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ILLINOIS POLLUTION CONTROL BOARD  
AUGUST 18, 2006

IN THE MATTER OF: )  
 )  
PROPOSED NEW 35 ILL. ADM. CODE 225 ) R06-25  
CONTROL OF EMISSIONS FROM LARGE ) (Rulemaking-Air)  
COMBUSTION SOURCES (MERCURY) )

Report of proceedings had at the hearing in  
the above-entitled cause before HEARING OFFICER  
MARIE E. TIPSORD, called by the Illinois Pollution  
Control Board, pursuant to notice, taken before Martina  
Manzo, Certified Shorthand Reporter and Notary Public  
within and for the County of Cook and State of  
Illinois, at the James R. Thompson Center, 100 West  
Randolph Street, Assembly Hall, Chicago, Illinois,  
commencing at 1:40 p.m. on the 18th day of August,  
A.D., 2006.

1 APPEARANCES:

2 ILLINOIS POLLUTION CONTROL BOARD

3 Ms. Marie E. Tipsord, Hearing Officer  
4 Mr. G. Tanner Girard, Acting Chairman  
5 Mr. Nicholas J. Melas, Board Member  
6 Mr. Timothy J. Fox, Board Member  
7 Ms. Andrea S. Moore, Board Member

8 ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

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1                   MR. ZABEL: This may not have been clear  
2 on the record in answer to a question Ms. Moore asked.  
3 Under the 1990 amendments, there really is no  
4 grandfathering. All existing sources under Title 4,  
5 the ASRE provision, had to be allocated allowances and  
6 had to comply. Grandfathering was generally used to  
7 refer to the distinction between new and existing  
8 sources in the 1970 amendments.

9                   Thank you, Madam Hearing Officer.

10                   HEARING OFFICER TIPSORD: Thank you.

11                   UNIDENTIFIED SPEAKER: Madam Hearing  
12 Officer, I have a follow-up question from this  
13 morning's issue.

14                   HEARING OFFICER TIPSORD: All right.  
15 Let's go ahead and do that then, Mr. Harley.

16                   And do you have his card?

17                   THE COURT REPORTER: No.

18                   HEARING OFFICER TIPSORD: It's Keith  
19 Harley.

20                   MR. HARLEY: I'll give you my card in a  
21 moment. For the record, my name is Keith Harley. Good  
22 afternoon.

23                   Earlier in your testimony in  
24 response to a question that I asked you, you indicated

1 that installation of pollution control equipment had an  
2 expense of 1.5 to \$3 million and may be regarded as a  
3 major capital improvement at some facilities --

4 MR. MARCHETTI: Yes.

5 MR. HARLEY: -- is that true?

6 You said it would be regarded as a  
7 major capital improvement at older and smaller  
8 facilities?

9 MR. MARCHETTI: Yes.

10 MR. HARLEY: Could you elaborate on what  
11 you mean by "older facilities," please?

12 MR. MARCHETTI: Well, what I would be  
13 referring to about older facilities and -- older and  
14 smaller facilities, I'd usually be referring to an  
15 older property in excess of 50 years old and a unit  
16 that would probably be less than 200 megawatts.

17 MR. HARLEY: I see. Is it correct to  
18 say, also, that for that category of facilities, the  
19 installation of pollution control equipment, you were  
20 also factoring in the ongoing operating costs as well  
21 related to the operation of the pollution control  
22 equipment?

23 MR. MARCHETTI: Yes.

24 MR. HARLEY: If capital improvement of

1 \$1.5 million could be regarded as a major capital  
2 improvement, could any expense related to installing  
3 pollution control equipment at an older, smaller  
4 facility be regarded as a major capital improvement if  
5 it also involved operating costs on an ongoing basis?

6 MR. MARCHETTI: Operating costs in terms  
7 of operating costs of the pollution control equipment?

8 MR. HARLEY: Yes.

9 MR. MARCHETTI: Yes.

10 MR. HARLEY: So capital improvement at  
11 an older facility, 50 years old, 200 megawatts or less,  
12 that costs \$1,000 but had ongoing operating costs could  
13 be regarded as a major capital improvement?

14 MR. MARCHETTI: If it happens -- If a  
15 capital improvement was only \$1,000, I don't think it  
16 would be considered a major capital improvement.

17 MR. HARLEY: \$100,000?

18 MR. MARCHETTI: I would think it would  
19 have to be, you know, in terms of -- it would have to  
20 be in terms of something that would (inaudible).

21 THE COURT REPORTER: I'm sorry --

22 HEARING OFFICER TIPSORD: We lost it.

23 MR. MARCHETTI: The range (inaudible).

24 MR. ZABEL: Are you having trouble

1 hearing?

2 THE COURT REPORTER: Yeah. I think it's  
3 the microphone, actually.

4 MR. ZABEL: Let's try it here. This  
5 one's a little more sensitive.

6 MR. HARLEY: So it would have to be an  
7 improvement that was in excess of \$1 million?

8 MR. MARCHETTI: I would believe so.

9 MR. HARLEY: So one of the assumptions  
10 that's gone into the way that would you characterize  
11 the installation of pollution control equipment at many  
12 Illinois facilities that would be a major capital  
13 improvement would be anything in excess of \$1 million  
14 that entailed ongoing operating expenses related to  
15 that pollution control equipment; is that correct?

16 MR. MARCHETTI: Yes. But, I mean, it  
17 would also take into account the age and size of it.

18 MR. HARLEY: Thank you. I believe we're  
19 prepared now to resume with other questions.

20 MR. AYRES: I would just like -- I have  
21 one question to ask.

22 HEARING OFFICER TIPSORD: Sure.

23 MR. AYRES: Could you tell us,  
24 Mr. Marchetti, what a typical yearly maintenance budget

1 might be for a 500 megawatt power plant?

2 MR. MARCHETTI: No, I can't.

3 MR. AYRES: I'm sorry?

4 MR. MARCHETTI: I cannot.

5 MR. AYRES: Okay.

6 HEARING OFFICER TIPSORD: Then I believe  
7 we're ready for Question Number 4.

8 MR. MARCHETTI: On page 5, we note that  
9 there was a five percent reduction in the output of  
10 Illinois coal generating units in the model as a result  
11 of the implementation of the Illinois rule. Please  
12 identify which Illinois units have their output reduced  
13 in the model compared to the CAIR/CAMR run. In  
14 addition, please provide the variable operating costs  
15 for each of these model runs.

16 This information is being provided  
17 in exhibit --

18 MR. ZABEL: That would be whatever the  
19 next number is.

20 MR. MARCHETTI: I think it's 121.

21 HEARING OFFICER TIPSORD: 121?

22 MR. MARCHETTI: I guess it would be 121.

23 MR. ZABEL: It's two exhibits.

24 HEARING OFFICER TIPSORD: I've been

1 handed a multipage document, a table captioned  
2 "Generation-CAMR." If there's no objection, I will  
3 mark this as Exhibit 121.

4 MR. MATOESIAN: Excuse me. Could I have  
5 a copy, please?

6 MR. ZABEL: I'm sorry.

7 HEARING OFFICER TIPSORD: Seeing no  
8 objection, we'll admit this as Exhibit 121.

9 MR. AYRES: I'll repeat the same thing I  
10 said earlier in that this is a fairly large chart which  
11 we requested sometime ago, and we now have been given  
12 it too late for any analysis on it.

13 MS. BASSI: Madam Hearing Officer, there  
14 was -- I have to object to his objection, I guess,  
15 because there was no -- there was no request in the  
16 written questions that anything be provided ahead of  
17 time. All we got were written questions.

18 MR. ZABEL: To expedite this, I will  
19 just incorporate our response to that from the last  
20 time.

21 HEARING OFFICER TIPSORD: And I  
22 understand your concern. I understand that this is,  
23 unfortunately, the pattern as a result of the quick  
24 turnaround in both testimony and questions in this



1 proceeding. And I would note that you obviously have  
2 the opportunity to file comments in response to  
3 anything.

4 MR. AYRES: That doesn't give us an  
5 opportunity to cross-examine him, but ...

6 HEARING OFFICER TIPSORD: I've been  
7 handed "Generation-Illinois Rule," which we will mark  
8 as Exhibit 122. If there's no objection -- Seeing  
9 none, it's Exhibit 122.

10 MR. AYRES: Could I ask a question about  
11 this material that's just been handed out?

12 MR. MARCHETTI: Sure.

13 MR. AYRES: Is this output from Charles  
14 River Association?

15 MR. MARCHETTI: I think they call it  
16 CRA (inaudible) --

17 MR. AYRES: CRA (inaudible) --

18 MR. MARCHETTI: -- (inaudible) --

19 THE COURT REPORTER: Excuse me. Hold on  
20 a second --

21 HEARING OFFICER TIPSORD: Mr. Ayres, you  
22 can't talk over him. You have to let him answer, okay,  
23 because she can't get everything.

24 MR. AYRES: Sorry.

1 HEARING OFFICER TIPSORD: Let him speak,  
2 and then you could talk.

3 MR. MARCHETTI: I think for purposes of  
4 discussion, we'll just use CRA, and that would be  
5 appropriate.

6 MR. AYRES: That's fine.

7 Is this the output of the CRA  
8 model?

9 MR. MARCHETTI: Yes. That's the output  
10 they provided us for the CAIR/CAMR simulation for oil  
11 and gas in our units in Illinois as well as for the  
12 CAIR/Illinois simulation.

13 MR. AYRES: Okay. Thank you.

14 MR. MARCHETTI: Okay --

15 MR. AYRES: I'm sorry. Your answer to  
16 Question 4, I'm not quite sure --

17 MR. MARCHETTI: Okay. I've got to  
18 finish up one portion of it.

19 MR. AYRES: Okay. CRA International did  
20 not compute individual unit variable costs, so this  
21 information was unavailable.

22 Number 5: Table 1 found on page 6  
23 of your testimony shows a reduction not only in  
24 coal-fired generation but also in gas- and oil-fired

1 generation in the years 2009 and 2010 for the Illinois  
2 rule run relative to the CAIR/CAMR run. Please explain  
3 the result.

4                   The increase in natural gas-fired  
5 generation by Illinois generators beginning in 2010 is  
6 attributed to the declining price of natural gas as  
7 modeled by CRA International.

8                   Number 6 --

9                   MR. AYRES: I wondered if I could ask a  
10 follow-up question on that.

11                   I believe it's at that point where  
12 your testimony notes that the Illinois reduction -- the  
13 reduction in Illinois generation over this period  
14 represents a cost -- or a lost profit of about  
15 \$672 million over a ten-year period.

16                   MR. MARCHETTI: Yes.

17                   MR. AYRES: What accounts for this?

18                   MR. MARCHETTI: The principle --  
19 According to what I said in my testimony, two principle  
20 factors account for that drop in coal-fired generation,  
21 and that value is presented in what is some change in  
22 dispatch over some units, but the majority of the  
23 reductions in the coal-fired generation is a loss of  
24 export sales to -- export sales of electricity out of

1 Illinois.

2 MR. AYRES: If these plants are  
3 currently that profitable -- it think it was  
4 600 million over ten years -- what would make them shut  
5 down? What would make them stop generating? Why would  
6 a company do that?

7 MR. MARCHETTI: There's nothing in here  
8 that talks about shutting down units --

9 MR. AYRES: I'll withdraw that.  
10 But why would the company not  
11 generate electricity with plants that are that  
12 profitable?

13 MR. MARCHETTI: It's basically that  
14 generation forecast from CRA that I could best try to  
15 answer that question based upon that. It's that the  
16 variable costs of the Illinois rule makes a unit exceed  
17 the wholesale energy price as being sold into the  
18 region. So basically they do -- the generation is  
19 reduced.

20 MR. AYRES: So this is really also a  
21 number which depends entirely on the choice of  
22 technologies, and costs of those technologies are given  
23 in the modeling that's been done by you and CRA and  
24 Mr. Evans (phonetic)?

1                   MR. MARCHETTI: Yes. Costs are based  
2 upon fuel and variable costs, and the capital is not  
3 included. Hopefully, you try to recover capital based  
4 upon whatever that last unit does to assess most  
5 technology costs.

6                   MR. AYRES: Thank you.

7                   MR. MARCHETTI: Number 5 -- Oh, I  
8 already did that.

9                   Number 6, Number 6: Table 4 found  
10 on page 8 of your testimony shows a cumulative  
11 annualized compliance cost for mercury controls of  
12 2.63 billion for the Illinois rule for the years 2009  
13 to 2018. The total capital investment was  
14 1.77 billion. Please identify the capital recovery  
15 factor used in this analysis. Please identify the  
16 itemized annualized cost in detail and any increase in  
17 operating costs included in this number.

18                   The fixed charge rates that were  
19 utilized are included --

20                   MR. ZABEL: Excuse me. Do you want this  
21 one first?

22                   MR. MARCHETTI: No, the fixed charge  
23 rates.

24                   MR. ZABEL: Let's get this out first,

1 and then you can continue.

2 HEARING OFFICER TIPSORD: I have "Fixed  
3 Charge Rates by Unit," which we'll mark as Exhibit 123  
4 if there's no objection.

5 MR. ZABEL: 123, Madam Hearing Officer?

6 HEARING OFFICER TIPSORD: Yes.

7 MR. ZABEL: Okay. Now continue.

8 THE COURT REPORTER: Can we turn that  
9 mike off?

10 HEARING OFFICER TIPSORD: You know what?  
11 With the mike -- We'll have to switch mikes because  
12 with my cough, they can't hear him over here. We'll  
13 switch microphones again. They can't hear him on the  
14 other side of the room without the mike.

15 THE COURT REPORTER: It's too muffled.

16 HEARING OFFICER TIPSORD: We'll try this  
17 one. We've had problems with mikes all week. But,  
18 yeah, they can't hear him across the room without a  
19 mike. We tried that this morning --

20 THE COURT REPORTER: It's just real  
21 muffled.

22 HEARING OFFICER TIPSORD: Mr. Zabel, I  
23 didn't get one of those.

24 Okay. "Fixed Charge Rates by Unit"

1 is admitted as Exhibit 123, and "Illinois Rule Totals,"  
2 if there's no objection, it will be marked as  
3 Exhibit 124. Seeing none, it's Exhibit 124.

4 MR. MARCHETTI: The fixed charge rates  
5 that were utilized are included at the unit level in a  
6 document prepared as an exhibit. This rate not only  
7 includes the annual capital charge or amortized payment  
8 but also includes the costs for insurance and taxes  
9 when applicable. There are different fixed charge --  
10 FCRs, or fixed charge rates, for the class of  
11 generator -- investor, slash, merchant, cooperative,  
12 and public -- and the recovery period for these rates  
13 is 15 years. The breakout of the annualized capital  
14 costs, fixed and variable O&M costs for all Illinois  
15 generators, we have also prepared an exhibit which that  
16 would be 124.

17 MR. ZABEL: 124.

18 MR. MARCHETTI: Number 7: On page 13  
19 you conclude that the Illinois rule would increase the  
20 cost of operating the state's coal-fired facilities by  
21 \$200 million per year. Please explain this  
22 statement -- I'm reading the question.

23 MR. ZABEL: I'm sorry.

24 MR. MARCHETTI: Please explain this

1 statement, identifying the operating costs to which you  
2 refer.

3                   This is simply done by dividing the  
4 cumulative \$2 billion by ten years for the years  
5 between 2009 and 2018, which yields \$200 million per  
6 year annualized costs. This figure is comprised of the  
7 annual capital charge for control technology, annual  
8 fixed and variable O&M costs for control technologies,  
9 changes in annual fuel costs due to compliance and  
10 allowance purchases minus allowance sales. Of  
11 particular note, this 200 million per year is over and  
12 above what Illinois generators would pay for CAIR and  
13 CAMR.

14                   HEARING OFFICER TIPSORD: Mr. Ayres.

15                   MR. AYRES: Is there -- I don't want to  
16 interrupt.

17                   MR. MARCHETTI: I finished. Go ahead.

18                   MR. AYRES: Okay. Is there anyplace in  
19 your testimony where you have indicated what all these  
20 charges are? You've added to your testimony with this  
21 answer to that, correct?

22                   MR. MARCHETTI: In terms of charges --

23                   MR. AYRES: The annualized ...

24                   MR. MARCHETTI: The annualized



1 compliance costs?

2 MR. AYRES: Yes, exactly.

3 MR. MARCHETTI: Okay. There is -- In  
4 the testimony, there's cumulative numbers, and then  
5 there is also a -- in there as well, there is some -- I  
6 don't know what the page is specifically, but there's a  
7 discussion or some sentences to indicate 200 million.

8 MR. AYRES: And now you've given a  
9 number of subcategories for that total figure that  
10 you're using.

11 Can you supply us with information  
12 as to how much of these -- of the annualized costs'  
13 total is broken -- or is coming from each of the  
14 categories that you describe?

15 MR. MARCHETTI: Oh, you mean what's  
16 coming from allowance sales, things of that --

17 MR. AYRES: Exactly.

18 MR. MARCHETTI: Yeah, we can provide  
19 that.

20 MR. AYRES: Thank you.

21 MR. MARCHETTI: Number 8: In  
22 Appendix A, first page on page 17 of your testimony you  
23 state, EEMS identifies a combination of control  
24 options, technology versus allowances, that

1 approximates the least cost solution for a given  
2 utility system and regulatory trading regime. Would  
3 you agree that the EEMS model is specifically designed  
4 to model environmental regulations based on emissions  
5 trading?

6                                 No. EEMS is designed to evaluate  
7 any type of regulatory regime whether it's market-based  
8 or command-and-control. We set up parameters in the  
9 model structure that reflect the compliance regime of a  
10 particular rule in terms of timing, phasing of the  
11 rule, emission limits, caps, standards outlined in the  
12 rule and the level of banking, trading, and averaging  
13 that's allowed.

14                                 Number 9: In Appendix A, first  
15 page on page 17 of your testimony, you state under a  
16 command-and-control regulatory regime, which is  
17 effectively what the Illinois rule is because of the  
18 lack of flexibility in the rule, EEMS systematically  
19 assigns control technology until the reduction target  
20 is achieved at the least possible cost. Please explain  
21 exactly how control technologies are selected and apply  
22 to this model.

23                                 I believe my response to  
24 Question 3B answers this question.

1 MR. AYRES: I wondered if I could  
2 interject at this point.

3 HEARING OFFICER TIPSORD: Yes, please,  
4 Mr. Ayres.

5 MR. AYRES: On page 5 of 35 in your  
6 testimony, it says capital and operating costs were  
7 developed based upon Illinois electric generators'  
8 experiences in retrofitting recent SO<sub>2</sub>, NO<sub>x</sub>, and  
9 mercury-control technologies, closed quote. What  
10 recent retrofits do you refer to there?

11 MR. MARCHETTI: That's in -- That is in  
12 regard -- I believe I responded to that in Question 2.

13 MR. AYRES: Could you respond, again?  
14 Because I didn't hear it.

15 MR. MARCHETTI: Okay. Question 2 -- Do  
16 you want me to read the question and everything?

17 MR. AYRES: No. I'd just like the  
18 response to --

19 MR. MARCHETTI: Oh, okay. Several  
20 Illinois generators provided us with unit-specific  
21 capital and operational cost information to retrofit  
22 SO<sub>2</sub>, NO<sub>x</sub>, and mercury-control technologies --

23 MR. AYRES: I'm sorry to stop you.

24 You mentioned here that you based

1 your cost figures, in part, upon Illinois generators'  
2 experience in retrofitting recent SO2, NOx, and  
3 mercury-control technologies, and what I'm interested  
4 in, what are those experiences? What plants have  
5 recently been retrofitted by Illinois utilities with  
6 any of those technologies?

7 MR. MARCHETTI: I think what I meant by  
8 "recent" is basically the programs Illinois generators  
9 are currently going through to evaluate SO2, NOx, and  
10 mercury controls in response to CAIR and the various  
11 engineering work that's either being done internally or  
12 externally.

13 MR. AYRES: So they're estimates.  
14 They're not based on any experience at all, not recent  
15 experience installing any of these control  
16 technologies.

17 MR. MARCHETTI: Yes. It's based upon  
18 what people are evaluating now. It's not based upon a  
19 scrubber that was put in 1985 and 1990.

20 MR. AYRES: And these are -- The  
21 information you're talking about, the estimates that  
22 you're talking about which are what you meant by this  
23 statement, these are -- this is the information of  
24 which you said earlier you couldn't provide to us; is

1 that correct?

2 MR. MARCHETTI: That is correct.

3 MR. AYRES: Thank you.

4 Further on the same page, it says,  
5 quote, It should be noted that the above-mentioned  
6 control assumptions represent realistic assumptions in  
7 terms of applicability and performance. How is this so  
8 if actual facilities over 50 years old are being  
9 retrofitted with controls?

10 MR. ZABEL: I don't understand that --

11 MR. MARCHETTI: I don't understand that  
12 question.

13 MR. ZABEL: Neither one of us understand  
14 it.

15 MR. AYRES: I'll withdraw the question.

16 On page 11 of your testimony, you  
17 state specifically almost 72 percent, or  
18 10,737 megawatts, of the projected mercury-control  
19 technology will be filter technology, and thereby  
20 removal costs will average around \$75,000 per pound.

21 As you know, the Illinois EPA does  
22 not expect so many units to require fabric filters. So  
23 is your figure based on the input of Mr. Cichanowicz?

24 MR. MARCHETTI: Yes, it is.

1                   MR. AYRES:  And on page 14, you say the  
2 primary factor is in control assumptions used in both  
3 analyses.  Specifically, the MCH takes into account  
4 more detailed specific facilities, slash, unit  
5 characteristics than the TSD which ultimately affects  
6 the unit investment costs in dollars per kilowatt and  
7 effective removal of the mercury-control equipment.  
8 And you further provide examples of why you believe  
9 this.

10                   Are you testifying as an expert on  
11 mercury-control technologies?

12                   MR. MARCHETTI:  I'm not testifying as an  
13 expert on mercury-control technologies.

14                   MR. AYRES:  So you're not in the  
15 position to testify as to the validity of  
16 control-technology assumptions made by either  
17 Dr. Staudt or Mr. Cichanowicz?

18                   MR. MARCHETTI:  No, I'm not.  But the  
19 purpose of -- The purpose of this was to kind of  
20 clarify some considerations to be taken into -- in  
21 determining the costs and the employment of  
22 technologies at a particular unit, looking at  
23 whether -- SO3 conditioning, the size of the SCU, which  
24 is the basis of Mr. Cichanowicz's control assumptions.

1 MR. AYRES: Thank you.

2 HEARING OFFICER TIPSORD: Off the record  
3 for just a second.

4 (Discussion off the record.)

5 HEARING OFFICER TIPSORD: Question  
6 Number 10 -- I'm sorry. Mr. Harley has a follow-up.  
7 I'm sorry.

8 MR. HARLEY: How does your model account  
9 for the provisions of the proposed rule that are  
10 characterized as the temporary technology-based  
11 standard?

12 MR. MARCHETTI: We did not evaluate the  
13 TTBS.

14 MR. HARLEY: In light of the fact that  
15 you did not evaluate the temporary technology-based  
16 standard, does that change your answer regarding the  
17 inflexibility of the Illinois rule?

18 MR. MARCHETTI: It could change in terms  
19 of if something -- if a technology in the TTBS was  
20 implemented and it allowed utilities through 2015 or  
21 someday to make compliances in testing equipment, it  
22 could change. But right now, based upon the  
23 information that we have, any potential risk that may  
24 be associated with the deployment of these

1 technologies, it seems like the deployment filter  
2 technology was the most predominant.

3 MR. HARLEY: But your model does not  
4 take into account the TTBS?

5 MR. MARCHETTI: It did not take into  
6 account the TTBS.

7 MR. HARLEY: Were you able, since the  
8 introduction of the multipollutant standard amendment  
9 to the rule-making proposal, to evaluate how that might  
10 affect the flexibility of EGU operators in Illinois?

11 MR. MARCHETTI: We did not evaluate the  
12 MPS.

13 MR. HARLEY: Are you familiar with it?

14 MR. MARCHETTI: Yes, I am.

15 MR. HARLEY: Would that also provide a  
16 measure of flexibility to operators in Illinois?

17 MR. MARCHETTI: It could, yes. It could  
18 provide some level of flexibility, but it also may  
19 provide some additional costs.

20 MR. HARLEY: Thank you.

21 MR. MARCHETTI: Okay.

22 HEARING OFFICER TIPSORD: I actually  
23 have a little bit of a follow-up along those same  
24 lines, and I apologize for not asking this earlier. I



1 found it as I was going back through the testimony.

2 The modeling is based on the  
3 federal CAIR rule and not the Illinois/CAIR rule; is  
4 that correct?

5 MR. MARCHETTI: It's based upon federal  
6 CAIR. It does not -- If you're talking about the  
7 Illinois/CAIR with the specific NOx provisions, it does  
8 not include that in terms of the 30 percent set aside.

9 HEARING OFFICER TIPSORD: I, frankly,  
10 don't know what's all in the Illinois/CAIR rule, but I  
11 will take your word for that.

12 MR. MARCHETTI: We modeled the federal  
13 CAIR as is -- Let me just explain a little further.

14 We modeled the federal CAIR as is  
15 presented in the model cap and trade program in the  
16 federal CAIR rule.

17 HEARING OFFICER TIPSORD: Okay. Thank  
18 you.

19 Question Number 10.

20 MR. MARCHETTI: In Dr. Smith's addendum  
21 to your testimony on page 23, she states that she  
22 provided you with annual generation and coal prices for  
23 Illinois coal-fired generation and allowance prices for  
24 SO<sub>2</sub>, NO<sub>x</sub>, and mercury for both CAIR and CAMR policies.

1 Did she also provide you with this information for a  
2 model implementation, including the Illinois rule?

3 Yes, and they are discussed in the  
4 addendum to my testimony on pages 34 and 35.

5 HEARING OFFICER TIPSORD: Number 11.

6 MR. MARCHETTI: Number 11: If so,  
7 please provide the annual output by generator for each  
8 CAIR/CAMR case and the Illinois rule case.

9 I believe that was the -- Yeah,  
10 that would be -- I believe that's 120 and 122, the  
11 exhibits.

12 HEARING OFFICER TIPSORD: Okay.

13 MR. MARCHETTI: Dr. Smith also states  
14 that NEEM was designed specifically to be able to  
15 simultaneously model least-cost compliance with all  
16 state, regional, national, seasonal, and annual  
17 emission caps for SO<sub>2</sub>, NO<sub>x</sub>, and mercury. The  
18 least-cost outcome is the expected result in a  
19 competitive wholesale electricity market. Do you  
20 conclude that the compliance scenario produced by the  
21 model is, in fact, the least-cost compliance scenario  
22 for each of the CAMR and the Illinois rule cases?

23 We did not evaluate whether NEEM's  
24 output was a least-cost scenario; therefore, I cannot

1 comment as to whether CRA's compliance simulations were  
2 least-cost.

3                                 Number 13: The NEEM model also  
4 produced pollution control installation decisions. Was  
5 this function of the NEEM model used in your analysis?  
6 If so, how did the outcome of the model compare with  
7 the installation decisions made by the EEMS model?

8                                 No, it was used in -- it was not  
9 used in our analysis. CRA was responsible to provide  
10 us with future unit generation levels, SO2, NOx, and  
11 mercury allowance prices, based upon our control  
12 assumptions, and delivered coal and natural gas prices.  
13 It was our responsibility to incorporate these inputs  
14 into having determine system-level compliance and the  
15 level of technology deployment under CAIR/CAMR and the  
16 CAIR/Illinois rule.

17                                 14: Table 1 presents 22 coal  
18 plants in Illinois that would be subject to the  
19 proposed rule, which together comprise 51 operating  
20 units. Please provide the capacity factors or each of  
21 these units for each of the model cases.

22                                 I believe that's in 21 --  
23 Exhibits 121 and 122.

24                                 Number 15: Table 8 shows a large

1 increase in the consumption of Illinois coal in the  
2 Illinois rule case relative to CAIR/CAMR. Was this  
3 switch exogenous to the model or based on the model  
4 output? Please explain.

5 This is based upon a model output  
6 that is attributed to the projected new coal-fired  
7 generation coming on-line beginning 2010. Those  
8 units --

9 HEARING OFFICER TIPSORD: Mr. Marchetti,  
10 you picked up speed-reading again.

11 MR. MARCHETTI: Okay. I'll do it again.

12 HEARING OFFICER TIPSORD: We can hear  
13 you just fine. It's just you're going really fast.

14 MR. MARCHETTI: This is based upon a  
15 model output that is attributed to the projected new  
16 coal-fired generation coming on-line beginning in 2010.  
17 Those units are Dallman 4, 2010; Prairie State, 2011;  
18 and Indeck Elwood, 2011. This generation represents  
19 2,368 megawatts of new coal-fired capacity.

20 16: Comments and testimony  
21 indicate that several power plants support a federal  
22 CAMR rule. Was an assessment done on a plant-by-plant  
23 and unit-by-unit basis of all Illinois  
24 electric-generating units that determined what

1 additional control equipment, control measures, and  
2 costs, if any, would be required to comply with federal  
3 CAMR in Phase 1? Same question for Phase 2 of CAMR.

4 We undertook a system-wide  
5 compliance evaluation for both CAIR/CAMR for all  
6 Illinois generators between 2009 and 2018 and this  
7 appears in our testimony -- in my testimony. I cannot  
8 speak to whether other compliance evaluations were  
9 undertaken by Illinois generators.

10 Number 17: If yes, what were the  
11 results of this assessment? Please provide the  
12 expected additional control equipment, control  
13 measures, and costs needed to meet CAMR for each plant  
14 and unit for each phase of CAMR.

15 The results of our CAIR/CAMR  
16 simulation are presented in Table 2 of my testimony.  
17 Those units that were assigned mercury-control  
18 technology under CAMR are presented in Exhibit 119.  
19 However, as stated in response to Question 1B, we  
20 cannot provide unit-specific compliance costs due to  
21 the proprietary nature of this data.

22 Number 18 --

23 MR. AYRES: Mr. Marchetti, Mr. DePriest  
24 testified this morning that the technical assumptions

1 and costs provided did not allocate the cost of  
2 scrubbers between mercury control and SO2 CAIR  
3 requirements, if I heard his testimony correctly.  
4 Could you explain how those scrubber costs are  
5 accounted for in your model of the Illinois regulation;  
6 in other words, to what extent the scrubber costs  
7 contributed to the Illinois mercury rule?

8 MR. MARCHETTI: Are you talking in  
9 terms -- What we model, as you see in my testimony, is  
10 that we did break out the SO2, NOx, and mercury-control  
11 costs for both capital and annualized for CAIR/CAMR and  
12 CAIR/Illinois, and it's a cumulative cost from 2009  
13 through 2018. So CAIR SO2 is modeled separately. CAIR  
14 NOx models separately. And then the results of those  
15 models depend because of the co-benefits associated  
16 with SO2 and NOx control that we model the mercury  
17 element which would have been CAMR or the Illinois  
18 rule.

19 MR. AYRES: When you model the Illinois  
20 rule, which is about mercury, not about the pollutants,  
21 and came up with cost figures that you came up with, to  
22 what extent are the costs attributable to those  
23 scrubbers included in the costs of the Illinois mercury  
24 rule?

1                   MR. MARCHETTI: There are no  
2 scrubbers -- There's no scrubber costs attributed to  
3 the Illinois mercury rule. We did not deploy or model  
4 any FGD systems to control mercury. Any FGD systems  
5 which were modeled and we didn't -- that were deployed  
6 in our simulations was to SO2. And in terms of SO2  
7 compliance, what we found was we did not model any SO2  
8 scrubbers beyond what was already announced by various  
9 generators in this country -- in this state.

10                   MR. AYRES: So in the table that you  
11 gave us earlier, the one you called CAIR/CAMR Cap and  
12 then it's in the other one as well, CAIR/Illinois Rule  
13 Cap, what does FS mean? Is that fuel switch?

14                   MR. MARCHETTI: Fuel switch.

15                   MR. AYRES: There's no scrubber?

16                   MR. MARCHETTI: No scrubbers.  
17 Coffeen -- No. Let me go back. Coffeen 1 and 2 did  
18 get a scrubber, but that was already announced. And  
19 that was incorporated into our analysis.

20                   MR. AYRES: Are those costs then seen as  
21 exogenous to both these programs, or are they --

22                   MR. MARCHETTI: They're not exogenous.  
23 They're indigenous. They're included in there.

24                   MR. AYRES: They're included in there?

1 MR. MARCHETTI: Yeah.

2 MR. AYRES: Let me ask the same question  
3 with respect to the SNCRs. In the circumstances where  
4 a scrubber is installed or where certain other things  
5 may play a role in achieving co-benefits for mercury,  
6 how are those costs handled? Are the SNCR costs -- I'm  
7 sorry -- SCR or SNCR, either one, are they attributed  
8 to the mercury program --

9 MR. MARCHETTI: They're attributed --

10 MR. AYRES: -- in any way?

11 MR. MARCHETTI: They're attributed to  
12 the NOx program within CAIR.

13 MR. AYRES: So none of those costs  
14 appear in your analysis of the Illinois mercury  
15 program?

16 MR. MARCHETTI: They do appear because  
17 if you take -- In the testimony that I said -- In my  
18 testimony, because of the change in generation due to  
19 the Illinois rule, we did two SNCRs which were deployed  
20 under the CAIR/CAMR rule and were not deployed under  
21 the Illinois rule because of the drop in generation for  
22 these two particular units; and it was, therefore,  
23 increased a dollar per ton (inaudible) for NOx and  
24 resolved for separate purchase allowances.



1 HEARING OFFICER TIPSORD: Excuse me. I  
2 need to back up a minute because I think I may have  
3 misheard something you said, and I want to be clear.

4 MR. MARCHETTI: Sure.

5 HEARING OFFICER TIPSORD: When Mr. Ayres  
6 asked you about the mercury -- the modeling you did for  
7 the mercury rule -- Illinois mercury rule, did I  
8 correctly hear you say that your modeling did not  
9 include scrubbers?

10 MR. MARCHETTI: In modeling the Illinois  
11 rule, we did not -- Let me -- In modeling CAIR, because  
12 that's where the scrubbers come in, we do not deploy  
13 scrubbers to control mercury. We deploy scrubbers to  
14 control SO2 in our -- You know, I mean, we may end  
15 up -- And I think you find this in a lot of modeling  
16 exercises. You know, people will move scrubbers  
17 around. You know, something is supposed to go in 2009  
18 or 2011. They may move it up a year to get the mercury  
19 co-benefits, and, you know, most models do that. But  
20 in terms of when we model CAIR, aside from the  
21 scrubbers that have already been NOx'd by Illinois  
22 generators, which would be Ameren and Dynegy, those  
23 scrubbers were included in the analysis and, you know,  
24 embedded. And we did not come up with any other

1 scrubbers modeled because the costs were greater than  
2 the allowance prices.

3 HEARING OFFICER TIPSORD: Okay. Thank  
4 you.

5 MR. AYRES: While we're on these charts,  
6 may I ask a couple of more questions?

7 MR. MARCHETTI: Sure.

8 MR. AYRES: We're trying to understand  
9 what they mean and are unable to understand what S7MO  
10 means. Could you tell us about that?

11 MR. MARCHETTI: That's taking an  
12 existing SCR and operating it additional seven months  
13 year-round. So what you get there is, it increases  
14 variable costs. These are --

15 MR. AYRES: I understand. And then I  
16 wanted to see if you had the same reaction I do to  
17 these two when I look at them next to each other.  
18 Obviously, the one four CAIR shows technology being  
19 installed at a lot of plants. It runs into two pages.  
20 And the one for -- I'm sorry -- for CAIR of Illinois --  
21 excuse me -- for the Illinois rule. The one for CAIR  
22 and CAMR, which includes trading, is a list perhaps  
23 half as long. Would that indicate to you that the  
24 mercury reductions within the state of Illinois under

1 CAIR would be substantially smaller than they would be  
2 under the Illinois mercury rule?

3 MR. MARCHETTI: That's correct.

4 MR. AYRES: Do you have any figures for  
5 what the proportion might be?

6 MR. MARCHETTI: It's in my testimony.  
7 There's, I believe, Table 2 in my testimony, and this  
8 is a response to a question that's been coming. It  
9 would be the SO<sub>2</sub>, NO<sub>x</sub>, and mercury emissions under  
10 CAIR/CAMR and CAIR/Illinois.

11 MR. ZABEL: On page 7.

12 MR. MARCHETTI: Number 18: Who  
13 conducted this assessment, and what measures did they  
14 utilize to reach their conclusions?

15 I really don't understand this  
16 question. I think some of these questions were pulled  
17 from another set of questions for another witness, so I  
18 really don't understand this question. It seems to be  
19 pointed at other analyses undertaken to evaluate CAIR  
20 by other groups of individuals, and I'm not aware of  
21 these other analyses.

22 MR. AYRES: I think -- Doesn't this  
23 refer back to Question 16 which asks, was an assessment  
24 done on a plant-by-plant and unit-by-unit basis from

1 all of Illinois electric-generating units that  
2 determined what additional control that equipment  
3 measures and costs would be required to comply?

4 MR. ZABEL: Maybe, but, quite frankly,  
5 Mr. Ayres, it's related to Number 17 in which he said  
6 he didn't know of other assessments.

7 MR. AYRES: In which he said he didn't  
8 know such assessments.

9 MR. ZABEL: Yeah, that was his answer to  
10 17 because 16 asks about other assessments, and part of  
11 the answer to that was he didn't know of any. 17 says,  
12 if yes, what were the results of this assessment? He  
13 answered it as to his, but we thought 18 was addressed  
14 to the others. If we misunderstood it, if you can  
15 rephrase it, we'll be happy to have him answer it.

16 MR. AYRES: Well, I think what we'd  
17 like -- the question we'd like to have answered is  
18 Number 18.

19 MR. ZABEL: Well, then why don't we go  
20 to 19.

21 MR. AYRES: 18 --

22 MR. ZABEL: Oh.

23 MR. AYRES: -- was whether an assessment  
24 was done for your analysis on a plant-by-plant or

1 unit-by unit basis of all of Illinois' units.

2 MR. MARCHETTI: It was done on a unit-by  
3 unit basis. Depending on the regime that we were  
4 looking at, if it was CAMR -- CAIR/CAMR or if it was  
5 based on system-wide compliance of all the units within  
6 a particular system, like Dynegy, all those units, if  
7 it was on a CAIR/Illinois rule, it was also done on a  
8 unit-by-unit basis. But the CAIR portion is a  
9 system-wide compliance, and the Illinois rule is  
10 facility averaging.

11 MR. AYRES: So your assessment was done  
12 on a unit-by-unit basis?

13 MR. MARCHETTI: Yes, it was.

14 MR. AYRES: Was that based on a  
15 unit-by-unit investigation?

16 MR. MARCHETTI: It was based upon  
17 unit-by unit data that we have in our database.

18 MR. AYRES: In your database?

19 MR. MARCHETTI: As well as contacts with  
20 the individual utilities specifically on such issues as  
21 SO3 conditioning.

22 MR. AYRES: Are you aware that IEPA made  
23 visits to each site and made a comprehensive assessment  
24 of boiler ductwork configurations, the use of gas

1 conditioning, ESP sizes, et cetera?

2 MR. MARCHETTI: I'm aware of it based  
3 upon testimony this week. I'm not familiar with the  
4 documents.

5 MR. AYRES: Are you aware that the  
6 extensive detail in this report was sufficient to raise  
7 concerns by power companies regarding homeland security  
8 considerations?

9 MR. ZABEL: I think that's --

10 MR. MARCHETTI: I'm not aware of that.

11 MR. ZABEL: He can answer it, but I  
12 think that's beyond the scope.

13 MR. AYRES: And are you aware that IEPA  
14 testified that the information in this report was a  
15 factor in developing the TTBS?

16 MR. MARCHETTI: I'm not aware of that  
17 statement, that they used that in developing the TTBS.

18 MR. AYRES: And are you aware that  
19 Dr. Staudt testified that this report and the resulting  
20 TTBS were factors in the revision of his testimony?

21 MR. MARCHETTI: I'm not aware of that.

22 MR. AYRES: And these were not factors  
23 in the preparation of your testimony, I take it?

24 MR. MARCHETTI: They were not.

1                   MR. AYRES: Do you or Mr. Cichanowicz  
2 visit every power plant in Illinois as a part of this  
3 project?

4                   MR. MARCHETTI: I have not visited any  
5 power plants in Illinois. I believe Mr. Cichanowicz  
6 has visited a number of power plants in Illinois. I  
7 cannot give you a number. I believe he mentioned that  
8 he visits -- he has visited over 100 -- you know,  
9 hundreds of power plants over his 15 years -- or  
10 25 years of working in this field.

11                                 Number 19 --

12                   MR. AYRES: I'm sorry. I have one more  
13 question.

14                   MR. MARCHETTI: Okay.

15                   MR. AYRES: Didn't you testify that the  
16 IEPA did not use site-specific data in your testimony?

17                   MR. ZABEL: Do you have a specific  
18 reference?

19                   MR. AYRES: We're trying to find it  
20 right now.

21                   MR. ZABEL: Okay. Well, we'll wait.

22                   MR. AYRES: It's at page 14, the third  
23 sentence in the bottom paragraph on that page.

24                   MR. ZABEL: The one beginning "for

1 example"?

2 MR. AYRES: No, the one beginning  
3 "specifically."

4 MR. ZABEL: That's the second sentence.

5 MR. AYRES: Would you care to revise  
6 that testimony given what we do know about the Illinois  
7 investigation?

8 MR. MARCHETTI: Well, no, I probably  
9 would not want to. I mean, I've seen that data that  
10 you just talked about. I've also heard that some of it  
11 may be confidential and that this modeling exercise,  
12 like any modeling exercise, is based upon a set of data  
13 that we have in our database, plus discussions with  
14 individual utilities. I think I mentioned that early  
15 on in my testimony before we got into the analysis that  
16 we applied a set of assumptions based -- across a whole  
17 board of a population based upon a set of parameters we  
18 have.

19 Now, we do not have information in  
20 there on ductwork, but we did have information on flue  
21 gas emissions. And since that was an issue dealing  
22 with activated carbon, we contacted all the generators  
23 to find out if they used SO3, if that flue gas  
24 conditioning was used for SO3. So we modified the



1 database. That's how we do a lot of analyses. We talk  
2 to people. It's not just getting information off of  
3 federal forms.

4 MR. ZABEL: Maybe I'm lost, Mr. Ayres.  
5 There was a question before that referred to the  
6 inspection that led to the TTBS. Mr. Marchetti's  
7 statement in his testimony refers to the preparation of  
8 the TSD. They were not done at the same time. So I  
9 don't know what this temporal sequence is of your  
10 questions.

11 MR. AYRES: I believe the temporal  
12 sequence is not of significance.

13 MR. ZABEL: I'm sorry?

14 MR. AYRES: Temporal significance is not  
15 of significance to the question.

16 MR. ZABEL: Well, but the record says,  
17 did you know that they did these inspections, and he  
18 gave his answer. And you said, isn't this statement  
19 wrong, and you had said they did those inspections for  
20 the TTBS. But his statement here doesn't address the  
21 TTBS. It represents the TSD. So the timing of the TSD  
22 seems to be what's important in relation to when those  
23 inspections were done. And, frankly, I think the  
24 record shows those inspections were done after the TSD

1 was prepared. Is that not correct?

2 MR. AYRES: No. The point of the  
3 comment, I assume -- The testimony provided here is to  
4 suggest that the analysis -- the modeling -- the  
5 database used by MSH -- MCH takes into account more  
6 detailed, specific facility/unit characteristics than  
7 does the TSD. That would not be true when the State of  
8 Illinois had made site-by-site visits, would it?

9 MR. ZABEL: It would not be true if they  
10 made them before the TSD was prepared. If they were  
11 made after it, it's somewhat irrelevant to the TSD. I  
12 don't remember the timing sequence. That's why I  
13 raised my question. I mean, I'm sure the record will  
14 reflect that.

15 MR. AYRES: I think it will.

16 MR. ZABEL: But the TSD, I think, long  
17 predated those inspections.

18 HEARING OFFICER TIPSORD: I think the  
19 point has been made. I think we can move on.

20 MR. ZABEL: Fine.

21 MR. MARCHETTI: 19: What are the  
22 expected reductions, if any, in mercury emissions in  
23 pounds reduced per year and percentage reduced per year  
24 from a given base year as a result of each plant's

1 federal CAMR compliance strategy in Phase 1? Same  
2 question for Phase 2. Please use a year from 2000 to  
3 2005 as the base year, if available. If not, please  
4 identify the base year.

5 In terms of our CAIR/CAMR  
6 simulation, the reductions for 2005 can be computed  
7 from our table in my testimony, which I believe is on  
8 page --

9 MR. ZABEL: 7.

10 MR. MARCHETTI: -- page 7. And I think  
11 I mentioned that in response to an earlier question.

12 Number 20: Have you conducted an  
13 assessment in which coal-fired power plants and  
14 electric-generating units in Illinois would likely  
15 delay or completely avoid the installation of mercury  
16 controls such as that they would need to purchase or  
17 use banked allowances for a period under the federal  
18 CAMR due to the installation of controls being  
19 uneconomical, difficult, or any reason?

20 Yes.

21 If yes, what were the results of  
22 this assessment? Please identify which plants and  
23 units would likely purchase or use banked allowances.

24 Since we evaluated CAIR/CAMR

1 compliance at a system level, each unit within a system  
2 receives an allowance allocation; therefore, we only  
3 computed the level of allowances that would have to be  
4 purchased at the system level. It should be noted that  
5 the level of allowance purchases is the difference  
6 between the emissions and allocations for the entire  
7 system. In conjunction with this analysis, we also  
8 computed the level of allowance sales for a given  
9 system, which are banked, slash, excess allowances  
10 within a system. I could give you systems that we  
11 computed, you know, that were purchasing allowances if  
12 you wish: Ameren Energy Generating, Ameren Energy  
13 Resource Generation, EEI, Indeck, which is a new coal  
14 unit, Kincaid, Midwest Generation.

15 MR. AYRES: And those are the systems  
16 which would purchase allowances?

17 MR. MARCHETTI: Purchase allowances at  
18 some time.

19 MR. AYRES: Can you give us an  
20 indication of how much those purchases would be, or is  
21 that ...

22 MR. MARCHETTI: Between 2009 through  
23 2018, \$410 billion in 2006 constant dollars.

24 MR. AYRES: That's for all those

1 companies together total?

2 MR. MARCHETTI: Yeah.

3 What measures were utilized to  
4 reach your conclusions?

5 In our particular analysis, we  
6 utilized EEMS and the data inputs and CAMR  
7 allocation -- allowance allocation assumptions  
8 discussed in my testimony and the control assumptions  
9 presented in Mr. Cichanowicz's testimony.

10 23: What is the expected duration  
11 of use of purchased or banked allowances at the plants  
12 and units identified to use the means -- to use these  
13 means of compliance?

14 There's no time limit on the use of  
15 banked or purchase CAMR allowances according to the  
16 CAMR model cap-and-trade program. Our analysis only  
17 goes through 2018, and there are no allowance  
18 purchases, although no significant banks, through that  
19 year. There are -- Let me just read that last sentence  
20 again: Our analysis goes through 2018, and there are  
21 allowance purchases, although no significant banks,  
22 through that year.

23 MR. AYRES: Just a final follow-up  
24 question, if I may.

1 HEARING OFFICER TIPSORD: Go ahead.

2 MR. AYRES: If the Pollution Control  
3 Board were to conclude that given the time available  
4 between now and the compliance date and the flexibility  
5 elements built into this rule, ACI will be capable of  
6 achieving the reductions needed to meet the standard at  
7 most locations. Would that change your testimony on  
8 costs of the program?

9 MR. ZABEL: Could I have that question  
10 back, please?

11 (Record read as requested.)

12 MR. MARCHETTI: Well, it's an "if."  
13 Based upon information that we used in our control  
14 assumptions, which is what -- which is currently  
15 available, and I guess based upon the discussion that's  
16 taken place this week, there seems to be a lot of  
17 uncertainty. I mean, there's differences in opinions  
18 on the performance of these various control  
19 assumptions. And based upon our analysis right now and  
20 based upon the information that we have, we feel  
21 that -- you know, that the coal packs and the filter  
22 technology would be the dominant technology. And I  
23 guess that information has been somewhat supported by  
24 the Ameren testimony given in the early part of the

1 week in regard to what they feel they're going to have  
2 to do based upon their MPS proposal.

3 MR. AYRES: But the Board has to  
4 evaluate the weight it wants to give to the differing  
5 testimony received and come to its own conclusion about  
6 what it thinks the technology is capable of. I'm only  
7 asking, if they came to the conclusion, despite the  
8 testimony of Mr. Cichanowicz and others, that the  
9 technology was -- the ACI technology was capable of  
10 achieving most of the goals of this rule, would that  
11 change your estimate of the costs?

12 MR. MARCHETTI: If ACI was able to  
13 achieve the performances that it has been -- you know,  
14 that has been presented -- Well, if -- Let me just stop  
15 and start over.

16 If ACI was able to achieve  
17 90 percent removal at the expected costs, as has been  
18 presented by some individuals, which is lower than coal  
19 pack or filter technologies, yes, the compliance costs  
20 would probably be less.

21 MR. AYRES: Thank you.

22 MR. ZABEL: May I ask one follow-up  
23 question?

24 HEARING OFFICER TIPSORD: Sure.

1                   MR. ZABEL: Mr. Marchetti, in your work  
2 and your analysis and your discussions with the utility  
3 companies, regardless of what the Board may conclude  
4 about the technology, is it your understanding that  
5 they have concluded they would not take the risk, that  
6 ACI alone would be sufficient?

7                   MR. MARCHETTI: That's correct.

8                   MR. ZABEL: I have nothing further.

9                   HEARING OFFICER TIPSORD: Anything  
10 further of Mr. --

11                  MR. AYRES: Nothing further from us.

12                  HEARING OFFICER TIPSORD: Anything  
13 further for Mr. Marchetti?

14                  MR. AYRES: Thank you, Mr. Marchetti.

15                  HEARING OFFICER TIPSORD: Thank you very  
16 much, Mr. Marchetti.

17                  MR. MARCHETTI: You're welcome.

18                  MR. ZABEL: And thank you for the  
19 expedition this afternoon.

20                  HEARING OFFICER TIPSORD: We have  
21 reached the last of the witnesses that were prepared  
22 for this week. That being the case, we're going to  
23 adjourn in just a second -- or recess, is I guess is  
24 more correct term. Next week, we begin on Monday.



1 We'll start at 1:00 o'clock on Monday. I think we'll  
2 be fine at 1:00 o'clock on Monday. We'll begin with  
3 Krish Vijayaraghavan, Gail Charnley, Peter Chapman,  
4 Richard McRanie, then followed by C.J. Saladino, and  
5 Andy Yaros.

6 MS. BASSI: There's a possibility that  
7 next week we may want to switch the two Dominion  
8 witnesses with McRanie.

9 HEARING OFFICER TIPSORD: We'll talk  
10 with that when the two -- when they're present to  
11 discuss that.

12 MS. BASSI: One's here.

13 HEARING OFFICER TIPSORD: Oh, I'm sorry.  
14 But Mr. Forcade isn't and neither is the other person  
15 who has filed an appearance on behalf of Dominion. So  
16 I would feel more comfortable talking with their  
17 counsel before we ...

18 Mr. Kim.

19 MR. KIM: Yes. I just wanted to let you  
20 know I have been working on this Stubenville report and  
21 what I have learned is this, that Dr. Keeler is on  
22 vacation. I have his cell phone number. I've  
23 contacted him and left him a long voice mail. Our  
24 librarian was able to get in touch with the editorial

1 offices of the Environmental Science and Technology  
2 publisher, and the response she got back was,  
3 unfortunately, you need to be one of the primary or  
4 co-authors of the manuscript so they can give you  
5 information as to the specific publication date. She  
6 gave us the telephone number for the person -- for an  
7 author to call along with the request that the author  
8 have a manuscript number. And I passed all that  
9 information on to Dr. Keeler in the voice mail. So  
10 hopefully, if nothing else, maybe if he gets our  
11 message, he'll contact them and maybe get that  
12 information for us. Apparently, they have many, many  
13 on-line articles that they're just waiting to publish,  
14 so I assume it's somewhere in the queue. But maybe  
15 Monday we'll hear something more.

16 HEARING OFFICER TIPSORD: Thank you,  
17 Mr. Kim. With that, we'll recess until Monday at  
18 1:00 o'clock, same Bat time, same Bat channel.

19 (The hearing in the above-entitled  
20 cause was adjourned until Monday,  
21 August 21, 2006, at 1:00 p.m.)  
22  
23  
24

1 STATE OF ILLINOIS )  
 ) SS.  
2 COUNTY OF COOK )

3 Martina Manzo, being first duly sworn, on  
4 oath says that she is a Certified Shorthand Reporter  
5 doing business in the City of Chicago, County of Cook  
6 and the State of Illinois;

7 That she reported in shorthand the  
8 proceedings had at the foregoing hearing;

9 And that the foregoing is a true and correct  
10 transcript of her shorthand notes so taken as aforesaid  
11 and contains all the proceedings had at the said  
12 hearing.

13

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\_\_\_\_\_  
MARTINA MANZO, CSR

16

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CSR No. 084-004341

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SUBSCRIBED AND SWORN TO  
before me this 23rd day of  
August, A.D., 2006.

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NOTARY PUBLIC

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