Indianapolis, Indiana
June 22, 2007
9:00 A.M. (EDT)

(Reporter marked documents for identification as Petitioner's Exhibit Nos. 19, 20, 20-A, Confidential 20, 23 and 23-A)

JUDGE STORMS: Let's go ahead and go back on the record, and, Petitioner, you may call your next witness.

MR. POPE: Thank you, Your Honor. We'll call Mr. Moreland.

ROBERT D. MORELAND, a witness appearing on behalf of the Petitioner, having been previously duly sworn, resumed the Stand and testified on Rebuttal as follows:

DIRECT EXAMINATION,

QUESTIONS BY MR. POPE:

Q Would you state your name, please?

A Robert D. Moreland.

Q Are you the same Robert Moreland who previously sponsored Petitioner's Exhibit No. 4 in this proceeding?
A Yes, I am.
Q You testified two or three days ago?
A Yes, sir.
Q Do you have before you a document that's been marked for purposes of identification as Petitioner's Exhibit 19?
A Yes.
Q Is that your prepared rebuttal testimony in this proceeding?
A Yes, it is.
Q Do you have any corrections or changes that need to be made to your rebuttal testimony?
A No, I do not.
Q If I were to ask you the same questions today, would your answers be the same?
A Yes, they would.

MR. POPE: At this time, Petitioner would offer Petitioner's Exhibit No. 19.

JUDGE STORMS: Is there any objection? If not, we'll show Petitioner's Exhibit 19 admitted into this cause.

(PETITIONER'S EXHIBIT NO. 19, BEING THE PREFILED REBUTTAL TESTIMONY OF MR. ROBERT D. MORELAND, ADMITTED INTO EVIDENCE.)

MR. POPE: The witness is available.

JUDGE STORMS: Let's go off the record. We need to test these microphones.

(Off-the-Record Discussion)

JUDGE STORMS: Let's go back on the record.

Let's go ahead and give it a try, and if it seems like we're having some problems, we can always stop and take a break. We have called the technical folks to come down and see if they can take a look at it and adjust it. We'll see how that works.

Let's go ahead and -- Mr. Helmen?

MR. HELMEN: Start that way.

JUDGE STORMS: Let's do it the same way we've been doing it.

Mr. Hartley, your witness.

MR. HARTLEY: Thank you, Your Honor.

CROSS-EXAMINATION OF MR. ROBERT D. MORELAND,
QUESTION BY MR. HARTLEY:

Q Mr. Moreland, in Ms. Pashos' rebuttal, among the commitment points that she made, there was a reference to installing infrastructure for a -- the low carbon capture scenario during the design and build phase, and I'll just preface this question by saying that in your answer, we'll assume that all the conditions that Ms. Pashos put in her testimony with regard to under what circumstances that would occur will apply, but I would like for you to just give me an example of what such an infrastructure item that could be included during the original construction of this plant might be.

A I could envision that if we learned from GE/ Bechtel that we might need a different pipe size, that that could be installed, something that's still being used but maybe just a different size.

It's fairly typical in the building of a new plant to include some wiring spares in the wiring that's run. We would probably want to make sure that that's

adequate for what we might use in the future for the low carbon capture case, make sure that there is room in the pipe rack for carrying piping that might have to be installed in the future, those type of things.

MR. HARTLEY: Thank you.

JUDGE STORMS: Let me stop you right there. I don't know if Amy is getting any of this, but it's driving me nuts.

Why don't we just try it without the microphones and see how we do for at least a period of time until we can get the technical folks down here.

Please proceed, Mr. Polk.

MR. POLK: Certainly.

CROSS-EXAMINATION OF MR. ROBERT D. MORELAND,
QUESTIONS BY MR. POLK:

Q Good morning, Mr. Moreland.
A Good morning, Mr. Polk.
Q On Page 5 of your testimony --
A Is this my rebuttal?
Q Your rebuttal testimony, yes, Lines 13 through 15, you state that you believe that Dr. Cortez has significantly understated the additional work necessary to accomplish even the 15 percent to 20 percent partial carbon capture he describes.

Can you describe for us what additional work would be necessary and why you think Mr. Cortez' position is an understatement?

A Well, I just believe that General Electric will want to do analyses to make sure that they've got the process right, and when General Electric does analyses, it has to go through a toll gate process. It's part of their inherent processes for ensuring that the products that they produce are correct, which since they're a jet engine manufacturer, I think we can all appreciate how they have to

get it right hopefully the first time. I don't believe it's just a matter of saying this is all you have to do because knowing their review process, we want them to thoroughly study it and take it through their review process so that we get it right.

Q Would they have to go through the same process if the plant was approved as Duke has requested, and sometime in the future to comply with carbon regulations, Duke undertakes capture and sequestration at the Edwardsport IGCC?

A I'm not sure I understand your question exactly, Mr. Polk. Are you -- you want me to make the assumption that we're constructing the plant today without carbon capture and then sometime in the future add carbon capture?

The difference, I think, is that in your case in the future, that they would have already had the reference design done and then it would just be a matter of looking at the differences between the Edwardsport plant and the reference plant and taking them through that design review process.

Q Does that mean their reference plant would include carbon capture?
A Not as it's currently designed, it does not.
Q I'm not sure I understand your previous response then.
A Well, in your hypothetical example, I was making the assumption that the studies that are currently underway would be done by that time.
Q So, I think the initial question in this series was what you just described as the additional work necessary to accomplish 15 to 20 percent partial carbon capture was a lot more work than Mr. Cortez believed it to be, and I asked you to describe what would need to be done and then what would need to be done if that same process would need to be done if at some point in the future Duke had to capture and sequester carbon at the site.

Is your answer that that work has already been done now so it will be completed in the future when Duke has to capture and sequester carbon?
A General Electric is currently studying carbon capture as it would apply to their reference

plan. That's the genesis for me saying that in your example of the future, I believe they would have had that phase done, and the remaining studies would be the application to our plant.

JUDGE STORMS: Let's go off the record.

(Off-the-Record Discussion)

JUDGE STORMS: Let's go back on the record. Mr. Polk, you may proceed with your questioning.

MR. POLK: Thank you, Your Honor.

Q Mr. Moreland, do you know the time frame in which GE will complete its performing more detailed studies of the various levels of carbon capture with respect to the plant design?

A My understanding is that they've completed some of the technical analysis and will now start moving into more of the commercial analysis. I would suspect by the end of the year and maybe a little sooner than that.

Q Will the study that GE is doing also look at the changes that would be necessary in the upstream equipment to handle the pressure loss from the addition of a CO2 absorber?
A Yes.
Q The same would be true with respect to the related drying equipment and compression equipment?
A Yes.
Q On Page 6, Lines 5 through 6, you state that even after GE completes those analyses, that more work will be necessary to apply that technology to Edwardsport. Why is that?
A That's because the reference plant design is an Illinois SIP Call, and this plant is being specifically designed to accommodate the Indiana No. 5 seam. Slight difference; I wouldn't expect major differences, but we would want them to make sure that they did it based upon our plant.
Q Is that the only difference between the Edwardsport plant and the reference plant?
A No, there are a few other differences.
Q Would the same sort of analysis need to be done with respect to those other differences

and how they would impact the changes that need to be made?

A I'm not sure that any of the other differences would impact -- would be impacted by this change. I'm sure General Electric could help us think through that.

Q Then you indicate in your testimony, your rebuttal testimony, that in addition to all of those studies, a FEED type study would also be necessary. Why is that?

A That's just the terminology for the study that's conducted to make it specific to the Edwardsport plant.

Q So there would be additional costs related to that?

A Likely, but I've not had any specific conversations with General Electric about the cost of it.

Q Would there be some additional time required for that?

A Yes, sir.

Q Have you received -- Well, you state in your rebuttal testimony that you don't have an estimate of the cost of such a study. Of course, this was filed several weeks ago now.

Have you received any new information on the cost of those studies?

A No, I have not.

Q On Page 7 of your testimony, Lines 7 through 8, you indicate that "Another key point with respect to the schedule for beginning carbon capture is what to do with carbon."

Is it going to take time to assess what can be done with carbon at the plant?

A Yes, it will likely take some time.

MR. POLK: May I approach the witness, Your Honor?

JUDGE STORMS: Yes, you may.

(Reporter marked documents for identification as Intervenor's - CAC Exhibit Nos. CX-13 and CX-14)

Q Mr. Moreland, you have -- I've just handed you what's been marked for identification as CAC Exhibit 13. Can you identify that for me? I believe it's a response to a request for admissions, Set No. 1, No. 11.

A Yes.

Q Could you read the request and the response,

please?
A "Request: Admit that as a result of national regulation of CO2, Duke Energy will likely have to reduce CO2 emissions to levels below its current emissions."
"Response: Duke Energy Indiana generally admits this request, subject, however, to the caveat that the amount and timing of emission reductions required by, and the means of compliance, including allowances and offsets, permitted by, any such legislation, have not yet been determined."
Q I've also handed you what's been marked for identification as CAC Cross-Examination Exhibit 14, which is a response to a request for admissions, Set 1, No. 4. Can you identify that?
A Yes.
Q All right.
MR. POLK: Your Honor, at this time, I would like to move into the record CAC Cross-Examination Exhibits 13 and 14.
JUDGE STORMS: Is there any objection?
MR. POPE: No objection, Your

Honor.

JUDGE STORMS: We'll show CAC Cross-Examination Exhibits 13 and 14 admitted into this cause.

(INTERVENOR'S - CAC EXHIBIT NO. CX-13, BEING A ONE-PAGE DOCUMENT ENTITLED, "CAC, IURC CAUSE NO. 43114, REQUEST FOR ADMISSIONS SET NO. 1, RECEIVED: JUNE 8, 2007, CAC RA-11", AND INTERVENOR'S - CAC EXHIBIT NO. CX-14, BEING A ONE-PAGE DOCUMENT ENTITLED, "CAC, IURC CAUSE NO. 43114, REQUEST FOR ADMISSIONS SET NO. 1, RECEIVED: JUNE 8, 2007, CAC RA-4", ADMITTED INTO EVIDENCE.)

CROSS-EXAMINATION OF ROBERT D. MORELAND,
(Continuing)
QUESTIONS BY MR. POLK: (Continuing)

Q Mr. Moreland, if you could turn to the last page of your rebuttal testimony, Page 8, Lines 7 through 9, you talk about the estimated cost of capture, 15 to 18 percent carbon, being approximately $80 million, and does that mean that trying to accomplish something on the order of 90 percent carbon capture would cost significantly more than that?

A Yes, it would.

Q About what? Four or five times as much or a lot more than that?

A At least double.

MR. POLK: Thank you. I have no further questions for this witness, Your Honor.

JUDGE STORMS: Mr. Stewart, your witness.

MR. STEWART: Thank you.

CROSS-EXAMINATION OF MR. ROBERT D. MORELAND,
QUESTIONS BY MR. STEWART:

Q Good morning, Mr. Moreland.
A Good morning, Mr. Stewart.
Q How are you?
A I'm great. How are you?
Q Good.

I heard a discussion yesterday; I think it was Ms. Pashos discussing the North Carolina testimony and the Indiana testimony related to IGCCs, and I believe what I heard was that one of the differences or distinctions was the legacy and legacy Cinergy engineers and their experience at Destec. Are you one of the legacy Cinergy engineers?

A I am a legacy Cinergy engineer, yes.
Q Okay, and it made me think back to a question Mr. Pope had. I don't know if it was with you or not on direct, and correct me if I'm wrong, but I'm trying to remember.

With respect to the gasification part of Destec, Cinergy never owned, had control or operated that part of the plant; is that right?

A That is correct.

Q Okay. Now, are you familiar with the Tondu Corp. proposal for a 600 megawatt integrated gasification combined cycle power plant at Corpus Christi?
A No, sir.
Q You do in your rebuttal testimony on Page 4 reinforce your statement that you made earlier both in your prefiled testimony as well as through cross-examination that you can expect the proposed plant at Edwardsport to be, in your words, very reliable. Is that still the case?
A Yes, sir.

MR. STEWART: That's all I have. Thank you.

JUDGE STORMS: Ms. Becker?

MS. BECKER: Nucor has no questions, Your Honor.

JUDGE STORMS: Mr. Helmen, your witness.

MR. HELMEN: Thank you, Your Honor.

CROSS-EXAMINATION OF MR. ROBERT D. MORELAND,
QUESTIONS BY MR. HELMEN:

Q Get a doughnut?
A I thought I would wait until after my testimony.
Q Mr. Moreland, during this construction project, would Duke have a problem submitting construction monthly progress reports, kind of a project management status as to cost, work and schedule to the IURC and the OUCC?
A I would assume that we would not have a problem providing the IURC with any information that it requests.
Q How about the OUCC?
A We normally cooperate with the Intervenors. That's probably a question best asked of Ms. Pashos.
Q I'm not asking for any money; I just want to make that clear.

MR. HELMEN: That's all I have, Your Honor.

JUDGE STORMS: Redirect?

MR. POPE: None, Your Honor.

Your Honor, at the close of Mr. Moreland's direct, the Commission had asked

for some EPRI Tag Guide data. I got reminded later that I said we'd furnish it. Pursuant to a Confidentiality Order in Cause No. 43057, the Company provided a significant amount of EPRI confidential data that supported the IRP.

Certainly, if the Commission wants any more of that data than that, let us know; maybe a Docket Entry or something saying give me the EPRI stuff pursuant to the Confidentiality Order. We'll be glad to get it, but people think that we've given most of the data already pursuant to the Confidentiality Order in that cause.

JUDGE STORMS: Is this the IRP submission cause number that --

MR. POPE: It was the petition to keep confidential certain information used for the IRP, and included in that was specific EPRI data, and the Order -- I don't have the date on it, but the Order in that cause said to make it confidential and file it, and we did.

JUDGE STORMS: So, any additional confidential information related to the IRP could come in through this cause number?

MR. POPE: Certainly.

JUDGE STORMS: Thank you very much. That's very helpful.

MR. POPE: And if you need Mr. Moreland to lay a foundation for confidentiality beyond that, we can do it while he's here. Otherwise, I think there's probably enough --

JUDGE STORMS: I think the way the IRP rules are set up, I think it should be sufficient, but let's work through it under that cause number.

MR. POPE: Works for us.

JUDGE STORMS: That would be sufficient for our purposes as well.

Mr. Moreland, thank you very much for your testimony. You are excused.

(WITNESS ROBERT D. MORELAND EXCUSED ON REBUTTAL)

JUDGE STORMS: Petitioner, you may call your next witness.

MR. POPE: Thank you, Your Honor. We call Mr. Zupan. This witness needs to be sworn, Your Honor.

JUDGE STORMS: Please raise your right hand to be sworn.

(OATH DULY ADMINISTERED TO ONE PERSON)

DENNIS M. ZUPAN, a witness appearing on behalf of the Petitioner, having been first duly sworn, testified on Rebuttal as follows:

DIRECT EXAMINATION,

QUESTIONS BY MR. POPE:

Q Please state your name and spell your last name for the record.

A Dennis M. Zupan, Z-u-p-a-n.

Q Mr. Zupan, by whom are you employed and in what capacity?

A Duke Energy Shared Services. I'm the Senior Project Director for the Edwardsport project.

Q For purposes of this proceeding, has your

testimony been reduced to written question and answer form?

A Yes.

Q Do you have a document before you that's been marked for purposes of identification as Petitioner's Exhibit No. 20?

A Yes.

Q Is that your prepared written testimony?

A Yes, it is.

Q Do you have any corrections or changes that need to be made to that testimony?

A No.

Q Do you also have a document that's been marked for purposes of identification as Sub-Exhibit 20-A?

A Yes, I do.

Q Can you identify that document?

A It's the redacted copy of the FEED study report.

Q Do you also have an envelope, sir, that's marked Petitioner's Exhibit Confidential 20 indicating that it includes Confidential Exhibits 20-B and 20-C?

A Yes.

Q Are those the exhibits that you identified in

your testimony?
A Yes, they are.
Q Mr. Zupan, if I were to ask you the same questions set forth in Petitioner's Exhibit 20 today on the Stand, would your answers be the same?
A Yes, they would.
Q Do you adopt Petitioner's Exhibit 20 as your testimony in this proceeding?
A Yes, I do.

MR. POPE: Your Honor, at this time, we will offer Petitioner's Exhibit 20, 20-A and the document that's been marked as Petitioner's Exhibit Confidential 20, which contains Confidential Exhibits 20-B and 20-C.

JUDGE STORMS: If there's no objection, we'll show Petitioner's Exhibit 20, along with 20-A and 20 Confidential, Exhibits B and C admitted into this cause.

(PETITIONER'S EXHIBIT NO. 20, BEING THE PREFILED REBUTTAL TESTIMONY OF MR. DENNIS M. ZUPAN, AND PETITIONER'S EXHIBIT NO. 20-A, BEING A DOCUMENT ENTITLED, "EDWARDSPORT INTEGRATED GASIFICATION COMBINED CYCLE POWER STATION, FRONT END ENGINEERING AND DESIGN STUDY REPORT", ADMITTED INTO EVIDENCE.)

(PETITIONER'S EXHIBIT NO. CONFIDENTIAL 20, BEING A CONFIDENTIAL DOCUMENT CONTAINING PETITIONER'S CONFIDENTIAL EXHIBIT NOS. 20-B AND 20-C, ADMITTED INTO EVIDENCE.)

MR. POPE: And the witness is available.

JUDGE STORMS: Thank you. Mr. Hartley, your witness.

MR. HARTLEY: Thank you, Your Honor.

I just need to ask counsel for Duke for purposes of my questions, I need to refer to Exhibit 20-C. I don't wish to question the witness about any numbers on there, but I do wish to use -- to refer to the line items that are on there, and I wonder whether I can do that without falling into the confidentiality of the document.

MR. POPE: It's the confidential portion -- we consider the confidential portion to be the individual breakdown of costs, the right column. So, references to left column are okay.

MR. HELMEN: Counsel, if it would help, because I was going to ask this witness some questions about that, and I made extra copies of the confidential exhibit to --

MR. HARTLEY: I really just want to ask him about one item. I don't need it.

MR. STEWART: Your Honor, I was thinking I might have a couple questions about the numbers. I'm thinking almost everybody in here is Duke or signed an agreement, so I don't think it's going to be a huge problem, but I thought I'd throw that out so that you can at least start planning on whatever is necessary. It's very short; it will only take a minute.

JUDGE STORMS: Who in here has not signed a confidentiality agreement?

MR. POPE: Duke employees, put your hands down.

JUDGE STORMS: I'm not going to excuse you from this room, so that won't work. It's an excellent try.

I just need to know if we need to go in camera. I mean, that's going to be the key thing, I believe, and except for folks who have not signed a confidentiality agreement, we'll have to exclude them from the room, but we'll also have to designate that portion of the question to be in camera, so to the extent that you can identify the question that you would like to ask, let me know; we can go in

camera and then come back out of camera and stay in for just that limited purpose.

MR. STEWART: It will be very quick.

JUDGE STORMS: Okay, just let me know, and we'll be able to do that.

Now, Mr. Hartley, you'll be able to ask your question without the need to go in camera?

MR. HARTLEY: Yes, Your Honor.

JUDGE STORMS: Okay. Please proceed.

CROSS-EXAMINATION OF MR. DENNIS M. ZUPAN,
QUESTIONS BY MR. HARTLEY:

Q Mr. Zupan, there's one line item, the title of which is "CO2 Recycle."

A Yes.

Q I just wanted to confirm that that item -- that has nothing to do with capturing CO2 from this plant; is that correct?

A That's correct.

Q That, I assume, has to do with CO2 produced by the air separation unit and sending it off for some other use in the plant somewhere; is that

right?
A It's not produced by the air separation unit. There is part of that CO2 that's in the syngas that is recycled back through the process.
MR. HARTLEY: Thank you.
JUDGE STORMS: Mr. Polk, your witness.
MR. POLK: No questions, Your Honor.
JUDGE STORMS: Mr. Stewart.
MR. STEWART: Thank you, Your Honor.

CROSS-EXAMINATION OF MR. DENNIS M. ZUPAN,
QUESTIONS BY MR. STEWART:
Q Good morning, Mr. Zupan.
A Good morning.
Q We've heard some testimony earlier in the proceeding, at least questions, relating to the concept of this project being turnkey from the coal pile to the grid. Were you here for any of that?
A Yes, I was here for that proceeding.
Q At somewhere along the line in the process here, it became my impression that while that

was the initial intent, some developments had resulted in that that wasn't what Duke was going to be paying for; they weren't going to be getting a package for a fixed cost from the coal pile to the grid. Can you explain to me the status of all of that?

A The current status or --

Q Yes, sir.

A I think in the FEED study report, we have a section in there that deals with, you know, how we intend to execute the project.

Additionally, General Electric and Bechtel have gotten together and formed an alliance, and their perception of the market was that the turnkey project was what was really required. That was about in 2004, end of 2004.

As events have unfolded in the market and also the utilities that they're dealing with, that isn't really the preferred approach, and we have always been of the opinion since we entered into our first agreement with GE and Bechtel that we wanted to explore other contracting approaches that were more familiar to us, and within the last

three or four months of completing the FEED study, we agreed that we would look at a different approach as opposed to turnkey.

Q Are you able to describe for us the difference between the approaches? I assume the difference -- and you can tell me if this is accurate or not, that the difference is one where Duke rather than the Alliance will be assuming certain responsibilities for parts of the project and potential cost overruns?

A We would being taking over more of the management of the overall project rather than leaving that to GE and Bechtel.

Q Okay, and so if -- for those parts of the project, would there be fixed price guarantees from them, or would it just be management as -- more as usual, for example, in one of your environmental projects where you're managing it, and if it comes in less, it comes in less, and if it comes in more, it comes in more?

A I think the first thing that I should clarify is that we don't have a contract with GE or Bechtel for the construction of the plant or the engineering or even the procurement at

this point, and we're in the process of developing what we think is going to be the best approach for that.

Some of the components will probably be fixed price. Those things that can be fixed at this point and we can get pricing on, we would choose to take a firm lump sum price on those components.

Other parts, we think it's more reasonable to manage them as the design is completed and as the pieces of scope are identified, what's the best way to handle those. Sometimes local labor is a better way to handle it. We want to take some time and develop the best approach.

Q I remember when we had Mr. Shilling on the Stand and had the opportunity to review his testimony and talk with him. He outlined the many perceived advantages in his direct testimony in this proceeding from having a turnkey project and did indicate that you -- that Duke and the Alliance were discussing alternatives to that.

One of the advantages of having it as a turnkey was that you knew the price,

anything that went wrong fell on them, so under the proposal as you see it, Duke will not have that kind of price certainty; is that correct?

A No.

Q Have you heard of the -- Well, what's your position with respect to the IGCC plant? I know you said it, but can you repeat it for me?

A I'm the Senior Project Director.

Q In that position, do you tend to keep an eye on other IGCC developments around the country?

A Not particularly, I mean, not in a lot of detail. I get a lot of e-mail obviously about other projects that are going on, but most of that is just information that's in the public demand; it's not very detailed or not very reliable.

Q Had you heard about the Tondu Corp. proposal for a 600-megawatt IGCC in Texas?

A Not in Texas, no.

Q Have you heard about a Tondu Corp. IGCC somewhere else?

A I've heard their name before, and I know that they've been planning to develop projects in

different locations, but I have never heard about any in Texas at this point.

MR. STEWART: Your Honor, at this point, I would like to ask a couple questions in camera.

JUDGE STORMS: Okay. Anyone who has not signed a confidentiality agreement, if they could please exit the room. We will come and get you when we are back in open proceeding.

MR. STEWART: They need not go far.

JUDGE STORMS: Okay, well the nice thing about this room is we do have a conference room right out there, so maybe they can go sit in there.

Let's go ahead and go in camera for purposes of discussing -- Mr. Stewart, is it Confidential Exhibit 20?

MR. STEWART: 20-C, Your Honor.

JUDGE STORMS: Okay, please proceed.

MR. STEWART: Thank you.

(IN CAMERA PORTION OF HEARING COMMENCED TO BE HEARD AT THIS POINT IN THE TRANSCRIPT.)

(IN CAMERA PORTION OF HEARING COMMENCED TO BE HEARD AT THIS POINT IN THE TRANSCRIPT.)

CROSS-EXAMINATION OF MR. DENNIS M. ZUPAN, (Continuing)

QUESTIONS BY MR. STEWART: (Continuing)

Q Mr. Zupan, do you have 20-C in front of you?

A Yes, I do.

Q The first line I see is "Bechtel Engineering Cost", and the number at the bottom we've talked about, the $1.985 billion --

A Yes.

Q -- okay, and the numbers above total out to that. The first one is Bechtel engineering, is that -- and it's $150 million; is that right?

A Roughly, yes.

Q Okay. Can you tell me what the second line, "Bechtel Indirects", would involve?

A Yes. The breakdown on that is that the engineering cost is generally the engineering labor, so all of the engineers on the project, all of the field non-manual people that are in the field managing the project down to a

certain level of construction oversight.

The indirects are all the things that go into a construction project that don't apply to a specific piece of equipment; cranes, mobile equipment, construction facilities if they need them, warehousing or office space, water to water down the construction site to maintain the dust, all of those things that don't contribute to constructing the project that remain with it, so it's the indirect components that you use.

Q Then I see at the very bottom, the last line is Duke engineering and management, $131 million. Is that in-house Duke personnel?

A It's a combination. That includes the FEED study cost of things that we've done so far, and we used a lot of outside consultants for different components developing the price estimate.

As the project gets executed, those engineering and management costs include kind of a wide variety of things. We'll have site security, and we will have some responsibility around the site. Our management costs are the components that we

use to manage the projects that we don't run through Bechtel and GE, and also operations, you know, just all of the different components that we have to provide. It's not just engineering or engineering management.

Q Okay. So, roughly $280 million of the project or, in my mind, almost 15 percent is in the categories of Bechtel engineering and Duke engineering and management costs?

A Yes, that's correct.

Q Okay.

MR. STEWART: I'm ready to go out of in camera.

JUDGE STORMS: Let's go ahead and go back into the open proceeding. We are no longer in camera.

(IN CAMERA PORTION OF HEARING CONCLUDED AT THIS POINT IN THE TRANSCRIPT.)

(IN CAMERA PORTION OF HEARING CONCLUDED AT THIS POINT IN THE TRANSCRIPT.)

JUDGE STORMS: Thank you. Please proceed, Mr. Stewart.

MR. STEWART: Thank you, Your Honor.

If I could have one minute, please.

Mr. Zupan, thank you. That's all I have.

JUDGE STORMS: Thank you, Mr. Stewart.

Ms. Becker, your witness.

MS. BECKER: Thank you. I just have a few questions.

CROSS-EXAMINATION OF MR. DENNIS M. ZUPAN,
QUESTIONS BY MS. BECKER:

Q You mentioned in your testimony that you were named to your present position in 2006; is that correct?
A That's correct.
Q Did that position exist prior to your appointment?
A Actually, I was performing the work but under a different title. That title was created on that date.
Q Recognizing your expertise and your experience?
A Actually more, I'd say, the result of the merger of the two companies and trying to align common titles.
Q Previously, you told Mr. Stewart that Duke does not have a contract with GE and Bechtel; is that correct?
A Not for the construction of the plant, no.
Q Is Duke currently in negotiations for that contract?
A Yes, we are.
Q And who is leading those discussions?
A That would be me.

Q Can you tell us where that's at?
A Most of our time in the last two months has been focused on a technical services agreement for some of the work that's being done prior to getting a full notice to proceed, and we're in the position as of last night at about midnight to sign that agreement for the next interim phase of engineering work.

The actual construction part of the project, we've received kind of an engineer's equipment package draft from GE, and we're just now beginning to sit down and discuss the division of responsibility for who's going to do what on the project.
Q You used the term full notice to proceed or FNTP in your testimony.
A Yes.
Q What does that mean specifically?
A The full notice to proceed is when you tell the contractor he can basically start ordering the large dollar equipment and, you know, begin to make commitments on the project.

A limited notice to proceed is more engineering work; it's just a limited notice for them to get started to be prepared

to execute the project. Full notice is an actual notification for them to begin that project.

Q Are there legal ramifications to the full notice to proceed?

A There will be. When we finish up the contract that we're negotiating, there will be a definition of full notice to proceed, and then we'll have a legal context at that point, but it's going to be different for different projects, and, in general, it's the full notice for the contractor to begin all of the work associated with the project.

Q Will Duke issue a full notice to proceed without an IURC order?

A I would not expect that we would, but that would probably be above my paygrade to make that decision. It's a commitment to the contractor at that point for a large sum of money.

Q Thank you very much.

MS. BECKER: I have no further questions.

JUDGE STORMS: Mr. Helmen, your witness.

MR. HELMEN: Thank you, Your Honor.

CROSS-EXAMINATION OF MR. DENNIS M. ZUPAN,
QUESTIONS BY MR. HELMEN:

Q Good morning, Mr. Zupan.
A Good morning.
Q Do you have any updates for us since filing your testimony either with respect to costs or time lines?
A No, not with respect to costs or time lines. I think my testimony still holds.
Q Are you still shooting for the summer of 2011 for the plant to go on line?
A I think the B-1 schedule in the FEED study report shows about an October, 2011 commercial operation date. We also had mentioned that we're attempting to work with GE and Bechtel to get lead engineering information, so we could shoot for an earlier date, but as --
Q Excuse me; can I stop you? I don't understand what you just said. Can you explain that?
A We would try to shoot for an earlier

commercial date, more like the Summer of 2011, but the problem we encountered was that that information just isn't available at this point.

Q What information isn't available?

A Engineering and design data to begin the engineering process for foundations and actual process design.

Q When do you expect to have that information?

A We're developing that right now. That's the subject of that technical services agreement that I just mentioned.

Q Is that the B-1 study that you --

A No, the B-1 schedule is an attachment to the report.

Q Sorry, okay. Prior to October of 2011, or if that date is pushed back, is this plant designed to produce electricity using natural gas?

A Our expectation is that natural gas will be one of the fuels for start-up and shutdown.

Q Would it be able to do that sooner than the Fall of 2011?

A I believe in the design, it will be able to operate on natural gas, but there's a

validation process that needs to take place for the gas turbines that would really prevent us from being able to make widespread use of the machines on gas until the full project is validated.

MR. HELMEN: Your Honor, I need to ask one question in camera.

JUDGE STORMS: Do we have anybody here that has not signed a confidentiality agreement?

Let's go ahead and go in camera.

(IN CAMERA PORTION OF HEARING COMMENCED TO BE HEARD AT THIS POINT IN THE TRANSCRIPT.)

(IN CAMERA PORTION OF HEARING COMMENCED TO BE HEARD AT THIS POINT IN THE TRANSCRIPT.)

CROSS-EXAMINATION OF MR. DENNIS M. ZUPAN,
(Continuing)
QUESTIONS BY MR. HELMEN: (Continuing)

Q Mr. Zupan, isn't it true that the FEED Study -- the confidential portion of your FEED Study indicates that this plant can generate electricity with natural gas 18 months after breaking ground on the project?

A You're referring to the schedule?

Q I'm referring to the FEED study. I'm sorry; I'm referring -- it's in the Alliance contract.

A The Alliance contract?

Q GE/Bechtel.

A We don't necessarily have an Alliance contract. We have a technical services agreement for the engineering and design of the plant.

Q Okay.

A I'm not familiar with the statement that you're talking about.

Q Okay. I don't have it with me, so that's fine.

MR. HELMEN: That concludes our in camera.

JUDGE STORMS: Okay, thank you. Let's go ahead and get back into the open proceeding.

We are out of in camera.

(IN CAMERA PORTION OF HEARING CONCLUDED AT THIS POINT IN THE TRANSCRIPT.)

(IN CAMERA PORTION OF HEARING CONCLUDED AT THIS POINT IN THE TRANSCRIPT.)

JUDGE STORMS: Mr. Helmen, you may proceed.

CROSS-EXAMINATION OF MR. DENNIS M. ZUPAN, (Continuing)

QUESTIONS BY MR. HELMEN: (Continuing)

Q You mentioned on the top of Page 3 that GE has recently decided that the low pressure steam turbine configuration is not appropriate for Edwardsport. That's on Page 3 of your testimony, Lines 4 through 6.

A Yes.

Q Does that affect the cost in any way?

A It has an impact on the cost, but the gas turbine -- or, I'm sorry, the steam turbine price actually goes down because of the -- it's not as expensive of a turbine, but the installation cost goes up slightly. We haven't evaluated that change, not to the level that we accomplished in the FEED study with a full quantity estimate, but we have

some preliminary numbers from Bechtel for the change in the installation, and it appears that the cost is a wash. The turbine is less; the installation is a little bit more.

Q I'd like to direct your attention back to Petitioner's Confidential Exhibit 20-C, which are the estimated capital costs.

A Yes.

Q Now, there has been some concern expressed during this hearing about the concern of escalating costs. Were you here for some of those questions?

A Yes, I was here.

Q And I'm just wondering: Can ratepayers look at this document and have any comfort that certain of these costs, the price risk is lower because perhaps it's standard -- more of a standard item than you see in any power plant construction?

A First of all, I hope the ratepayers don't look at this document because it's confidential, but, yes, I agree with you that some components of the estimated costs are more firm or better known than others.

Q Can you identify -- I mean, I'm looking, for

example, at the bottom at the costs under Duke Energy Indiana. Can we have some confidence that those costs probably are pretty well set?

A Yes. I think if you look at those components, there are things that we have a pretty good amount of experience with from the amount of work we've been executing in Indiana, the scrubbers and the SCR projects, and, you know, we've got some really good information to base those estimates on, and we feel pretty confident that we made the right estimate.

Q Are any of those numbers -- should we be concerned that any of those numbers are going up significantly?

A Well, there's a risk that they could go up or down, but I think that based on the way we put the estimate together and using that data, we've also looked at -- we've compared the estimates to the other projects; we've compared it to independent estimates, and I think we have a good handle on those.

Q How about under GE? Do you see "GE Power Island Equipment and Services"?

A Yes.

Q Is that the same as --

A Yes, the GE equipment and GE products and services, which are a component of this, are priced by GE, and during the course of the FEED study, we've -- you know, we've had a lot of discussions about price, and we would be very surprised to see these GE components increase. Those will be under the fixed price for the GE projects and services, so I don't anticipate that those are going to go up. If they do, we'll have a heart to heart talk with GE about it.

Q How about right in the middle of the page, something called the cooling tower. Is that a cost that we can expect wouldn't -- probably won't go up from the estimate here?

A A cooling tower doesn't have a lot of high technology in it. I probably would offend some cooling tower manufacturers by saying that, but, in general, I don't expect to see a large increase in that kind of component or that cooling tower. I think this estimate is based on actual quotations from vendors for this equipment.

Q Any other items on this list that you would consider the price risk being lower?

A No, not really.
Q Okay.
MR. HELMEN: May I have a moment?
JUDGE STORMS: Yes.
MR. HELMEN: That's all I have, thanks.
JUDGE STORMS: Redirect?
MR. POPE: Just a couple of brief questions.

REDIRECT EXAMINATION OF MR. DENNIS M. ZUPAN,
QUESTIONS BY MR. POPE:

Q Mr. Zupan, you've been involved in a few large projects in the past, haven't you?
A Yes.
Q Wabash River Repowering?
A Yes.
Q I think you mentioned a plant down in Texas.
A Yes, I was involved in a combined heat and power project for a refinery in Texas.
Q How large is that plant?
A It's about 600 megawatts.
Q Mr. Zupan, in all the projects that you've been involved with, have you ever had as much engineering detail this early in the project

as you have for the Edwardsport plant?
A No. We usually don't have two years to prepare for cost estimates and put this level of understanding into a project before we get started.

MR. POPE: That's all I have. Thank you.

JUDGE STORMS: Mr. Zupan, I have a couple of questions for you.

QUESTIONS OF MR. DENNIS M. ZUPAN,
BY JUDGE STORMS:

Q I know you spoke to, I believe, Mr. Helmen about issuing a full notice to proceed in October. There was some discussion about the need for a Commission order prior to that time.

What other things -- I'm curious about -- there are other requirements, are there not, that the plant has to comply with, specifically IDEM air permits?
A Yes.
Q Do you know the status of that permitting process?
A Yes. We submitted the permit application in

August of last year, and somewhere near the end of 2006, we had to put that application on hold. We were in the process of making some changes to the outline of the plant, the location of the sources and also wanted to confirm the emission points and emission quantities, so we put the permit on hold with the understanding that as soon as we completed the air modeling, which I believe was the only part that was deficient, we would restart the process.

Over the last six months, we've been putting together that -- the final determination of the emissions. Right now, our plan is to have the modeling completed and the revisions to the application available by July 9th and hope to restart that permit process at that point.

Q Okay. If you started it July 9th, what kind of time frame would you expect, if you know, for the completion of the air permit process?

A It's really dependent, you know, on the amount of questions or concerns or any further lack of information that might not be there that would hold up the process, but our expectation

is and from what I understand of the internal process is that the permit was very close to being ready for issue. The modeling was the big hold-up, and once we get the modeling in, our expectation is in 60 to 90 days, we should be able to get to a point where a permit can be issued for public notice.

Q 60 to 90 days from July 9th; is that the time frame?

A Yes.

Q Is that kind of a best case scenario, or is that just --

A I think it's probably a reasonable time frame based on where the permit was.

I know there have been some personnel changes within the agency for who has to look at the permit and those kind of things, but the permit is -- there aren't too many things that we really need requirements for. Most of the emissions go down as opposed to up, and it really should be a quick process.

Q Okay. When you put the process on hold, what does that mean? Did IDEM continue to look at the portions except for the modeling that you

started working on, or how does that work?
A When we put it on hold, they had pretty much gone as far as they could go with their analysis, and they had -- it is my understanding that they had a draft permit ready for issuance, but they needed to have the air modeling that shows that you don't exceed any of the national air quality standards as kind of a checkmark that's done independently of writing the permit, and we didn't have that part down. It got to the point in the process where we needed to check that box, and we weren't able to do that.
Q Okay. Are there any other boxes that need to be checked that you're aware of?
A To my knowledge, the permit application is complete other than the modeling.
Q What do you do actually to restart the process? Do you start with a submission, or do you plan to go in and meet with IDEM? How does that work?
A The plan -- and this is supposed to be communicated this morning -- was that we would deliver the information on or before July 9th and try to schedule a meeting to come in and

explain or answer any questions.

Q So shortly thereafter, you should have perhaps a better idea of the ultimate time frame that would be needed?

A Yes.

JUDGE STORMS: Mr. Zupan, thank you very much for your testimony. You are excused.

Let's take about a ten-minute break.

(WITNESS DENNIS M. ZUPAN EXCUSED ON REBUTTAL)

(HEARING IN RECESS UNTIL 10:35 A.M., SAME DAY)

Indianapolis, Indiana
June 22, 2007
10:35 (EDT)

JUDGE STORMS: Let's go ahead and go back on the record.

Petitioner, you may call your next witness.

MR. DuMOND: Petitioner calls Dr. Richard Stevie.

RICHARD G. STEVIE, a witness appearing on behalf of the Petitioner, having been previously duly sworn, resumed the Stand and testified on Rebuttal as follows:

DIRECT EXAMINATION,

QUESTIONS BY MR. DuMOND:

Q Good morning, Dr. Stevie.

A Good morning.

Q Would you please state your full name for the record?

A My name is Richard G. Stevie.

Q And you have previously testified in this cause?

A Yes, I have.
Q You have a document that has been marked for identification purposes as Petitioner's Exhibit 23 before you; is that correct?
A Yes.
Q Is that a copy of your prefiled rebuttal testimony in this cause?
A Yes, it is.
Q Do you have any changes or corrections to your testimony?
A No, I do not.
Q If I were to ask you the same questions set forth in Petitioner's Exhibit 23, would your answers be the same?
A Yes.
Q Do you adopt Petitioner's Exhibit 23 as your sworn testimony in this cause?
A Yes.

MR. DuMOND: Your Honor, Petitioner would offer into evidence Petitioner's Exhibit No. 23 including Sub-Exhibit 23-A.

JUDGE STORMS: If there's no objection, we'll show Petitioner's Exhibit 23 with Sub-Exhibit 23-A admitted into this

cause.

(PETITIONER'S EXHIBIT NO. 23, BEING THE PREFILED REBUTTAL TESTIMONY OF DR. RICHARD G. STEVIE, WITH PETITIONER'S EXHIBIT NO. 23-A ATTACHED THERETO, ADMITTED INTO EVIDENCE.)

MR. DuMOND: Your Honor, Dr. Stevie is available for cross-examination.

JUDGE STORMS: Thank you. Mr. Hartley?

MR. HARTLEY: No questions.

JUDGE STORMS: Mr. Polk, your witness.

MR. POLK: Thank you, Your Honor.

CROSS-EXAMINATION OF DR. RICHARD G. STEVIE,

QUESTIONS BY MR. POLK:

Q Dr. Stevie, have you read Ms. Pashos' rebuttal testimony?

A I have read through it.

Q Okay. Is there anything in there that you're aware of that you disagree with?

A I don't recall.

Q Are you aware of models to implement energy efficiency such as Efficiency Vermont?

A I have heard of Efficiency Vermont as a model for implementing energy efficiency.

Q Are you aware of whether Vermont offers or provides for recovery of lost margin or lost revenue to utilities in the state for energy efficiency investments?

A I am not aware of that.
Q Can you describe for me briefly the difference between a load forecast and an energy forecast?
A I view those as fairly similar terms.
Sometimes a load forecast is meant to imply an energy and a peak forecast. It may imply just energy; it may imply just peak, as opposed to an energy forecast which I think of as just an energy forecast.
Q Okay. Can you describe -- what do you mean by energy forecast? What is it a forecast of? Is it a forecast of capacity? Is it a forecast of gigawatt hour sales? Is it gigawatt hour sales at a particular time?
A It can be a number of different things. It can be a forecast of kilowatt hour sales from the customer side; it can be a forecast of total energy that includes losses, so it just depends on the context that it's being used.
Q So, can the terms load forecast and energy forecast be used interchangeably?
A I usually think of a load forecast as more generic, whereas energy might be considered more specific, but sometimes different people

can use it different ways without knowing what they're talking about.

Q I'm ticking off questions here that I'm not going to ask, so this actually will shorten the process a little bit. Let me take a moment here.

MR. POLK: May I approach the witness, Your Honor?

JUDGE STORMS: Yes, you may.

Q Dr. Stevie, what I'm going to hand you is Page 30 from Mr. Biewald's corrected confidential testimony. It's already been put into the record, and I have copies of that page if anybody would like a copy to look at.

If you'll notice, Column B says "Strategist Forecast"; Column C is "2006 Forecast."

Can you tell me whether those -- the 2006 and 2005 IRP forecasts were taken from the -- those are all taken from Duke information. Can you tell me the difference between the STRATEGIST forecast and the 2006 forecast, why those numbers are different?

A The STRATEGIST forecast, you might need to ask Ms. Jenner about what the components are that

are in there. I'm not sure if that's referring to the 2005 or the 2006 forecast, and if you remember from the direct testimony a few days ago, I talked about how in the 2005 forecast, we had excluded the IMPA projected sales from the -- but kept in the load forecast the WVPA Gibson share, and in the 2006 forecast, we had moved all of the wholesale load essentially over into -- Well, we had removed it all from the forecast, and Ms. Jenner was including it in the resource planning forecast for her analysis.

So the differences here are the -- really the wholesale load, and actually if you look at the graph that is attached to the end of my testimony, the rebuttal testimony -- this is Petitioner's Exhibit No. 23-A -- that once you account for the differences and how the wholesale loads were treated in the 2005 forecast, the lines are exactly the same, and you can see that there with the solid black line for the 2005 forecast. The 2006 forecast is slightly higher, and that was primarily due to the changes in the economic outlook.

Q So, Dr. Stevie, looking at Petitioner's

Exhibit 23-A, and you say where the two lines begin to diverge in 2011, the difference in those two lines can be accounted for because of new wholesale load contracts that begin at that time, or -- Is that what you were saying?

A No, I was saying that that was due to an updated forecast of the economy from economy.com.

Q Okay. So, the difference between the 2006 forecast and the 2005 forecast is only because of the update from economy.com?

A On the graph, that's correct.

In Mr. Biewald's testimony, the reason the 2006 forecast shown there is below the 2005 is entirely due to the differences in how the wholesale loads were either included or excluded between the two forecasts, but those wholesale loads were utilized by Ms. Jenner in her analyses. They were just not treated the same between those two forecasts.

I will mention that in our 2007 forecast that I do mention in my rebuttal testimony, that we have since moved all of the wholesale load back into the forecast, and if my memory is correct, that forecast, the 2007

forecast, is slightly higher than the 2006.

MR. POLK: Your Honor, may I approach the witness and collect that confidential page back?

JUDGE STORMS: Yes, you may.

Q Dr. Stevie, would you say that Duke's service territory is significantly different from Vectren's service territory?

A I'm really not familiar with Vectren's territory in detail. I have been through it. It is, I would consider, maybe a little more urban than the Duke Energy Indiana territory, so I don't know that you can say they're similar. It's hard to characterize.

Q I think the folks in Evansville will be happy to be viewed as more urban than elsewhere in the state.

A My daughter lives in Evansville, so I have seen Evansville.

Q Have you reviewed the market potential study that was done for the Vectren service territory?

A I have not seen that. I believe that is being held within the -- I'm not sure what the rules are, but from my understanding, it's not a

public document.
Q Are you familiar with studies by ACAAA and other organizations that have looked at the potential for demand-side management in the Midwest?
A I have seen a number of market potential studies across the country.
Q Okay. Would you say that there are lessons to be learned from those studies that could be applied to Indiana?
A There can be. One has to use market potential studies with care.

I have seen some that will, for example, attribute most of the potential energy savings to things like windows that just do not on the surface make sense.

I have seen others that -- and with the variety of approaches that are used, it's not clear that you can compare one to the other. Some may include some costs for implementing programs, and some may not. So, it's hard to look at one and draw a conclusion for -- you know, in terms of general direction.

The other thing that is of some

issue to me with regard to market potential studies is that they will assume that over the long term, that those impacts can continue when the -- they're really relying on the continuation of technological change and that you can continue to just assume you're going to get the same types of impacts out into the future that -- it's an assumption. I think they're good for guidance for maybe two, three, maybe even up to five years, but beyond that, they're making a lot of assumptions.

Q Were you here the other day when Mr. Reed -- and I forget the name of the theory, but it roughly involves talking about computer technology and how it increases exponentially, and I believe there was a Duke witness who talked about how -- or maybe it was the Clean Air Task Force witness who talked about buying a computer for $3,000 back in the '70s and how you could get so much more for so much less now that productivity increases over time. Are you generally familiar with those theories and that discussion?

A Sure. I think it was Mr. Stewart asking about Moore's law or -- No?

Q I believe you're correct that it's Moore's law, but I still think it was Mr. Reed.

And often, energy efficiency is driven by improvements in technology; right?

A Absolutely. I think that's an excellent point because within the projection of load, our load forecast embodies increasing energy efficiency.

For example, the energy intensity on the industrial side of the forecast is increasing dramatically throughout our load forecast, so in terms of the level of production per unit of energy, that is declining over time within our load forecast.

That's also reflected in our commercial forecast, and we have a -- within the details of the residential forecast, we have a projection of increasing appliance efficiency. That's one of the reasons why our projections of loads are where they are. We've got a load forecast that's on a retail basis around 1 percent per year, which is fairly low, but it is reflecting increasing energy efficiency, and that's another reason why market potential studies need to be taken

carefully because we could be double counting the energy savings by assuming we're going to get everything that's within a market potential study because it can be reflected already to an extent that's unknown but to an extent within the load forecast, and when I think of how we use that in conjunction with the Integrated Resource Plan, the forecast, to me, is a critical ingredient to that analysis, and we've got to make sure we're not double counting efficiency impacts.

Q Are you familiar with energy efficiency programs out in Oregon or the general state of energy efficiency out in the Northwest?

A I'm familiar with energy efficiency programs generally across the country. I have reviewed -- there are these nice summaries that come across the desk from time to time, and you can look through them and see what different utilities are using across the country and different organizations.

Q Are you aware of the level of energy savings they're achieving out in Oregon through their energy efficiency programs?

A I have heard claims. I have not seen that

they are completed through the monitoring verification process, so I think there's still some question as far as the level of the impacts that are being claimed.

Q Does Duke currently have such a monitoring and verification in place for its DSM programs?

A Yes, it does.

Q Is it fairly -- is that monitoring and verification process something novel and proprietary to Duke, or is it sort of a best practice in the industry?

A It is a best practice in the industry, and I know it is an issue that the -- and I can't recall what all the acronyms stand for, but it's NAESB, and it is investigating the standards for monitoring the verification, and we are participating in that process.

Q Are you aware of any states where they are achieving a 1 percent a year savings from energy efficiency?

A I have heard those mentioned. I remember seeing that in Mr. Mosenthal's testimony, and generally when people refer to that, they're referring to states like California, Vermont, Connecticut and Massachusetts that happen to

have energy prices that are on average twice the level of that in Indiana, which when you think about that, that energy price makes it a lot easier for energy efficiency programs to have impacts because you have the drive by the consumer or the incentive by the consumer to want to conserve to reduce their exposure to the higher prices of energy, and it's a -- it makes it a lot easier to pass the participant test and to implement programs.

Q I noticed you left Oregon off that list, but Oregon belongs on that list, too, don't they?

A I don't know.

Q You would agree that in Massachusetts, Connecticut, Vermont, California, New York, they've all been doing fairly aggressive energy efficiency programs for many years; right?

A Yes, they have, and our Company has done that in the past and has tried to do it and continue to do it going forward.

Q So you're representing to me today that the Company's achieving the same level of energy savings or spending the same amount per customer or per kilowatt hour on energy

efficiency as they're spending in Massachusetts, Connecticut, California and Vermont?

A No, I'm not saying that. What I was saying was that we had in the past a considerable amount of spending on energy efficiency, and then with the advent of restructuring and the likelihood or the indications that the market would pick up efforts around energy efficiency, that the utility needs to back away from that. That hasn't happened, and we're trying to turn that back around today.

Q But you would agree that the types of reductions they've seen in Massachusetts, Connecticut, Vermont, California and Oregon are technically achievable?

A I don't know that I would characterize it as technically achievable. I would like to think of it in terms of what is achievable, and, again, part of that is going to be driven by the cost to implement the programs, what are the impacts in terms of lost margins on the company, and what is really the cost effectiveness of the programs here versus there.

Q Do lost margins for the Company impact ratepayer adoption of energy efficiency measures in any way?
A No. I didn't mean to imply that. What I was getting at is that when you look at the total all-in costs of the programs, that needs to be factored in, what the impact is of the program.
Q So, incentives to the customer as well as incentives to the utility need to be factored into the cost of the programs for a cost benefit analysis?
A I wasn't referring to lost margins as an incentive, although in the approach that can be employed, there is an option for a sharing of the savings as an incentive to the utility, but that should be included.
Q Would you then also agree that incentives like an enhanced ROE for the company should be included in the cost benefit analysis of an IGCC facility?
A I can't answer that. That may have been a question better directed to Ms. Pashos.
Q Okay. I think you testified -- kind of stepping back here -- earlier that in

Massachusetts, Connecticut, Vermont and California that they were, in fact, to your belief achieving 1 percent reductions in energy savings, somewhere on that order, from demand-side management?

A That's my understanding that they were doing that.

Q And you're not familiar with Oregon's level of energy savings, but you are familiar with whether Oregon's rates are higher or lower than Indiana's; correct?

A I could check; I would have to look. I don't know.

Q Well, they're a lot lower because of hydro power, aren't they?

A That could be.

Q And in states like Massachusetts, Connecticut, California and Vermont, they have a long history of investing in energy efficiency; correct?

A I haven't gone back to look at when they started. I know California's programs have been around for awhile.

Q Okay. Would it be safe to assume that a program that's been around for ten, 15, 20

years has gotten most of the low-cost energy efficient measures installed and taken care of?

A Not necessarily. It depends on what their level of effort has been at the different points in time.

Q If I understand the discussion we just had, the problem with achieving a 1 percent reduction in energy savings in Indiana is not because the technology doesn't exist, but it has to do with the level of incentives or expenses of the measures?

A I wouldn't characterize it that way. There may be areas where there's enough technology to get significant energy efficiency impacts. Whether that adds up to 1 percent or not is really unclear, and it really needs to be looked at from the bottom up in conjunction with what is already captured in the load forecast so that we're not double counting the energy impacts, the energy saving impacts.

Q Thank you, Dr. Stevie.

MR. POLK: I have no further questions, Your Honor.

JUDGE STORMS: Thank you, Mr.

Polk.

Ms. Dodd, your witness.

MS. DODD: Thank you, Your Honor.

CROSS-EXAMINATION OF DR. RICHARD G. STEVIE,

QUESTIONS BY MS. DODD:

Q Good morning, Mr. Stevie.

A Good morning.

Q On Page 7 of your rebuttal testimony on Lines 7 to 11, you discuss the fact that large customers greater than 500 kilowatts do not want to fund energy efficiency programs.

Isn't the reason that large customers don't want to fund energy efficiency programs through the utilities is because they already have individualized company-specific efficiency programs?

A Yes, I have heard that. In fact, the way we have tended to do that is we like to see -- I mean, the larger customers that have already implemented energy efficiency and really don't want to subsidize other potential competitors in the industry is to have them opt out and verify that they've actually done something.

Q Isn't it also true that efficiency programs

for large customers need to be more geared toward the specific industry in the customer's business?

A When you're talking about larger customers, I think what you're talking about is that you have to have what are called customized programs because they're -- each customer is in a different situation, and when you have somebody that's going into the plant to do an energy efficiency audit, the types of measures that could be identified will vary widely from one place to another and can be very site specific.

Q Thank you.

MS. DODD: No further questions, Your Honor.

JUDGE STORMS: Thank you. Ms. Becker?

MS. BECKER: Just briefly. I've had my doughnut.

CROSS-EXAMINATION OF DR. RICHARD G. STEVIE,
QUESTIONS BY MS. BECKER:

Q Going back to your discussion with Ms. Dodd on Lines 7 through 11, just to clarify, you're not suggesting that larger customers are opposed to DSM philosophically, are you?

A I think that it varies. I've heard where some large customers are opposed to utility funded energy efficiency programs. I don't think they're opposed to energy efficiency. In fact, we have seen it in the forecast; we have seen it, and it is captured in our load forecast going forward that there's a declining energy intensity per unit of production in the forecast, so we're assuming the industrials are going to continue to be more energy efficient over time.

Q Isn't it true that some of your industrial customers have expressed concern over paid for DSM programs wherein they do not actually benefit from those programs?

A I think that's true.

Q Does Duke Energy consider interruptible customers a form of demand-side management?

A In my mind, yes, that what we're talking about

when we talk about demand-side management; it's the demand side of the equation as opposed to the supply side.

So, to me, anything that affects the demand side that can involve prices or incentive programs, to me, that's a very clean demarcation between demand side and supply side. So, if there's a program that offers an incentive to get a customer to reduce load like our power share program, I would consider that a demand-side management program.

Q Thank you.

MS. BECKER: I have no further questions, Your Honor.

JUDGE STORMS: Thank you, Ms. Becker.

Mr. Reed, Your witness.

MR. REED: Thank you, Your Honor.

CROSS-EXAMINATION OF DR. RICHARD G. STEVIE,
QUESTIONS BY MR. REED:

Q Good morning, Dr. Stevie.
A Good morning, Mr. Reed.
Q I would like to shift gears away from DSM for just a minute and take you back to Tuesday with your discussion with Mr. Endris about wholesale contracts.
A Okay.
Q You were talking earlier today about replacement wholesale contracts and how originally -- I'm sorry, how these wholesale contracts have been taken out of the load forecast and now recently they've been brought back in.
A Yes.
Q I believe when you were discussing this earlier, although not today, you referred to some of these new wholesale contracts as around the clock contracts.
A Yes.
Q Can you explain to me what that phrase means, Dr. Stevie?
A It means it's a constant load for 8,760 hours in the year. So, for example, the Gibson

shares are 155, 156 megawatts, 8,760 hours of the year.

Q Can you tell me, Dr. Stevie, whether the wholesale replacement contracts that were replaced whether those were around the clock contracts?

A I'm confused with your question as far as what -- when you're referring to something that's replaced, are you talking about the ones that stopped or the ones that were added?

Q Let's talk about the ones that had stopped; let's start with the IMPA contract, for example. Was that an around the clock contract?

A It's my understanding it was not.

Q Can you tell me, Dr. Stevie, how many of the new wholesale power contracts are around the clock contracts?

A I'm not sure if I know entirely, but I think all of them are. You might confirm that with Ms. Jenner.

Q Thank you. Is it also then safe to say that the majority of the former wholesale contracts were not around the clock contracts?

A I don't believe they were, but keep in mind

that a lot of the differences that you're seeing in this load forecast had to do with contracts that did not end but were just moved in and out of the forecast, but they were still there for the resource planning side as a requirement.

Q Dr. Stevie, if you replace approximately 500 megawatts of wholesale native load that is not around the clock with 500 megawatts of wholesale load that is around the clock, won't that have a measurable increase in total energy sales?

A It depends on what you mean by measurable. It will have an increase in sales.

Q And you could quantify that, presumably?

A It could be quantified.

Q So, it would be measurable?

A In that context, it could be measured.

Q Thank you. If this is a reasonable assumption to make, can you tell me what a typical load factor would be in these -- in the old wholesale contracts that were not around the clock?

A Not off the top of my head. I would have to look.

Q Would it be somewhere in the 60, 65, 55, 75, that range; something less than 100, presumably?
A It would be less than 100. It might be near the system load factor. I just don't know off the top of my head.
Q What would that system load factor be?
A The system load factor is around 60 percent; it might be a little bit higher than that.
Q 60, 65, ballpark?
A Yes.
Q Well, if we assumed a 60 to 65 percent load factor for your system load factor, that's our baseline, and then you replaced 500 megawatts that were at 65 percent load factor and you replaced them with 500 megawatts at 100 percent load factor, wouldn't that be about a 50 percent increase in energy?
A I don't know. I would have to run the calculations.
Q Dr. Stevie, can we turn to Page 7, please?
A I'm there.
Q Earlier, Ms. Dodd was asking you some questions about industrial users in Lines 6 to 11, and I thought I heard you say earlier that

Duke formerly had significantly greater energy efficiency spending levels, particularly as they applied to large use customers, but that as the market moved toward deregulation, the utilities backed off those programs; is that a fair summary of your testimony?

A I think it was as the market moved toward restructuring and that there was a recognition that we ought to see if the energy efficiency industry, the competitive industry, could provide those services.

Q Fair enough. The comment you made after that, though, you said -- I thought I heard you say that Duke was trying to turn that back around today. Do you recall that comment?

A Yes. We made a filing in 2004 to expand significantly our efforts on energy efficiency which we brought to the Commission back at that point in time. It was not accepted.

Q But you said you were trying to turn it back around today, not three years ago, and since you weren't successful three years ago, what is Duke trying to do to turn it around today to bring back large industrial customers into demand-side management programs?

A I don't know that I was directly implying the large industrial customers, although we would like to once again raise that issue and see if there would be programs that would be amenable to the larger industrial customers. That is something we are investigating.

Q You said you were doing it today, and I was wondering what it was you were doing today.

A No, I don't believe I said that. What I was referring to was generally with regard to energy efficiency. I wasn't focusing in that comment directly on industrial programs.

Q Thank you for that clarification.

Earlier, Mr. Polk asked you some questions about long running demand-side management programs that had been around for 15 or 20 years, and he asked you whether or not you believed those programs or a program that had been in effect for that length of time had already secured most of the low-cost savings. Do you recall that question?

A Yes, I do.

Q I believe your answer there was that it depends on the effort, presumably presenting the effort of the utility to go after that; is

that correct?
A Yes. I was referring to if you have had a program that's been around for 20 years, well, they might not have spent very much money the first ten and spent a lot later. I just don't know the distribution of that spending and what kind of impacts were achieved. What were the programs? Did they have some that they implemented and subsequently shut down because they had saturated the market? In fact, we had a few programs like that that had saturated the market, and then we shut those down.
Q Dr. Stevie, earlier, you were discussing with Mr. Polk -- we were talking about load forecasts and market potential studies, and you commented that sometimes market potential studies can double count energy savings already counted in the load forecast. Do you recall that?
A Yes.
Q I thought I heard you say that you can't be sure whether or not the savings are double counted. Did I hear you correctly?
A Generally, I think you represented that

correctly.

The issue there is that a market potential study can give you, I think, a pretty good idea of the types of programs in the near term that can provide benefits in reducing energy consumption.

When you expand that over to the longer term, market potential studies are assuming that there's going to continue to be technological change, that there will be new energy efficiency measures or equipment that can be provided in the market to continue to achieve those types of energy savings, and what I'm saying is that, well, at the same time, the load forecast is assuming the same thing, so there's a risk of double counting those impacts.

Q So that I understand then what you're saying, the load forecast would also include the same technological advancements?

A That's right. It assumes technological change continues and productivity continues, and you can see this also when you look at, for example, the national gross domestic product per unit of energy for the whole country.

Back in the '70s, the ratio was about 1.2, 1.3 -- or the growth rate rather than NGDP relative to growth and energy was about 1.2 percent.

I need to clarify this. It's energy use per unit of gross domestic product.

Q Can you say that again, please?

A Energy use per unit of gross domestic product.

Energy use was growing 20 percent faster than GDP. Today, it's growing half, so 60 percent of the growth of GDP.

So, that's implying that there's an embedded level of energy efficiency that the overall economy has achieved, and we can't ignore that when we're putting together a load forecast.

Q Thank you.

Dr. Stevie, could you please turn to Page 9 of your testimony, Line 17, the question that addresses Ms. Soller's testimony?

A Yes.

Q That question, sir, carries on over on to Page 10, and you make the comment that Ms. Soller's numbers on Line 23 only represent the

incremental impacts from the conservation programs and do not include the continuing impacts achieved from energy efficiency investments made in prior years. Do you see that language?

A Yes.

Q What are the sources of the continuing impacts achieved from energy efficiency investments made in prior years that you're discussing here?

A Well, the Company has a long history of implementing energy efficiency programs going back to the early '90s, and each time that a customer installs more energy efficient equipment due to prior incentives that the Company would have provided, those impacts don't go away. They would continue out to the future, and that's what I'm referring to.

Q Is that really true? Those energy efficiency gains don't last forever, do they? I mean, my water heater gets old, or, Heaven forbid, I take out my compact fluorescent light bulbs.

A You shouldn't do that.

Q Oh, I know, but people do, don't they?

A Some will, but we do assume that the equipment

is replaced with an in-kind level of efficiency, so, for example, let's say a commercial establishment has put in T-8s as opposed to T-12 lighting. Well, when it comes time now to maybe redo or remodel an area, we do assume that they're going to continue to put in the T-8s.

Q Isn't it true, Dr. Stevie, that the Company has made no independent study of its Indiana customers that would demonstrate the length of service of these energy efficient measures?

A The Company has conducted a number of impact evaluation studies. We may have provided those in response to a data request. I would have to go through there to see what the studies had concluded on persistence of the impacts.

Q Isn't it true, Dr. Stevie, that it is exactly the lack of that type of information that the Company was criticized for in its last DSM case?

A I don't think it was criticized on the persistence of the impacts. It was argued that the impact evaluation plan that was provided in the filing was not complete,

although I would contend that it was because we were making the point that we did not want to bias the output of the impact evaluation studies by dictating what it's going to look like, and we wanted to have an independent third party prepare and report on those impacts rather than having the Company report on that.

Q Is it your testimony here today, Dr. Stevie, that this testimony here in Lines 1 and 2 about the continuing impacts achieved from energy efficiency investments made in the prior years, that the Company has undertaken impact evaluations that would demonstrate the persistence of these measures put forth since, I believe as you noted, 1990?

A I would have to go back and look at the impact evaluation reports to confirm the results of the persistence that was assumed in those reports or that was found.

Q Not what you've assumed, Dr. Stevie; I'm not interested in your assumption.

What I'd like to know is whether or not the Company has performed impact evaluations that would back up your contention

that Ms. Soller's numbers exclude the continuing impacts of savings, which so far we don't know if they're still there saving anything?

MR. DuMOND: Objection. I think that mischaracterizes what the witness has stated.

JUDGE STORMS: I'll overrule the objection and allow the witness to answer.

A My issue with Ms. Soller's statement is that she's looking at what occurred as a result of the energy efficiency programs just in 2006. It is incorrect to assume that there are no continuing impacts from all of the programs and all of the spending that has occurred over the last 15 years. If we're going to assume that that's not going to be there, then we really shouldn't be doing any energy efficiency programs.

Q (Mr. Reed Continuing) Let's agree that it would be wrong to exclude 100 percent of the prior energy efficiency savings from the '90s forward. Somebody did something last year that they're still doing, whether it's a better water heater or a better air

conditioner; fair enough?
A Sure.
Q My point is that you can't quantify those continued impacts because you don't have an Indiana based impact evaluation.
A That's incorrect. We have done considerable studies over the years. I think we provided them in different proceedings. We've made estimates based on those studies of the historical impacts, and I believe I even reported on it in my direct testimony.
Q Thank you, Dr. Stevie.
MR. REED: Your Honor, I have nothing further.
JUDGE STORMS: Thank you, Mr. Reed. Redirect?

REDIRECT EXAMINATION OF DR. RICHARD G. STEVIE,
QUESTIONS BY MR. DuMOND:

Q Dr. Stevie, I believe you stated that Duke Energy Indiana, and as it was then known PSI Energy, has had energy efficiency and DSM programs dating back to the '90s; is that correct?

A That's correct.

Q Would it be fair to say that over a period of over a decade, Duke Energy Indiana has implemented additional DSM and energy savings programs?

A That's correct.

Q And, in fact, at the time you filed your direct testimony, Duke Energy Indiana had on file an application for a personalized energy report program, and subsequent to the time you filed your direct testimony, that has been approved by the Commission?

A That's correct.

Q How would you characterize the efforts of Duke Energy Indiana with respect to DSM and energy efficiency programs in relation to other utilities in this area?

MR. REED: I'll object, Your

Honor. That goes well outside the scope of at least my cross. I don't believe anyone asked Dr. Stevie to compare Indiana energy efficiency efforts to anyone else's. Mr. Polk did discuss energy savings in other areas, but he didn't ask how Duke compared to that.

MR. DuMOND: Certainly, the implication of Mr. Polk's questions was to bring into question the issue of how Duke Energy Indiana is doing in comparison to other utilities.

JUDGE STORMS: I'll overrule the objection and allow the witness to answer.

A I believe that Duke Energy Indiana tries to be very smart about the programs that it implements.

You mentioned the personalized energy report program, and that one is performing very well, and it's my understanding that in the State of Indiana, that Duke Energy Indiana is really leading the efforts on implementing energy efficiency.

MR. DuMOND: May I approach the witness?

JUDGE STORMS: Yes, you may.

Q (Mr. DuMond Continuing) Dr. Stevie, I'll hand you what was previously marked as Indiana Industrial Group CX-1. I'll ask you if you would agree that on the first page of that document, there is a listing of all of the states, and it has the highest cost for industrial consumers down to the lowest cost, and do you see that the states of Massachusetts, Connecticut, New Hampshire and California are all categorized in the top ten most expensive states for electricity prices for industrial customers?

A Yes, I see that.

Q And the State of Indiana is down toward the bottom; is that correct?

A Yes. It's 35th.

Q So, the 35th least expensive whereas the states referenced by Mr. Polk, Massachusetts is second most expensive; Connecticut is fourth most expensive; New Hampshire is fifth most expensive, and California is ninth most expensive; is that correct?

A That's correct.

Q And for the states of Massachusetts, Connecticut and New Hampshire, at least with

respect to industrial rates, would you agree that their industrial rates are more than double than the State of Indiana?

A They are more than double.

Q And California is almost more than double?

A That's correct.

Q If you turn to the second page --

MR. POLK: Your Honor, I'm going to object because he's cross-examining -- he's doing redirect on industrial rates. I didn't ask questions about industrial rates. Duke doesn't have industrial programs for DSM. We were talking about residential customers.

JUDGE STORMS: Any response?

MR. DuMOND: I'm just asking generally about the rates in this state versus other states. There's been testimony in this case with respect to the fact that it's more difficult to implement energy efficiency programs and DSM programs in states where you have a lower cost of electricity. In addition, I do have some questions with respect to residential customers.

MR. REED: Your Honor, I'm going to join in Mr. Polk's objection but on

separate grounds. I believe if counsel wants to ask Dr. Stevie questions about the document, he can, but if Counsel is just going to stand up and read the results of the document, he's testifying, and he's not a witness.

JUDGE STORMS: That document is already in the record; is that correct? It was submitted by the Industrial Group with respect to another witness; right?

MR. DuMOND: Yes.

JUDGE STORMS: I'll sustain the objection. I agree that if you'd like to question Dr. Stevie in redirect form on the testimony from today, that would be perfectly fine, but we'll sustain the objection.

Q (Mr. DuMond Continuing) Would you agree, Dr. Stevie, that in the states of Connecticut, New Hampshire, Vermont and California that in general, those states have much higher residential electricity rates than the State of Indiana?

MR. REED: Objection, Your Honor. He's leading the witness.

JUDGE STORMS: I'll sustain the

objection.

Q (Mr. DuMond Continuing) In comparison to the State of Indiana, how would you categorize the electric rates for the states of Connecticut, New Hampshire, Massachusetts and California?

MR. POLK: I'm going to object because he already testified to where those rates were earlier when I asked him that question.

JUDGE STORMS: I'll overrule the objection.

I question why the witness still has the document that I previously sustained the objection on from just reading through it. If you could retrieve that from the witness, I think that would be useful.

If you would like to rephrase your question in the form of redirect based on the testimony he's provided today, I think that's perfectly acceptable. Thank you.

Q Dr. Stevie, you were questioned earlier about the energy efficiency programs in the states of Vermont, New Hampshire, Connecticut and California; is that correct?

A Yes.

Q And you heard questioning from Mr. Polk about the alleged energy efficiency savings that have been accomplished in those states; is that correct?
A Yes.
Q In states that have higher electricity rates, is it easier or more difficult to implement energy savings programs?
A As I have stated in my rebuttal testimony, I see that as very true because it is a lot easier to pass the participant test where it makes it easier for the customer to justify the cost effectiveness of some of the investments in energy efficiency. So in states with higher energy prices, it's easier to make it cost effective.
Q And apart from the industrial exhibit that we were just looking at, do you have independent knowledge of the fact that residential rates in the states of California, Vermont, Massachusetts and California are substantially higher than the State of Indiana?
A Yes. I had on my own looked at the same type of information that was on the exhibit from the Department of Energy, and it shows that

the residential electric prices are very close to, and, in many cases, more than double that of the residential prices in Indiana.

Q Mr. Polk referred to the testimony of Mr. Mosenthal, and he made references to programs that were suggested by Mr. Mosenthal. How do Duke Energy Indiana's DSM and energy efficiency programs compare to those set forth in the testimony of Mr. Mosenthal?

A The programs, for example --

MR. POLK: Your Honor, I'm going to object. I don't actually recall asking any questions about the programs suggested by Mr. Mosenthal. I believe Dr. Stevie may have raised something about the programs of Mr. Mosenthal in one of his responses, but I don't recall asking any questions about the programs proposed by Mr. Mosenthal.

JUDGE STORMS: Response?

MR. DuMOND: It seems to me that the thrust of the questioning by Mr. Polk was that Duke Energy Indiana isn't doing enough with respect to DSM and energy efficiency. It seems to me we ought to be able reply with respect to the programs that we are moving

forward with.

JUDGE STORMS: That's been the thrust of Mr. Polk's questioning for a week on a lot of witnesses. What about with respect to the actual Mosenthal information that was conveyed with respect to the objection?

MR. DuMOND: I believe Dr. Stevie did in one of his responses refer to Mr. Mosenthal.

JUDGE STORMS: I'll overrule the objection and allow the witness to answer.

A Well, just to clarify and in my testimony, I had laid out -- and it's also shown in the Integrated Resource Plan -- what energy efficiency programs we have, that they do provide a wide range of options for consumers that is very easy to take advantage of on the part of the consumers.

Q (Mr. DuMond Continuing) Are you familiar with the web site of Duke Energy?

A Yes.

Q And if any person were to go to that web site, would they be able to find references to energy efficiency programs?

A Yes, they would. They would find that very

easy to do.

In fact, if they call in, the call center is quite well equipped and trained to be able to refer people to the -- our energy efficiency programs.

Q And are the energy efficiency programs set forth by state; that is, for the State of Indiana, for the State of Ohio, for the State of Kentucky, et cetera?

A Web sites are very interesting things, but within the Duke Energy web site, if you are able to just click on the state that is of interest to you, you can then see and scroll down to what energy efficiency programs are there by state.

Q And, again, your load forecasts take into account the energy efficiency savings that have already occurred because of Duke Energy Indiana's DSM and energy efficiency programs; is that correct?

A That's correct. The historical data will capture what has been achieved, and we actually make a forecast with and without projected energy efficiency impacts, and when I say that, I'm talking about the expected

impacts from incremental spending through the DSM programs.

Q So they also take into account the ongoing benefits of past programs that will continue into the future?

A Absolutely. Otherwise, our load forecasts would be considerably higher.

MR. DuMOND: May I approach the witness?

JUDGE STORMS: Yes, you may.

(Reporter marked document for identification as Petitioner's Exhibit No. Redirect 3)

Q I've handed you what's been marked as Petitioner's Redirect Exhibit No. 3 --

A Yes.

Q -- and earlier while you were being questioned by Mr. Polk, you referred to the Duke Energy 2007 load forecast.

A Yes. This is a forecast that was prepared this Spring.

Q Okay. Can you identify --

MR. POLK: Excuse me, Your Honor.

I'm going to object. I don't recall asking Dr. Stevie about a 2007 load forecast. I'm not sure my client has ever seen the 2007 load forecast or the document that's been handed out. It doesn't have a source on it. I'm not sure if it's ever been provided in discovery. I'm not sure we've ever been able to ask questions about it. I'm not sure where these numbers come from or what assumptions were made.

JUDGE STORMS: Is there any response?

MR. DuMOND: The fact that a load forecast had been prepared is set forth in Dr. Stevie's rebuttal testimony.

JUDGE STORMS: Was this attached to the rebuttal testimony? I don't recall Mr. Polk asking about a load forecast, and maybe we can look back in the record and see if that question was asked, but for our purposes here, even if it was discussed in Dr. Stevie's testimony, the appropriate mechanism to do would be to attach it to his testimony. It's up to you. It's not been offered, so at this point, you can offer it, and I can rule on the

objection.

MR. DuMOND: Your Honor, we would like to offer it.

MS. BECKER: Your Honor, Nucor would like to join in on the objection.

MR. REED: Likewise, Your Honor, the OUCC would join in that objection.

MS. DODD: The Industrial Group would, too.

JUDGE STORMS: Any further response?

MS. KARN: Can we have a minute, Your Honor?

JUDGE STORMS: Yes.

MR. DuMOND: If I may, Your Honor, when Mr. Polk was questioning Dr. Stevie, he had referred to a page, I think, taken from the testimony of Bruce Biewald, which had the STRATEGIST forecast, the 2006 forecast, the 2005 IRP forecast, and Dr. Stevie was explaining how -- what the root of the differences were between those different forecasts with respect to including wholesale and not including wholesale, and then during the questioning of Dr. Stevie, he made clear

that the 2007 forecast -- and this is consistent with his rebuttal testimony -- included the wholesale load. In my mind, this helps clarify the record.

JUDGE STORMS: I am going to sustain the objection, and as we discussed previously, although I believe this was, in fact, discussed by Dr. Stevie in his rebuttal testimony, it should have been included as part of the rebuttal testimony. I think it's best related to the discussion he was having with Mr. Polk, and, therefore, I will exclude it from the record and sustain the objection.

(PETITIONER'S EXHIBIT NO. REDIRECT 3, BEING A ONE-PAGE DOCUMENT ENTITLED, "DUKE ENERGY INDIANA, FORECAST OF ELECTRIC ENERGY AND PEAK DEMAND, FORECAST PREPARED IN 2007", ***NOT ADMITTED*** INTO EVIDENCE.)

REDIRECT EXAMINATION OF DR. RICHARD G. STEVIE, (Continuing)

QUESTIONS BY MR. DuMOND: (Continuing)

Q Dr. Stevie, do you know whether the wholesale loads you discussed with Mr. Reed are native wholesale loads?

A Yes, they're native wholesale loads.

Q Do you know whether the wholesale native load is allocated fixed cost such as generating plant costs associated with such load?

A No, I don't.

Q When you were being questioned by Mr. Reed, he was inferring that customers might replace an efficient device or piece of equipment with a less efficient piece of equipment.

In your opinion, is it reasonable to assume that DSM measures that are implemented by customers will generally be replaced by equipment and other measures that are at least as efficient as those that were replaced?

A I think that's a reasonable assumption, and I think it's also reasonable to assume they could replace it with even more efficient equipment.

So, for example, if they put in an efficient refrigerator and then years later they decide to replace it because of improvements in appliance efficiency, they could replace it with a more efficient appliance. Same with air conditioners and other items.

Q Do technical innovations generally produce measures with higher efficiency or lower efficiency?

A Well, if you're talking about plasma TVs, I don't know, but, generally, yes.

Q Generally yes?

A Yes, they are replaced with more efficient units, but I can't testify that every appliance would be more efficient. It might be providing more utility to the consumer and could consume more energy.

Q In general, do governmental regulations require more efficient measures such as with respect to HVAC systems?

A Yes.

Q Okay.

MR. DuMOND: Nothing further, Your Honor. Thank you, Dr. Stevie.

QUESTIONS OF DR. RICHARD G. STEVIE,
BY JUDGE STORMS:

Q Dr. Stevie, I have a couple of questions for you. On Page 10 of your testimony -- Before we get to that, I was listening to Mr. DuMond, and I was wondering when someone replaces their refrigerator and takes the old one to their basement, what does that do for them? It increases the usage, I would imagine.

A It could, but hopefully they're taking one out of the basement that was even older and replacing -- putting the one that's a little more efficient down there, but --

Q Bumping it down the line. Okay.

I am particularly interested, and just to try to get some additional clarification from you, on Page 10, the question that begins on Line 5 and takes the remainder of that page, and there are a number of issues in there that seem to have some impact or will have some impact on the Commission or some role for the Commission to play, and I guess initially you talk about this market potential study, and I was wondering, if you know -- and I know there's a

collaborative for this purpose. I was wondering if the collaborative is far enough into the process that they know how they're going to judge this program and ask the Commission to implement it ultimately.

A It hasn't gotten to that level yet. We just received recently the draft of the market potential study, and the collaborative is discussing what to do with that as well as what types of programs need to be brought forth to the Commission for approval. It's still in the development stage.

Q Is that what the collaborative is doing to try to identify the most appropriate programs to present to the Commission and ones that should not be presented, or is that just part of it?

A I think that's just part of the process within the collaborative. The consultant will recommend here are the cost-effective measures; here are the programs to -- that ought to be implemented, and I think it's really up to the collaborative in that process to then take that and figure out what to do with it.

For example, and I'm not able to

point to a particular recommendation from this report because it's still in a draft stage, but there may be a program in there that one or another member of the collaborative might think, well, we've already done that or it could be structured differently and would make more sense a different way.

Q Do you anticipate that the report will be structured in such a way to walk through that process to see how you started and how you ended up where you did ultimately?

A I think the report will be from the consultant and will be separate. I would anticipate that when ultimately something is brought to the Commission, that part will be discussed either in testimony or in the application of how that maps from one into the other.

Q Okay, and that would be provided through the testimony of witnesses?

A I would think so.

Q The other question I have -- it really starts down on Line 17, I suppose, 16, 17, in that area, and it talks about energy efficiency and demand response in at least -- in the range of at least 1 percent of our revenues. Do you

see that?
A Yes.
Q Explain to me, if you would, it's 1 percent of revenues. Do you have any idea -- I am assuming you can judge when you've reached that level. How are you going to quantify the effectiveness vis-a-vis that level of expenditures? Do I have that right? Are they two separate things? Is one an expenditures side, and then there's a separate side that would allow you to evaluate the effectiveness of this level of expenditures?
A To me, it's a bottom-up process of looking at each of the measures and the programs to see what is cost effective and adding all of that up. We anticipate, although we're nowhere near complete on this, but we anticipate that that should result in being able to spend 1 percent of retail revenues. There's no guarantee on that. There may be enough cost-effective energy efficiency that would get us to that point.
Q So it's the effectiveness of this program that's going to drive this number?
A The cost effectiveness should.

Q Okay, so they're tied together; they're not separate as I was suggesting?
A That's how I look at it.
Q Then the last thing I have, and I'm looking at the bottom here, Line 20 talks about the Commission should not side-step the good work that's being done in the collaborative by requiring a certain level of energy efficiency requirements in this proceeding.

Is this relating back to this 1 percent number? Is this something that the Commission should not get involved with at this juncture?
A I think what it is is it's premature. We don't have enough of the information yet to say here's the plan. We ought to go and finish the process of developing the plan and bringing that forward to the Commission rather than having a directive from the Commission saying go do this amount; it will be better to come and bring to the Commission something that is built from the bottom up. I think that would -- then there's a foundation or a basis for including it in the IRP.
Q When you include it in the IRP, I know in your

direct testimony, you had a low-impact DSM case, a high-impact and an ultra-high impact DSM case I think that you developed. Where do you see the 1 percent expenditures placing you on this continuum with respect to your projections?

A I don't know that I have a good answer for that that can say that the ultra high was around the 1 percent or that even the high was 1 percent because we didn't really price that out. That was a projection using the impacts from the filing that we made in 2004, and I don't know that that was -- I just don't recall whether that was close to 1 percent. It might have been.

Q For which one?

A For the ultra-high DSM. It might have been close to the 1 percent; I just don't recall.

JUDGE STORMS: Dr. Stevie, thank you for your testimony. You are excused.

Let's go ahead break for lunch and reconvene at 1:15.

(WITNESS RICHARD G. STEVIE EXCUSED ON REBUTTAL)

(HEARING IN RECESS UNTIL 1:15 P.M., SAME DAY)