do you see that?

A. Yes.

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- Q. Now, do you believe that that's what AMP-Ohio is proposing? We would have a plant that would have to be, quote, retrofitted?
- A. I don't know what AMP-Ohio is proposing in that regards.
 - Q. Let's go on, then.
 - A. Okay.
 - Q. You quote -- well, strike that.

You indicate that it could increase the cost of generating power at the plant by perhaps as much as 68 to 80 percent. Do you see that?

- A. Yes.
- Q. Now, are you talking about AMPGS there, or are you talking about a retrofitted plant? What are you talking about?
- A. I'm talking about studies from the National Energy Technology Lab and MIT and also Duke Energy, this relates to a study that Jim Rogers, the head of Duke Energy, put in testimony in the Indiana

case you and I discussed earlier, which indicate that the cost of electricity from a plant with carbon capture and sequestration, excuse me, carbon capture alone would be anywhere from 68 to 80 percent or higher. That's my conclusion based on those studies.

- Q. Now, did you actually review those studies?
 - A. Absolutely.
 - O. You mentioned NETL?
 - A. Yes.

MR. BENTINE: May I approach, your Honor? EXAMINER PRICE: You may.

MR. BENTINE: I'm going to show him what has previously been marked and admitted as AMP 6.

- Q. I'm going to show you what's been previously marked and admitted as AMP 6. Have you ever seen that before?
 - A. Yes
- Q. Then you probably know that the estimations in here for aqueous ammonia technology are somewhat lower than your prediction, correct?
- A. That's correct. That's not the NETL study I'm talking about. I'm talking about an August 2007 study that is a much bigger study that looked at

- 1 | the range of CO2 capture costs.
 - Q. Let's talk about AMP-O Exhibit 6 for right now if we could.
 - A. Sure.

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- Q. If you recall, and I'll bring this back up, I probably shouldn't have taken it, it talks about carbon capture at \$14 a metric ton and a 21 percent increase in cost of electricity, does it not, for PC supercritical unit?
- A. Correct. Within the context of all the caveats it has about the early stage of the technology, those are the numbers in there, yes.
- Q. And that's quite a bit different than the 68 to 80 that you project, right?
- A. Not that I project, that the studies I've seen including a more recent NETL study project, yes.
- Q. Now, you also quote the MIT study; do you not?
- A. Yes, sir.
- MR. BENTINE: May I approach again, your
- 21 Honor?
 - EXAMINER PRICE: You may.
- Q. I'm going show you what's been marked as
 AMP-O 9, which I will represent to you is a portion

of the MIT "Future of Coal" study. Take a look at that, and you can even look at my cheat sheet there.

- A. You don't have the full study in there.
- Q. I'll readily admit that.
- A. And if you look on page 40, I think it has numbers in the range of what I've talked about.
 - Q. Well, let's look at page x.
 - A. Okay.

- Q. And the middle paragraph there in page x, and what dollar per ton does it have?
- A. It has 25 -- I'm sorry. They're talking -- wait a minute. What you've got here, do you want me -- this paragraph?
 - Q. Yes.
 - MS. JAISWAL: Which paragraph?
- A. They have a range that, it's -- their high range is \$25 a ton beginning in 2015, but that's per metric ton so it's roughly \$22 per ton in 2015, increasing at 4 percent above the rate of inflation.

If you do this in nominal dollars, their rate here is almost exactly the same as our Synapse high rate. I used to have a chart in my testimony that showed that the MIT low and the MIT high were our Synapse low and our Synapse high. I wish I had

included it in here. But basically that's what
they --

MS. JAISWAL: Just for the record, what paragraph is that number?

MR. BENTINE: It was the middle paragraph under "We conclude CO2."

MS. JAISWAL: Thank you.

- Q. Let me show you one other place and I'm going to be referring to the page xi, small Roman Numeral xi. Referring your attention to that paragraph, this has got -- would you just read this paragraph that I've just pointed out there?
- A. Sure. Yes. I actually cite this
 paragraph in my testimony. They say ". . . for new
 plant construction, a CO2 emission price of
 approximately \$30 per ton" -- again, that's metric
 tons so it's roughly \$28 per U.S. short ton -- "would
 make CCS competitive with coal combustion and
 conversion systems without CCS."
 - Q. Please continue.
- A. Okay. "This would be sufficient to offset the cost of CO2 capture and pressurization (about \$25 per metric ton) and CO2 transportation and storage (about \$5 per metric ton). This estimate of

CCS cost is uncertain and might be larger and with new technology, perhaps smaller."

- Q. Thank you. Now, \$25 a ton, metric ton, does not compute to a 60 to 83 percent increase in the cost of electricity out of a PC plant, does it?
- A. That's correct. If you look at page 19, I was wrong before, you look at page 19 of the MIT study, they look at pulverized coal plants and compute the cost of electricity with carbon capture versus without and the numbers are roughly \$40 per ton or higher. And as I mentioned also, the August 2007 NETL study.
- Q. Are you aware of what Powerspan is projecting as its cost per ton of CO2 capture?
 - A. Yes. They're saying \$20 per ton.
- Q. And that's higher than the NETL document that I showed you earlier and a little lower than the MIT document?
- A. No, it's impossible to compare any of them. The NETL study you showed me, AMP-Ohio 6, doesn't indicate what year's dollars the estimate's in. I've not seen any backup for the Powerspan \$20 cost; we don't know what year's dollars it's in at all. So it's apples and oranges until you know

- that kind of information and what's included.
 - Q. Okay. Page 19.

- A. Okay.
- MS. JAISWAL: Is this still his testimony?
 - $\label{eq:mr.bentine} \texttt{MR. BENTINE:} \quad \texttt{Yes.} \quad \texttt{I'm sorry.}$
 - MS. JAISWAL: Thank you.
- Q. Line 8. The last sentence on that line "Regardless, it is imprudent to ignore the risk."

 Again, your testimony is not that AMP-Ohio and R.W.

 Beck ignored the risk. Your testimony is that they didn't fully take into account a wider range of potential costs as well as having projections that were too low.
- A. That's correct. I didn't mean to imply that they had ignored the risks entirely.
 - Q. Turn to page 20 of your testimony.
 - A. Twenty. Okay.
- Q. The sentence starting on line 21 you discuss various provisions to spur technology innovation as well as details pertaining to offsets.

 Let's talk about various proposals to spur technology innovation. To the extent that AMP-O builds AMPGS with the Powerspan system for SO2 removal, do you

believe that it would be a candidate for an early installation of a full-size CO2 CCS system,

potentially?

- A. Well, if you include the word "potentially," you can't answer anything but yes because anything is -- any plant's potentially a candidate.
- Q. And might it be eligible for federal moneys to do so?
- A. I think that's highly unlikely that any -- but it's possible.
- Q. Well, what are you talking about, various provisions to spur technology? That's exactly what the federal government did with regard to IGCC; did it not?
- A. Well, it's what it said it did, but it's not really gotten around to giving the money to companies to build IGCC, that's one of the reasons why some of the plants are being cancelled. But with regards to spurring technology, I was talking about something like, I forget which bill it is, maybe Kerry-Snowe has a portion of the emission allowances would be auctioned and the money would go into a technology fund.

| | Q. | Do . | λoπ | know | whether | or | not | the | state | of |
|---------------|-------|------|-----|-------|---------|------|-------|-----|-------|----|
| Ohio | might | have | ind | centi | ves for | clea | an-co | oal | | |
| technologies? | | | | | | | | | | |

- A. I don't know if they do or not.
- Q. Let's talk about offsets. What do you mean when you say "offsets" here with regard to CO2 regulation?
- A. An offset is -- when you buy an offset, it's a reduction in your emission. So if you buy an offset from an international offset or a noncovered sector, agricultural, basically you emitted 10 tons of CO2 and if you bought 1 ton's worth of offsets, your net emission counting for the whole cap and trade purposes would be 9 tons.
- Q. And all of these different bills have different provisions with regard to offsets and how much offsets, et cetera.
 - A. Correct.

- Q. Now, what about allowance allocation?
- A. What about -- I don't know what you're asking me.
- Q. What do you mean when you have "allowance allocation"?
 - A. Allowance allocation means what portion

will be given to generators for free, what portion would be auctioned. The amount of allowances would be based on the cap. If the cap -- using my hypothetical of 10 tons, if the cap were set when you were at 10 tons, you could either give those 10 tons, 10 allowances, to generators or you could give 5 to generators, auction them, you could give zero to generators and auction all 10. There are various ways of dealing with the allocation of allowances.

- Q. Go back for just a second. Do the bills that are currently pending in Congress, do they only cover electric utility generation carbon?
- A. No. Generally most of the bills in Congress are economywide or at least broader than the electric sector.
- Q. How were the SO2 allowance allocations made?
 - A. I forget how they were initially made.
- Q. Were they initially made based upon a base year of --
- A. Yes. Yes, that's exactly how they were made. And that's how we believe the caps would apply in each of these bills.
 - Q. Tell me this, sir, do you know, if

AMP-Ohio is going to shut down or some of its members are going to shut down and retire some of its current coal-fired generation, would it be able -- and allowances were given out based on some historic test year when AMPGS wasn't working, would those allowances be available, do you think, to use for AMPGS?

- A. Yes, I think probably to a certain extent they would be. I mean, I think over time, because the bills in Congress as indicated on figure 1 on page 22 of my testimony, that the caps -- the reductions increase so the caps decrease over time under the bills in Congress, the amount of total emissions. So in your hypothetical of retiring plants, yes, you'd get some, but over time you'd lose them.
- Q. Over time everybody would lose some amount; would they not?
 - A. Sure.
- Q. And you have listed on your table 1 what you believe to be the primary bills in Congress currently on CO2 control, correct?
 - A. Yes.
 - Q. I notice there isn't a bill number on the

- A. Yes. I think it's 489 or something like that. It's somewhere in that range.
 - Q. You just left the bill number out.
- A. Yeah, it was my mistake.
 - Q. And would you agree with me that all of these proposals but one have originated in the Senate?
 - A. Correct.
 - Q. And none of those have passed either the Senate or the House?
 - A. That's correct. The Lieberman-Warner bill passed committee and I guess is now before the floor at some point.
 - Q. Not my question.
 - A. Sorry. I apologize.
 - Q. Neither one have passed the House or the Senate, correct?
 - A. That's correct.
 - Q. Now we can turn to your page 22 and figure 1. And this is the table that you indicated, and I apologize, that you had verified the various lines in here that correctly reflected your understanding of those particular bills, correct?

| | _ | |
|--|----|------|
| | Α. | Yes. |

- Q. With regard to lines 7, 8, and 9, the discussion about 60 to 80 percent range of emission reductions from current levels that many now believe will be necessary, who are you referring to with "many" there?
- A. Researchers at MIT who did the MIT cap and trade assessment, the same people who did the MIT "Future of Coal" study that you showed me before, the Intergovernmental Panel on Climate Change, the sponsors of the various bills on the prior page. Something called USCAP, which is an organization including AEP and Duke Power on the National Commission on Energy Policy.

Generally the belief is that you need those reductions in order to keep the temperature rise at 1 to 2 percent by the middle of the century.

MR. BENTINE: I want to mark this because I'm going to come back and move to strike it in just a moment if I might.

EXAMINER PRICE: Noted.

- Q. Are you a climatologist?
- A. No.
- Q. Have you independently studied the

- relationship between CO2 emissions and concentrations
 in climate?
 - A. No. I'm relying on the work of other experts.
 - Q. But it's outside your range of expertise, correct?
 - A. I've not done a study.
 - Q. That's not what I asked. It's outside your range of expertise to determine the relationship between CO2 emissions, greenhouse gas, and climate.
 - A. Yeah, I'd have to say it is. I've not testified to that.
 - MR. BENTINE: With that, your Honor, I would move to strike lines 7, 8, and 9 of the previous answer that I asked be marked.
 - EXAMINER PRICE: Motion to strike will be granted.
 - Q. Turn to page 24 of your testimony.
 - A. Yes.

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- Q. The title of this table is Announced

 State and Regional Greenhouse Gas Emission Reduction

 Goals; are any of these mandatory limits?
- A. Minnesota is a limit. I believe

 California is a limit. I believe Oregon is a limit.

Q. Okay. Let's talk about California for a second. That is economywide or only on the electric industry?

A. Economywide.

- Q. And how is that to be implemented; do you know?
- A. California's taking many steps now to implement it. On the electric side there is a requirement that the state not buy power that's generated at a power plant that emits more than I think 285 pounds per Btu. I think that's the right units. It's roughly 1/10 the emission of a plant -- or 15 percent emission of a plant like AMPGS.
 - Q. I missed it.
- A. It's roughly 15 percent of the emission of a plant like AMPGS.
- Q. How about Minnesota; how are they implementing their requirements?
- A. There's a climate change study group now that's developing plans that will be decided upon.
- Q. Well, I guess I don't understand. If this is mandatory, hasn't it already been passed?
- A. It has, and now they're figuring out how
 to meet the -- you asked me how are they implementing

- it, and I'm saying they are developing plans for implementing the legislative requirement.
 - Q. And it, again, is economywide?
 - A. I believe it is. I've only seen it with regard to electric, but I believe it may be broader than that.
 - Q. What about Oregon?
 - A. Oregon. Again, I believe they're developing policies, I don't recall when they set the standard.
 - Q. And it's economywide.
 - A. I think so. I've seen these mostly with regards to electricity because that's the field I work in, but some of them may be broader than that.
 - Q. Turn to page 28.
 - A. Twenty-eight?
- Q. The question and answer beginning on line 25.
- ¹⁹ A. Yes.
- Q. Did you review the deposition transcripts
 of Mr. Clark of R.W. Beck and Mr. Couppis of R.W.
- 22 Beck?

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A. I looked at Mr. Clark's. I don't recall the other gentleman.

- Q. Mr. Couppis.
- A. Mister?

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- Q. Couppis, C-o-u-p- --
- A. I don't think I looked at that one.
- Q. So you don't know whether or not they were asked questions about this and whether or not they responded?
- A. They hadn't as of the time I wrote my testimony, I know that, but I don't know whether they have since done so -- or, he has done so. I know Mr. Clark didn't provide this information.
 - Q. I'm sorry?
- A. After reviewing Mr. Clark's deposition I don't believe he provided this information, and the other gentleman, I don't know.
 - Q. Do you know whether he was asked?
 - A. I don't.
 - Q. Turn to page 30.
 - A. Thirty? Okay.
- Q. With regard to the remaining answer on line 12, were you given copies of legislative analyses or presentations on carbon legislation by your counsel that was provided by AMP-Ohio?
 - A. Yes. So I guess the answer, since I

- don't have -- the rest of it's gone, the "no" should
 be a "yes."
 - Q. Now, on page 31 of your testimony, on line 15 you talk about the cost of transportation and sequestration and you have estimated that to be 5 to 10 dollars, correct?
 - A. Correct.

- Q. That MIT study we talked about earlier estimated that at 5; did it not?
- A. They did, but they were in constant 1997-year dollars. If you escalate that over time, it will end up to 5 -- well, it will be much more than 5, but it will be 5 to 10 or more in actual nominal year dollars; so this is not inconsistent with the MIT study at all.
- Q. So you're telling me that the MIT study was published in 2007 on page xi, small Roman Numeral xi, the \$5 a ton that they talk about there that they are estimating is a 1997 number?
- A. Yeah. If you would, if you would show me -- give me that, I can show you where they indicate that their numbers are, I believe, in year-1997 dollars.

MR. BENTINE: May I approach, your Honor?

| 1 | EXAMINER PRICE: You may. |
|----|---|
| 2 | MS. JAISWAL: Do we have the page? |
| 3 | MR. BENTINE: I believe you have this |
| 4 | one. |
| 5 | MS. JAISWAL: And any page you're going |
| 6 | to show him we will see, right? |
| 7 | MR. BENTINE: I don't know because you |
| 8 | guys have this. |
| 9 | MS. JAISWAL: I just mean the version |
| 10 | that you're going to be showing him. |
| 11 | MR. BENTINE: There's only one version |
| 12 | that I know of. |
| 13 | MS. JAISWAL: I mean the copy I have is |
| 14 | the copy |
| 15 | MR. BENTINE: You can certainly, if it's |
| 16 | all right with the administrative law judges, you can |
| 17 | join me with the witness and we can all look at it |
| 18 | together. |
| 19 | MS. JAISWAL: Thank you. |
| 20 | EXAMINER PRICE: I have no objection. |
| 21 | A. On page 9 you'll see that they're talking |
| 22 | about their high and low that we talked about before |
| 23 | in 1997 dollars per U.S. ton of CO2, and I believe |

that the number is -- the \$5 per ton is also in 1997

dollars. That's the only thing that makes sense. I don't think that they would use one base year for one and another base year for another.

- Q. So you're assuming because the figure 2.2 that they're referring to on page 9 is in 1997 dollars, that the numbers that were not flagged to be 1997 dollars back on page small Roman Numeral xi were also in 1997 dollars, correct?
- A. Yes. The ones that you said you find are not flagged are in the executive summary.
- Q. That would be quite extraordinary; would it not?
- A. No. I am surprised that they did any of their numbers in such old dollars. I would have thought they would have done them more currently.
- Q. I'm talking about not having dollar numbers like that in the executive summary noted that it was '97 dollars rather than 2005 or 2006 or 2007 in a 2007 report.
- A. No. I just think that they -- you'd have to ask them why they did that, but I don't see any evidence that's anything but 1997 dollars because that's consistent with the rest of the report. But even if it's 2005 dollars or 2007 dollars, you're

still going to escalate those over time.

Q. Understood.

A. And as you escalate them over time it's going to get to the 5- to 10-dollar range I'm talking about.

EXAMINER BOJKO: Just so I'm clear, in the report there's one chart and it specifically says, because I didn't get a copy of this, it specifically says 1997 dollars in the one chart that you were talking about?

THE WITNESS: No. It's not a chart.

They're talking about their forecast of CO2 prices

and they say that that's in 1997 dollars.

EXAMINER BOJKO: For that particular -THE WITNESS: That's the only place where
they identify the year dollars.

Q. (By Mr. Bentine) Beginning on page 31 you start discussing Powerspan and the Burns & Roe report, and that's a Burns & Roe report dated October 17th, 2007?

A. Yes.

MR. BENTINE: I'm sorry, what are we are?

Are we on 12 or 11?

MS. JAISWAL: Thirteen.

1 MR. BENTINE: Thirteen. May I approach, 2 your Honor? 3 EXAMINER PRICE: You may. 4 MR. BENTINE: I would ask a document that 5 is entitled Consulting Engineer's Report for the 6 American Municipal Power Generating Station that is 7 located in Meigs County, Ohio, Prepared for the 8 Division of Cleveland Public Power, City of 9 Cleveland, dated October 16th, 2007 . . . 10 (EXHIBIT MARKED FOR IDENTIFICATION.) 11 (By Mr. Bentine) Do you have now before Q. 12 you what has been marked as AMP-Ohio Exhibit 13? 13 Α. Yes. 14 Is that the report to which you referred? 15 Α. Yes. 16 First of all, Mr. Schlissel, you do 17 understand the city of Cleveland did pass an 18 ordinance and executed an agreement to be a part of 19 this project? 20 Α. Yes, I do. 21 Q. If you know, Mr. Schlissel, did the 22 consulting engineer Burns & Roe review all of R.W. 23 Beck's projections including their cost of CO2 24 projections?

| 1 | A. I don't know that they reviewed all of |
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| 2 | it. They say in here, I believe, what they reviewed. |
| 3 | I'm sorry, I'm too tired right now to remember |
| 4 | exactly what they said. I can look through it and |
| 5 | tell you. |
| 6 | EXAMINER PRICE: Let's go off the record |
| 7 | for a minute. |
| 8 | (Discussion held off the record.) |
| 9 | EXAMINER PRICE: Let's go back on the |
| 10 | record. |
| 11 | We will adjourn for the evening and we |
| 12 | will commence again at 9 o'clock tomorrow morning in |
| 13 | this hearing room. Anything else before we adjourn |
| 14 | for this evening? |
| 15 | (No response.) |
| 16 | EXAMINER PRICE: Thank you very much. |
| 17 | (Thereupon, the hearing adjourned at 5:41 |
| 18 | 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 Monday, December 17, 2007, and carefully compared with my original stenographic notes.

Maria DiPaolo Jones, Registered Diplomate Reporter and CRA/ and

Notary Public in and for the

State of Ohio.

My commission expires June 19, 2011.

¹¹ (MDJ-3115)