BEFORE THE POLLUTION CONTROL BOARD
OF THE STATE OF ILLINOIS

IN THE MATTER OF:	)	
	)	
NATURAL GAS-FIRED, PEAK-LOAD ELECTRICAL POWER GENERATING FACILITIES (PEAKER PLANTS)	)	PCB No. R01-10

Proceedings held on October 5, 2000, at 1:00 p.m., at the William G. Stratton Building, 401 South Spring Street, Springfield, Illinois, before Amy L. Jackson, Hearing Officer.

Reported by: Karen Bristow, CSR, RPR
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APPEARANCES

Board Members present:

Chairman Claire A. Manning
Board Member Nicholas J. Melas
Board Member G. Tanner Girard
Board Member Ronald C. Flemal
Board Member Marili McFawn
Board Member Elena Z. Kezelis
Board Member Samuel T. Lawton, Jr.

Anand Rao, Senior Environmental Scientist
Alisa Liu, Environmental Scientist

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PROCEEDINGS

(October 5, 2000; 1:00 p.m.)

HEARING OFFICER JACKSON: I want to welcome everyone to the final two days of hearing that the board has scheduled in order to examine the potential environmental impact of natural gas-fired electrical power generating facilities, commonly referred to as peaker plants. My name is Amy Jackson, and I'm the attorney assistant to Board Member Elena Kezelis, and at the request of Board Chairman Claire Manning, I'm serving as the hearing officer for these proceedings. I'll ask you all to bear with me. I'm fighting a bad cough and throat thing, so if my voice goes out at some point during the hearing, please just bear that in mind.

We're very happy to have the entire board present today, and I want to take a moment to introduce all of our board members to you. Board Chairman Claire Manning is immediately behind me.

CHAIRMAN MANNING: Welcome. Good afternoon, everyone.

HEARING OFFICER JACKSON: To my immediate left is Board Member Elena Kezelis.

BOARD MEMBER KEZELIS: Good afternoon.

HEARING OFFICER JACKSON: Marili McFawn.

BOARD MEMBER MCFAWN: Hello.

HEARING OFFICER JACKSON: And Ronald Flemal.

BOARD MEMBER FLEMAL: Hello.

HEARING OFFICER JACKSON: To my right is Tanner Girard.

BOARD MEMBER GIRARD: Good afternoon.

HEARING OFFICER JACKSON: Nicholas Melas.

BOARD MEMBER MELAS: Good afternoon.

HEARING OFFICER JACKSON: And up next to Chairman Manning is Samuel Lawton, Jr.

BOARD MEMBER LAWTON: Good afternoon.

HEARING OFFICER JACKSON: We also have the board's technical unit present, and they are also sitting up here at the head tables. Anand Rao is up to my right.

MR. RAO: Hello.

HEARING OFFICER JACKSON: And Alisa Liu is to my left.

MS. LIU: Hello.

HEARING OFFICER JACKSON: Before I continue with some brief procedural matters, I will invite Chairman Manning to make any opening remarks that she has. Chairman Manning?

CHAIRMAN MANNING: Good afternoon, everyone. Thank

you, Amy. Welcome to this our last two days of

scheduled hearing in the board's inquiry hearings concerning peaker plants. As most of you know-- I see a lot of familiar faces here this morning-- this afternoon; a lot of unfamiliar faces as well. Most of you know, however, that Governor Ryan has asked us to look into the potential environmental impacts of proposed peaker plants. He's done this in response to the myriad of citizens' concerns he's heard throughout his travels in the state, particularly in the northwest area of the state. We're happy to be in Springfield today too to address any concerns that we have downstate and to address all the remaining concerns during these last two days of hearing.

The board is especially well-equipped to address these concerns for the Governor and for interested members of the General Assembly. That's because-- and I've explained in previous proceedings-- we're an independent body of seven technically-qualified individuals, and our general responsibilities are to promulgate the State's environmental regulations and to adjudicate any environmental matters that occur under the Environmental Protection Act.

The Governor when he issued the letter to me asking us to engage in these proceedings outlined five specific

issue areas, and in terms of the context of this proceeding, I would like to address those, actually read those issue areas to you for a full context of this proceeding.

The first issue is whether peaker plants need to be regulated more strictly than Illinois current air quality statutes or regulations provide.

The second issue is whether peaker plants pose a unique threat or a greater threat than other types of state-regulated facilities with respect to air pollution, noise pollution or groundwater or surface water pollution.

The third question is whether new or expanding peaker plants should be subject to siting requirements beyond applicable zoning requirements.

The fourth question is if the board determines that peaker plants should be more strictly regulated or restricted, should additional regulations or restrictions apply to currently permitted facilities or only to new facilities and expansions.

And finally and lastly, the Governor's asked us to

determine that-- whether-- to determine how other states regulate or restrict peaker plants.

On each of these questions and in each of these

issue areas, the board in the course of five days of hearing thus far, two days in Chicago and three days in the suburbs, in the collar counties, have received excellent information on each of these questions, and I can assure you that the full board has given its entire attention to all of the information we've received thus far.

At the conclusion of this process and probably around the end of the year, the last board meeting in December, we're expecting to issue a written informational order. This order will analyze all of the information that's been presented in these proceedings in light of the issue areas outlined by the Governor. Importantly, the order will set forth the board's recommendations on whether further state environmental regulation or legislation is necessary to adequately protect the environment for the citizens of the state of Illinois.

Now, for those of you who have been at our other proceedings, I'm sure you're familiar with the order of

those proceedings. Let me say that Hearing Officer Jackson is here to ensure that the proceedings are done in an orderly fashion, giving everyone who wants to the opportunity to speak, ensuring that the court reporter

gets everything recorded accurately for purposes of the board's publication of this transcript on the Web page and for our purposes when we review all of this information so that it's adequately transcribed, and finally, to give us time-- the board time to ask whatever questions we think are necessary to ensure that we have the right information.

Hearing Officer Jackson thus far has done an excellent job at maintaining order and keeping these proceedings fair, and I commend her for that, and I now turn the rest of the proceedings over to her very capable and qualified hands.

HEARING OFFICER JACKSON: Thank you, Chairman Manning. For those of who you have been following this process, you know that we have already held a number of hearings. Those have been held in downtown Chicago, Naperville, Joliet and Grayslake. You also know that we are maintaining much of the information we receive in this proceeding on the board's Web site. All prefiled

testimony, public comments, hearing transcripts, board opinions and orders and hearing officer orders are currently maintained on the board's Web site. For those of you who do not know the address of that Web site, I will give it to you now. It is www.ipcb.state.il.us.

Hard copies of any document filed with the board in this matter may also be obtained from the board's clerk's office, and the board's clerk may be reached at telephone number 312-814-3620.

We have approximately ten people who have preregistered to speak today. A list of those persons is available at the table near the entrance to the room. There is also a sign-up sheet on that table for those persons who are interested in addressing the board either today or tomorrow and who have not already preregistered with me. Please be aware, however, that if you do sign up on that sign-in sheet, it may be tomorrow before we have time to call you for your comments.

If you are speaking to the board today, when your name is called, I will ask that you please step forward. We have a witness table here in front. State your name clearly for the record and indicate on whose

behalf you are here today to testify. You should bring with you any documents or exhibits that you would like to have entered into this matter. If you do have documents to introduce into the record, you must be prepared to leave at least one original copy with myself so the court reporter can mark it as an exhibit in this

matter. Any extra copies that you have may be passed out to the board members today.

Once you have made your statement, any of the board members or members of the board's technical unit may ask you questions pertaining to your statement. Please do not infer any preconceived conclusions or opinions on the part of the board by the types or number of questions they might ask. Questions are asked solely in an attempt to develop a complete and accurate record for the board to review during its deliberations in this matter. The board has made no conclusions at this time, and it will begin its deliberations only after all information is submitted and the record is closed.

Because the purpose of these inquiry hearings is to provide the board with an opportunity to gather information regarding the environmental impact of peaker plants, only board members and members of the board's

technical unit will be asking questions of witnesses today and tomorrow. This is an information-gathering process as opposed to a debate on the pros and cons of peaker plants. Therefore, no cross-examination or cross-questioning will be permitted.

Having said that, let me assure you that the board is interested in hearing what you have to say. If any

statements are made today that you feel need to be expanded upon, clarified or even questioned, we invite you to do so in one of two ways. Sign up to speak at either today or tomorrow's hearing, or two, you may submit your comments in written form to the board's clerk's office. The public comment process is a very simple one, and it is explained on the public information sheet that is at the back of the room and that has been prepared by the board's public information officer.

As you can see, we do have a court reporter present today. She will be transcribing everything that is said. It is imperative that when you speak, you speak slowly and clearly so that the court reporter can take down everything you have said.

We have requested an expedited transcript of this

proceeding, so the transcript will be available in the board's office within three to five business days of this proceeding, and as soon as we receive it, we will ensure that it is posted to our Web site.

One other thing I want to mention is that we do have a notice list for this matter. Those persons on the notice list will receive copies of all board opinions and orders as well as hearing officer orders.

There is no obligation for those on the notice list to serve other persons on the notice list. If you are on the notice list and file a document with the board, you need only file the document with the clerk's office. If you are not on the notice list and would like to be added, you must contact the following person: Kim Schroeder, S-C-H-R-O-E-D-E-R. Her telephone number is area code 217-782-2633, or you can e-mail Kim at schroedk-- S-C-H-R-O-E-D-K-- @ipcb.state.il.us.

If you have any questions at all that are not covered by my opening remarks, please feel free to see Connie Newman at the back of the room. As I mentioned earlier, she is our public information officer. Connie, if you want to wave? Thank you. Connie will be more than happy to try to answer any questions that you might

have.

I do want to mention also that we have a citizens' group that is videotaping the proceeding today. If any of the witnesses do not feel comfortable being videotaped, please let me know and we will turn the videotape off during your presentation.

Those are the only opening remarks I have right now. The first witness scheduled to speak to us today is Mr. Roger Finnell with the Illinois Department of

Transportation, and I'll ask you to please step forward and we will begin.

MR. FINNELL: Good afternoon.

HEARING OFFICER JACKSON: Good afternoon.

MR. FINNELL: My name is Roger Finnell, F-I-N-N-E-L-L. I'm an engineer with the IDOT Division of Aeronautics, Bureau of Airport Engineering, and I've been asked to address the Illinois Pollution Control Board with a prepared statement, and then I'll follow up with any questions you might have on that.

On behalf of the Illinois Department of Transportation, Division of Aeronautics, we thank the board for the opportunity to comment on the impacts that peaker electrical generating facilities may have upon

air navigation.

There are several issues associated with electrical generating facilities that have the potential for creating an aeronautical safety hazard. The main aviation concerns associated with peaker plant developments are as follows: Physical height of the structure-- including construction equipment-- penetrating critical airspace; emission of visible discharge obscuring pilot and/or controller vision within the airport environment; electromagnetic

interference with aeronautical, navigational and communication radio signals; and finally, the exhaust plume's vertical velocity and its effect on aircraft structural integrity and aircraft controllability.

The first three issues have been addressed by the department in our Airport Hazard Zoning Rules. Presently there are 56 airports which have airport hazard zoning enacted and enforced by the department. These rules effectively limit the height of structures around individual airports as well as address smoke emissions and electromagnetic interference. They can be adopted by the department for publicly-owned airports, but only at the request of the airport sponsor.

Alternatives, publicly-owned airports may adopt their own hazard zoning rules that apply to hazards partially or totally within the public owner's territorial limits.

IDOT has not been granted authority under Illinois statutes to enact airport hazard zoning for privately-owned open-to-the-public facilities. The only protection these airports have from structures encroaching on their airspace is local land use control.

To date, we have not had a peaker plant proposal violate any airport hazard zoning surface nor create an adverse electromagnetic or visible plume concern.

However, this does not preclude conflicts with future proposals.

A concern to our office is the impact the vertical velocity of the plume has on flight safety. The majority of these plants are a gas turbine-fired-- I'm sorry-- gas turbine facilities which have relatively high exhaust velocities and temperatures. While the exit velocity of the plume dissipates rapidly upon leaving the stack, the buoyancy of the plume due to its heat still causes a significant vertical velocity several hundred feet above the point of discharge.

The situation where this is an aeronautical issue

is if the plant is within the traffic pattern to the airport. While pattern size is dependent on the speed and number of aircraft within the traffic pattern, the lateral dimensions of the pattern are usually within a mile of the airport. If a generating facility is within this area, it can result in arriving or departing aircraft passing only a few hundred feet over the smokestack of the facility.

We have entered into discussions with Federal Aviation Administration and manufacturers of general aviation aircraft to find out what the effect of flight into an exhaust plume would have on aviation. To

receive certification from the FAA, an airframe must be capable of withstanding a vertical gust of 30 feet per second. However, an aircraft in a landing or takeoff configuration at typical approach and departure speeds will likely lose lift and experience a momentary stall if subjected to a vertical gust of 15 feet per second or more. This is certainly an aviation safety concern.

We would like to emphasize that this concern is only for generating facilities within the immediate airport environment. Once away from the airport, aircraft are bound by FAA regulations to be at least 500

feet above the highest obstacle within a horizontal distance of 2,000 feet over sparsely populated areas and 1,000 feet above the highest obstacle within a horizontal distance of 2,000 feet over congested areas. Aircraft operating outside the traffic pattern are also at higher operating speeds and therefore are not as prone to stalling should they encounter larger vertical gusts of more than 15 feet per second.

IDOT is currently reviewing our rules and regulations to determine if further action is necessary to prevent discharges from interfering with air navigation and compromising aviation safety. During this time, we request that the Illinois Pollution

Control Board forward to IDOT any notification it receives of a generating facility being proposed within two miles of a public-use airport for further evaluation. This will afford us an opportunity to work with the proponent to mitigate any impact to aviation.

It is signed by James V. Bildilli, Chief Engineer of the Bureau of Airport Engineering of IDOT. And the original to you?

That being said, some of my qualifications, to give you some background with regards to questions I'll

respond to, I am a registered professional engineer with the State of Illinois. I've been with the Illinois Department of Transportation, Division of Aeronautics, for nearly ten years in their planning section. In addition, I'm also a commercial pilot, licensed by the FAA in both multi-engine and instruments, and I'm also a certified flight instructor. That gives you some background for the questions you may ask.

HEARING OFFICER JACKSON: Thank you. The document that you provided to the court reporter we will mark as IDOT Exhibit 1, and it will be entered into the record. Are there any questions at this time?

CHAIRMAN MANNING: I just want to say thank you, Mr. Finnell, and thank you to the Department of

Transportation for your participation in these proceedings. We welcome your expertise on the particular question of aviation safety.

I should mention that the reason that-- for IDOT's participation is as a result of an informal request that the board has made to the Department of Transportation as a result of issues that were raised on the record by citizens in terms of aviation concerns, and so we informally requested that the Department of

Transportation provide us its expertise on those questions.

I have no specific questions myself, but I'd be happy to open it up to the board members who might. Ms. Kezelis.

BOARD MEMBER KEZELIS: Thank you, Mr. Finnell. I do have one question. Would you for the record describe briefly an example of a sparsely populated area as opposed to a more heavily-concentrated area of population?

MR. FINNELL: Certainly. The FAA's interpretation of sparsely populated basically incorporates all of the population area within Illinois. A congested area would be that of a metropolitan area, a village or town with a relatively high density of people living, places of

public assembly. So certainly within metropolitan regions, that would require the 1,000 foot, as well as flying over any established town.

BOARD MEMBER KEZELIS: Okay. Thank you.

BOARD MEMBER FLEMAL: I believe you indicated that airports have the opportunity to request hazard zoning. There are 56 who have?

MR. FINNELL: Yes.

BOARD MEMBER FLEMAL: Is that correct? Are there any who have not?

MR. FINNELL: Quick math, there are currently 73 publicly-owned air facilities. Of those, only 56 have requested us to adopt airport hazard zoning on their behalf.

BOARD MEMBER FLEMAL: Have any of those other facilities adopted hazard zoning on their own?

MR. FINNELL: Yes, they have.

BOARD MEMBER FLEMAL: So most-- or do all the airports have hazard zoning, either yours or theirs?

MR. FINNELL: There is a requirement as a condition of accepting federal or state funding that the airport will protect their approaches. The degree to which that protection is enforced or enacted varies greatly, if that is sufficient. Some are very stringent as far as

the actual airspace they protect and can be somewhat limited. Others have larger territorial limits and can afford a greater degree of protection.

BOARD MEMBER FLEMAL: In your experience, are you aware of any circumstances or occurrences where vertical plumes have been a hazard to flight patterns--

MR. FINNELL: We have--

BOARD MEMBER FLEMAL: -- anywhere in the country?

MR. FINNELL: In the country, no. In the state of Illinois, certainly no, okay? I will qualify that by saying I have not researched that fully throughout the United States. There has not been an enforcement action within the state of Illinois to my knowledge.

HEARING OFFICER JACKSON: Mr. Finnell, could you please speak into the microphone?

MR. FINNELL: I'm sorry.

HEARING OFFICER JACKSON: They're having trouble hearing you in the back of the room. Thank you.

MR. FINNELL: Would you like me to move this over, or--

BOARD MEMBER FLEMAL: Does that answer that you just gave reflect all types of stacks, or are you referring specifically to peaker stacks?

MR. FINNELL: We're referring to all types of

discharges.

BOARD MEMBER FLEMAL: Okay. Thank you.

MR. FINNELL: It's not singled out to peakers, no.

HEARING OFFICER JACKSON: Are there any other questions? All right. Thank you very much, Mr. Finnell. We appreciate you being here.

MR. FINNELL: Thank you.

HEARING OFFICER JACKSON: Next on our list of speakers is Mr. John Smith with the City of Decatur. I believe you indicated that Brent Gregory is also speaking with you?

MR. SMITH: Yes.

HEARING OFFICER JACKSON: Would you like for him to come up at this time as well?

MR. GREGORY: You can go ahead.

HEARING OFFICER JACKSON: All right. And speak into the microphone, please.

MR. SMITH: Sure.

HEARING OFFICER JACKSON: Thank you.

MR. SMITH: Good afternoon. My name is John Smith, and I represent the Illinois Section of American Waterworks Association. ISAWWA is the state section of the American Waterworks Association. Membership includes water utilities, operators and professionals

throughout the state. And I appreciate the opportunity to speak before the board on the issue of peaker plants and on the use of water resources.

Number one: Do peaker plants need to be regulated more strictly than Illinois' current air quality

statutes and regulations provide? ISAWWA does not feel that peaker plants should be singled out and regulated more strictly than any other power plant types in Illinois with regard to air quality statutes. Adequate generation of electric power is important to the future economic growth of Illinois.

Number two: Do peaker plants pose a unique threat or a greater threat than other types of state-regulated facilities with respect to air pollution, noise pollution or groundwater or surface water pollution? ISAWWA believes that peaker plants pose no greater pollution than any other type of industry and that existing regulations are adequate for protection.

Number three: Should new or expanding peaker plants be subject to siting requirements beyond applicable local zoning requirements? ISAWWA believes that peaker plant siting requirements should encourage the siting of these plants near a sanitary water treatment plant, if practical, so as to utilize the

discharge from the sanitary water treatment plant known as gray water or cooling water.

Number four: If the board determines that peaker plants should be more strictly regulated or restricted,

should additional regulations or restrictions apply to currently permitted facilities or only to new facilities and expansions? We only wish to comment on the use of water resources by these facilities. Number one, the State of Illinois must manage, protect and enhance the development of the water resources of the state as a natural and public resource. Number two, water resources have an essential and pervasive role in the social and economic well-being of the people of Illinois and is of vital importance to the general health, safety and economic welfare. Number three, water resources of the state must be used for beneficial and legitimate purposes. And number four, waste and degradation of water resources must be prevented.

ISAWWA is not opposed to the use of water resources by peaker plants. We are only asking for the responsible use of water resources by these facilities and all major new water consumers. We believe the regulation or permitting of large water resource withdrawals should be the responsibility of regional

agencies, such as municipalities, counties or water boards, and that a state agency should have oversight of these regional agencies.

We believe that the basis for the decision on how much water can be safely used from a designated water resource be based on the existing knowledge and scientific studies of that resource, and, if knowledge of that resource is lacking, then additional research into the adequacy of this source should be done before allowing major withdrawals. The decision to allow the development of existing or new water resources must be based on sound science, not politics. We believe that funding must be adequate for the state agency to perform these studies.

In conclusion, Illinois Section AWWA is not opposed to peaker facilities. We are calling for the rules and regulations of water resources be based on scientific studies of our valuable water resources and that an unbiased state agency be charged with oversight of regional water use. Adequate funding for the state agency must allow for the scientific study of our state water resources, and the State must have a plan for the efficient management of water resources. Thank you.

HEARING OFFICER JACKSON: Thank you, Mr. Smith.

MR. SMITH: Questions?

HEARING OFFICER JACKSON: Any questions?

CHAIRMAN MANNING: Thank you for being here today. I do have just one question. Are you aware of any projects right now that are ongoing between a peaker plant developer and a sanitary treatment facility in the state we could speak to?

MR. SMITH: I'm not aware of any.

CHAIRMAN MANNING: Thank you.

HEARING OFFICER JACKSON: Anything else for Mr. Smith?

BOARD MEMBER GIRARD: I have a question.

HEARING OFFICER JACKSON: Okay.

BOARD MEMBER GIRARD: So what you're advocating is that we have a state water resources board that allocates these large withdrawals? Is that what you're saying?

MR. SMITH: What we are saying is that we believe a state agency such as the Illinois State Water Survey should have some oversight over the regional agencies that normally would have some control over water. We believe that in most cases, the regional agency has at least some knowledge of the water resource and how much of that resource can be used safely without impacting

other consumers or their industries. However, if the

local agency has-- unreasonably tries to restrict the use of these water resources, then a state agency could have oversight of the local agency.

BOARD MEMBER GIRARD: Are you familiar with any other eastern states that might have a setup that you would consider a model for these kinds of decisions?

MR. SMITH: No. I've not researched that.

BOARD MEMBER GIRARD: Thank you.

MR. SMITH: We would be glad to look into that.

CHAIRMAN MANNING: Could you explain a little bit about your association for us?

MR. SMITH: Yes. Illinois Section of American Waterworks Association represents most of the both public and private water utilities throughout the state of Illinois from the very small ones to the very large ones, and we represent the operators of these plants; we represent water resource people, such as lake managers.

CHAIRMAN MANNING: Thank you. Anybody else?

BOARD MEMBER MCFAWN: Is your association involved at all with any studies of water resources, be they groundwater or surface water, and their adequacy or even just their quantity?

MR. SMITH: Yes, we are. Illinois Section of AWWA

is involved with the Mahomet Aquifer Consortium, which has-- is trying to secure federal funding to do further studies of the Mahomet aquifer located in the central part of Illinois. This consortium and the action that we are doing to try to study this reservoir has already generated interest from other states in that they have inquired how we have put together the consortium and how we are going about to try and initiate these studies.

BOARD MEMBER MCFAWN: Does that consortium cross state lines? I mean, are there participants from Indiana, for example?

MR. SMITH: No, it does not cross state lines, although there are some of the water people right across the state line in Indiana that are aware of the consortium and of the study.

BOARD MEMBER MCFAWN: Thank you.

HEARING OFFICER JACKSON: Thank you, Mr. Smith. Brent Gregory with the Illinois-American Water Company.

MR. GREGORY: Good afternoon.

HEARING OFFICER JACKSON: Afternoon.

MR. GREGORY: My name is Brent Gregory, and while I work for Illinois-American Water Company, I'm here today representing the National Association of Water Companies, Illinois Chapter, and I appreciate the

opportunity to address the board, specifically on the issue of peaker plants and also in a more general sense, some of the related environmental and water resource issues. I do have a prepared statement.

My name is Brent Gregory, and I'm here today representing the Illinois Chapter of the National Association of Water Companies, or NAWC.

HEARING OFFICER JACKSON: Just slow down just a little bit for the court reporter.

MR. GREGORY: Certainly.

HEARING OFFICER JACKSON: Thank you.

MR. GREGORY: I told myself to do that ahead of time.

HEARING OFFICER JACKSON: It's hard to do when you're reading.

CHAIRMAN MANNING: It's hard.

MR. GREGORY: NAWC is the principal trade organization that represents the private and investor-owned water utility industry. NAWC member utilities serve over 1 million people in Illinois and 22 million people nationwide. I appreciate the opportunity to address the Illinois Pollution Control Board today on the issues of peaker plants and water resource management in Illinois.

The ability to provide water of sufficient quality and quantity to sustain commercial, industrial and residential growth goes hand-in-hand with the availability of electrical power. Water suppliers rely on adequate available electricity, and generating plants rely on an adequate supply of water. NAWC supports the development of new electrical generating capacity as needed for the economic advancement of Illinois.

We do not believe that peaker plants pose a unique threat to the environment compared to other types of state-regulated facilities. We believe that existing environmental regulations are adequate to address air and water quality concerns from peaker plants. As much of the water used by peaker plants is discharged to the environment, it is important that current discharge regulations be consistently applied in order to protect the quality of our groundwater and surface water resources.

NAWC agrees that it is in the best interests of all to have sound legislative and regulatory oversight of the state's water resources. The primary management of the water resources should be provided by an assemblage of local and regional stakeholders with the State having final oversight.

We emphasize the need for water use decisions to be based on sound scientific assessment of local and regional water resources. Where existing knowledge is insufficient, the state technical agencies should provide the scientific studies needed to permit or deny water withdrawals. State funding must be adequate to support these efforts. The right of existing public water supplies to condition withdrawing at their current installed capacities should be grandfathered into any program that is developed. The State should consider competent third-party assessments presented by those seeking to utilize the water resource.

We believe that permitting of new peaker plants and siting requirements should encourage conservation measures such as recycling of cooling water and use of other discharges for cooling when possible, such as those from sanitary treatment plants.

In summary, NAWC believes that the ability to expand power and water resources is important to the economic growth of Illinois. Peaker plants, as all state-regulated facilities, should be subject to the consistent application of existing laws to ensure protection of our environment and natural resources. There is a need for more comprehensive oversight of

Illinois' water resources. Such oversight appropriately resides with the State but must be based on sound and current science and not on politics. Thank you.

HEARING OFFICER JACKSON: Thank you, Mr. Gregory. Are there any questions? Go ahead.

BOARD MEMBER MELAS: Mr. Gregory, earlier in your statement you mentioned you thought that there was adequate control as far as water quality, and twice I heard the words water quality. Do you have any comments about the quantity of the-- or the adequacy of particularly groundwater supplies? Those concerns have been raised in--

MR. GREGORY: Yes.

BOARD MEMBER MELAS: -- previous testimony, and that's why I would like to know what your take on that is.

MR. GREGORY: Well, we recognize that in certain areas of the state in particular, there may be some quantity concerns. We're traditionally known as a water-rich state, and yet due to concentrations of industry and populations and other circumstances, there are areas where, particularly in long-term outlook, water quantity is a concern. That's why we concur that there is a need for sound comprehensive management of

the state's water resources with regard to quantity.

BOARD MEMBER MELAS: Thank you.

BOARD MEMBER MCFAWN: Wait. I have a question. I was just waiting. You mentioned you thought that the quantity-- I believe it was the assessment of it should be done by an independent third party? Could you explain that a little bit more?

MR. GREGORY: Yes, I can. If there is some legislative or regulatory control set up over the use of Illinois water resources, it needs to be based on sound scientific assessment of the resource, which we believe that the State has-- is the appropriate-- has the appropriate technical resources to conduct those. However, if there would arise a dispute over the use or the application for the use of water or withdrawal of water and there is better science to be presented by a petitioner for the use of that water, that should be allowed.

BOARD MEMBER MCFAWN: We are talking about just quantification, not quality?

MR. GREGORY: That is really in the context of quantity.

BOARD MEMBER MCFAWN: Okay.

MR. GREGORY: Yes.

BOARD MEMBER MCFAWN: I just want to make sure that--

MR. GREGORY: If somebody wants to withdraw water from an aquifer or from a watershed and is able to hire a qualified consultant to demonstrate the reasonableness of that petition, then that should be considered.

BOARD MEMBER MCFAWN: Thank you.

HEARING OFFICER JACKSON: Any more questions for Mr. Gregory? No? All right. Thank you, sir.

MR. GREGORY: Okay. Thank you.

HEARING OFFICER JACKSON: Next we have Ashley Collins with Citizen Action Illinois. Is Ms. Collins here?

MS. ZINGLE: I think she thinks she's testifying tomorrow.

HEARING OFFICER JACKSON: I'm sorry?

MS. ZINGLE: I think she thinks she's testifying tomorrow.

HEARING OFFICER JACKSON: Okay. James Monk, Illinois Energy Association. Give me a second and I'll pass this around.

MR. MONK: Sure.

HEARING OFFICER JACKSON: While those are being passed out, I'll just indicate that I've been handed a

document entitled "Testimony of James R. Monk," and we will mark that as Monk Exhibit 1, and also a handout entitled "System Peak-Load and Capacity," some historical data, and that will be Monk Exhibit 2. Thank you. Whenever you're ready.

MR. MONK: Thank you, Hearing Officer Jackson, Chairman Manning and members of the board. My name is James R. Monk. I'm the president of the Illinois Energy Association. The Illinois Energy Association is a trade association representing investor-owned electricity and combination electricity and natural gas companies serving customers in the state of Illinois. The association was formed in 1994 and has eight member companies. Those are listed in my formal testimony, but they include what you would normally, I think, term as the incumbent electric utilities in the state of Illinois, Commonwealth Edison, Illinois Power, CILCO, CIPS, etc. The Energy Association serves as a spokesperson for the investor-owned electricity and combination natural gas and electricity industries here and as a vehicle to develop policy positions and

policies on issues dealing in the public policy arena.

On behalf of the association, I want to express my appreciation to the board for providing the opportunity

to testify as part of this inquiry into peaker plants. Our member companies are active in both the power supply and the power transmission and distribution sectors of the industry, and we believe peaker plants play a critical role in both of those areas, and we stand ready as an industry to provide whatever information the board deems necessary to assist you in your inquiry.

To that end, I'd like to respond to a request I think that was made by the board and its staff at the initial hearings in Chicago regarding current generating capacity and expected demand growth for electricity here in Illinois, and I've attached Exhibit A-- which is a document I think that's been distributed to you-- to my testimony that shows both historical and projected system peak-load capacity-- load and capacity for the Commonwealth Edison system. Hopefully this will give the board a flavor of-- for where we are as a state in both of these respects.

These figures indicate a rather dramatic increase in peak-load in recent years. While peak-loads on the

ComEd system have grown at 2.8 percent over the last 15 years from 1984 to 1999, we note that the growth rate has nearly doubled in the last five years. From 1994 through 1999, peak-loads have grown at 4.2 percent.

Clearly, meeting demand was very tight in 1999, and I think most of you remember the summer of 1999. Virtually no extra reserves remained to cover contingencies at time of peak demand. New independent power capacity was critical to meeting that demand.

Similarly, while this past summer was cooler than normal, it was still necessary to have new IPP capacity in order to provide adequate reserves. For your information, about 1500 megawatts of reserve capacity is needed to provide what we call reliability insurance on the ComEd system for forced plant outages and additional deratings at peak. If the summer of 2000 weather had been normal rather than cooler than normal, total capacity would not have provided targeted reliability reserves or that reliability insurance that I spoke of.

The diagram also shows projected growth through the year 2003. These figures are based on average peak-making weather; not cooler than normal, not hotter than normal, but our historical average. In this

respect, the existing total capacity is inadequate going forward, even with average peak-making weather. Forced outage reserves are below target beginning in 2001. Demand exceeds supply in 2002 considering higher recent demand growth rates. Even if you look at the relatively

lower historical demand growth rates for the 15-year period, demand still exceeds supply in 2003. And remember, these projections are for normal summer weather. Extremely hot weather could add an additional 2 to 3 thousand megawatts of demand next summer.

The bottom line here is that even under the best of circumstances, additional capacity is critically necessary in order to keep the system functioning at peak times. In the short term, that additional capacity will come almost exclusively from peaker plants.

I realize that the focus of the board's inquiry is on the environmental aspects of these plants, and I certainly do not wish to diminish those concerns. In fact, I'm of the opinion that the record in this inquiry shows that peaker plants are the best power supply option from an environmental standpoint as well as an economic standpoint. However, peaker plants must also be viewed in the larger context of the role they play in

making sure that our state has adequate, reliable and affordable electricity throughout the year.

One need only look at the situation in California to see the disastrous results of a shortsighted power supply policy. While much of the blame for highly publicized failure of the electricity market in

California can be laid at the feet of those who designed the faulty marketplace mechanism, it is also undoubtedly true that lack of adequate power supply is at the heart of the problem in that state. California has allowed only limited investments in new power plants in the last 20 years. Between 1996 and 1999, California added only 2 percent to its generating capacity. Several state policies discouraged new construction at a time when demand continued to surge.

In that same time period between 1996 and 1999, California's growing economy caused a peak demand increase of over 5500 megawatts. California's demand is expected to grow faster than new power plants can be built for the next several years, even with some recent modifications to their siting procedure which should make it easier to build power plants. Much of that demand growth in California is caused by the booming

digital economy in that state that gobbles up electricity at a much higher rate than traditional industries have in the past. Obviously, here in Illinois and in the Midwest, we hope to be part of that digital economy as well, and we have to deal with the impact of that digital economy in the power supply sense as well.

I'd also like to comment on the issue that I think was raised in Chicago and maybe at the suburban hearings of whether much of the electricity generated by peaker plants constructed here in Illinois will be exported to other states. I think the information that I've provided in my testimony indicates that there's a need for power here in Illinois. On top of that fact, geographic and transmission constraints in our region are such that it's very difficult to transmit large amounts of electricity on an export basis. Strangely enough, I've talked to my counterparts in both Wisconsin and Indiana, and that same export of power argument has been used in both of those states by opponents of peaker plants who say they're building power plants in Wisconsin to ship power to Illinois or they're building them in Indiana to ship power to Illinois. Just the

basic facts of electricity and the physics of electricity are-- make that difficult, especially considering the transmission constraints we have in the region.

The board has received testimony from many sources that are involved in the generating side of the industry, including some of my own member companies. However, there's also a distribution component, and all

of my member companies are part of that side of the business, the distribution utilities. Even under our state's landmark deregulation law, distribution companies maintain a duty to provide safe, adequate, reliable and affordable electricity to our retail customers. We are also still the, quote, providers of last resort that we have always been to our native load customers. In order to fulfill those duties, distribution companies must have an adequate supply of electricity even at peak times. That is why, even for electricity distribution companies, much is at stake in the debate over construction of peaker plants here in Illinois.

Thank you for the opportunity to present testimony in this proceeding. The member companies of the

Illinois Energy Association are pleased to be a part of this process and stand ready to assist the board as your inquiry goes forward, and I'd be pleased to try to answer any questions that you might have, although I will tell you I'm not a technical expert. I'm a-- I'm what they call a policy guy. Thank you.

HEARING OFFICER JACKSON: Thank you, Mr. Monk.

BOARD MEMBER MELAS: Mr. Monk, in mentioning earlier in your statement the booming shortage, the

shortfall, you said that demand will have to come from peaker plants.

MR. MONK: In the short-term, I think peaker plants is where that's most exclusively going to come from.

BOARD MEMBER MELAS: I've heard a lot of testimony in the last month or two. The electricity which is generated by the peaker plants is the most expensive type of electricity; is that correct?

MR. MONK: I think that's a little overbroad. It depends on a lot of factors, given the market situation at the time that the peaker plants are operated or not operated. It's a little too broad, I think, to say that it's the most expensive power.

BOARD MEMBER MELAS: We've heard that statement

made at previous meetings.

MR. MONK: Right.

BOARD MEMBER MELAS: That's why I asked. Whereas the power that's generated through a so-called base-load, whether it's coal or nuclear, is much cheaper.

MR. MONK: I'd say on the whole, that's probably true.

BOARD MEMBER MELAS: Would not the construction of another one or two major base-load plants obviate the

problem, in your opinion?

MR. MONK: Well, I think if you were able to construct base-load power plants, certainly that would obviate some of the problems. The difficulty with the base-load power plant is the time frame that you're talking about in terms of the design, construction, operation, is much longer than we can afford to undertake here in Illinois.

BOARD MEMBER MELAS: Are any of your members at the present time contemplating any new base-load plants that you know of?

MR. MONK: Not--

BOARD MEMBER MELAS: Anywhere within the state of

Illinois?

MR. MONK: Not that I'm aware of. There may be internal planning processes that are underway that I'm not aware of, but I'm not aware of any at the present time.

BOARD MEMBER MELAS: That's all. Thank you.

MR. MONK: Of course I would add that part of what's going on in the industry is a-- what we call an unbundling of the industry, and, you know, you will have distribution companies-- all of my members are distribution companies, and depending on how this all

develops over the next few years, the distribution companies for the most part won't be owning generation in the first place. That will come from generation companies, some of who may be part of an overall company that the distribution company is, many of whom will not be related to a distribution company whatsoever.

BOARD MEMBER MELAS: Thank you.

BOARD MEMBER KEZELIS: I have one question, Mr. Monk. The chart that you've given us--

MR. MONK: Yes.

BOARD MEMBER KEZELIS: -- and I understand you're a policy person as opposed to perhaps a predictor or an

analyzer of figures-- but the chart you've given us notes a significant drop in 1992 for peak-load demand. Was 1992 an anomaly? Was it an usually cold year, or do you know?

MR. MONK: I don't know, but that would be my guess, because if you can look and compare 1999 to 2000, you see a similar drop, and I do know that those two--

BOARD MEMBER KEZELIS: That was weather-related.

MR. MONK: That was weather-related, and I would guess the other one was weather-related.

BOARD MEMBER KEZELIS: Okay. Thank you.

CHAIRMAN MANNING: I have a more general question

on the graph itself, and that kind of relates to the question of the applicability of the graph. When you look at the total capacity, you've got ComEd's capacity and installed IPP capacity. What do you mean by installed IPP? Maybe I missed that in your remarks, but what are you referring to when you say-- when the graph refers to the installed IPP capacity?

MR. MONK: That would be-- For the most part, that would be peaker plants that are already up and running.

CHAIRMAN MANNING: Okay. So that if you look at the gray shaded area on the graph itself, that's the

total capacity of energy currently being generated for what market?

MR. MONK: This is for the ComEd system.

CHAIRMAN MANNING: Okay.

BOARD MEMBER KEZELIS: There are two shades of gray.

MR. MONK: Right.

BOARD MEMBER KEZELIS: They're difficult to distinguish.

CHAIRMAN MANNING: Right. The shaded gray without the black line and the gray-- the shaded gray with the black line.

MR. MONK: Right, and then the dotted line above

that is the projection that shows that even with that, we need more power.

BOARD MEMBER MCFAWN: Does the IPP stand for independent power producers?

MR. MONK: Yes, it does.

BOARD MEMBER MCFAWN: Thank you.

BOARD MEMBER FLEMAL: The dropoff between 1997 and 1998 reflects what change in the system?

MR. MONK: Are you talking about the dropoff in the--

BOARD MEMBER FLEMAL: The installed capacity. 1997 shows the 22,000 megawatts and then '98--

MR. MONK: I would-- I don't know for sure, but my guess is that would reflect-- at least in one respect, that would reflect the retirement of the Zion plant. There may be other factors, but I think that would probably be a large factor involved in that.

CHAIRMAN MANNING: Mr. Monk, in our proceedings too we've heard various definitions of the word peaker plant itself. I would assume your association has a definition they would use for peaker plant. Do you want to give us what that would be?

MR. MONK: My definition would be an economic definition, and that is power that is primarily for use

at peak demand times, and, you know, that--

CHAIRMAN MANNING: However it's generated?

MR. MONK: Well, I mean, I-- yeah. I think, you know, if you're talking about a plant that is dedicated primarily to that purpose, then I would call that a peaker plant. Now, there-- you know, that may be an older plant that is only used at peak time, and there are those around, but I think, you know, in the general context of your inquiry, we're talking mostly about the

new natural gas turbine-fired facilities.

CHAIRMAN MANNING: Right.

MR. RAO: Just as a follow-up to Chairman Manning's question, when you say, you know, a peaker plant is a plant that serves you in peak demand, can peak demand be, like, the whole summer season, like a-- you know, if there's combined-cycle plant that operates just during the summer, would that be considered a peaker plant?

MR. MONK: Well, I'm treading on pretty thin ice here, but peak demand is actually a figure that's reached once per season, I guess, but what I would call the peak season would be the summer. Our systems, as are other systems around the country, the base-load demand is built to meet a regular demand, and then the peak is on top of that.

Now, you might have a run of-- period of two weeks which could be considered a peak period because every day is 100 degrees and every day the same huge amount of electricity is being demanded, but at some point in time, a few days or a while later, it's going to go back to a normal demand scenario, so, I mean, that's kind of the difference. Peak is what it implies, and that is the highest point of demand for a particular day or a

particular few days together. It is-- It's-- I don't know that we've ever had a peak that lasted an entire summer season or even more than a couple weeks.

MR. RAO: So you say it's more based on days rather than months or weeks.

MR. MONK: Yeah. Well, yes. I mean, in terms of-- it depends again, as I answered the gentleman's question a moment ago, on the market conditions, but, you know, peaker plants will run for certain periods of times when it's economic to run them, and then when it's probably a nonpeak period, they won't because it's not economic to run them.

MR. RAO: I had a question on the chart that you submitted, and, you know, you show growth rates for those dotted lines. The growth rate, those lines, do they represent base-load, or is it the peak-load growth

rate that you're projecting?

MR. MONK: That's peak, and the reason there are two there is to show you that historically we had one particular growth rate and we've accelerated that growth rate rather dramatically in the last few years.

MR. RAO: Okay. And one last question I have is about the required reserves that you show in the chart.

What percent of the base-load does required reserves represent; do you know?

MR. MONK: I don't know in this particular figure. I think if you go back to Mr. Bulley's testimony from MAIN, their standard is 15 percent reserve.

MR. RAO: That's what I just wanted to make sure, you know, that this percent is what Mr. Bulley was talking about.

MR. MONK: And-- So, I mean, that's the-- I think that's-- the industry standard is the 15 percent reserve margin.

MR. RAO: All right. Thank you.

BOARD MEMBER MCFAWN: So when it said on your chart required reserves, is that what you mean? What do you mean by required?

MR. MONK: There's some-- I would hesitate to say with 100 percent accuracy that we're talking about that

15 percent margin here, because the testimony-- the figures that were supplied from Commonwealth Edison talked about the-- let's see what-- I want to get the exact phrase-- the reliability insurance, which I'd have to check to make sure that we're talking about the true 15 percent system reserve as opposed to that reliability

insurance reserve that they're talking about. My guess is we're talking about the 15 percent, but I can check that and be sure on it. I wouldn't want to give you an inaccurate answer.

MR. RAO: If you could answer that in your comments, it would be helpful.

MR. MONK: Sure. I'd be glad to.

HEARING OFFICER JACKSON: Anything else?

BOARD MEMBER MCFAWN: I had a question. You mentioned that it's hard to export energy from Illinois. Could you expand on that?

MR. MONK: Well, for instance, the State of Wisconsin has-- is undertaking a program right now to increase its transmission capacity, because they have very serious transmission constraints caused by two main factors; geographic, the fact that this little lake kind of gets in the way of transmitting electricity around, and then they also have a shortage-- frankly, a shortage

of transmission capacity, just the physical capacity to transmit. We have other constraints that are related to the-- to our geography as well as the transmission capacity.

Transmission capacity, frankly, is another area

that has not kept up with the growth of the market in terms of especially wholesale electricity transfers. We-- You know, it-- I think it's no secret to anybody here that it's very difficult to site and build a transmission line, and we have not been able to keep up with that demand that's taken place in the last few years, with the growth that's taken place in the last few years of the wholesale electricity market.

You hear people who talk about deregulation tell you that we're starting into, at least on the wholesale basis, power transfers from one state to another, etc. We're starting into a wholesale bulk power market, but our system is really a Balkanized system that was built for the old electricity style of control area here, control area here, control area here, and that we do need to make-- one of the things that the industry is looking at and the government is looking at very seriously is how are we going to upgrade and modernize our transmission system in order to make the wholesale

bulk power market work? It wasn't built for all the transfers that are taking place now between utilities in Pennsylvania and utilities in Wyoming.

BOARD MEMBER MCFAWN: Do we have problems

internally in Illinois?

MR. MONK: No, not internally. I think our system internally is a sound system, and I'm not saying we have problems in terms of getting power when we need it. It's just that the transmission system that's there now does have constraints, and it needs to be modernized in order to be up to speed for the new industry that we're headed into, and it's very difficult to do, frankly, for some of the same reasons that building peaker plants is very difficult to do.

BOARD MEMBER MCFAWN: We heard in another hearing that the transmission system up by Zion of course is underused with the closing of Zion. With that freed-up transmission line, does that make it more difficult or easier to move power around in Illinois?

MR. MONK: That-- I couldn't answer that except to say that electricity unfortunately doesn't pay too much attention to the laws of man. There-- It's kind of into the laws of physics. And I don't know that simply freeing up a transmission line in and around Zion would

help a situation even as close as the western suburbs. I'm not that technically expert enough to give you an answer on that.

BOARD MEMBER MCFAWN: On a different topic, you talked about California.

MR. MONK: Popular topic these days.

BOARD MEMBER MCFAWN: It is, it is, and I would certainly like to learn more about it. You mentioned that between '96 and '99 they only added 2 percent to their capacity. I would assume their base-load capacity or just their capacity in general?

MR. MONK: Their capacity in general. I don't know the breakdown. I don't think-- It would probably be a peaking type of capacity, because I don't think they've built a base-load plant there in a long, long time.

BOARD MEMBER MCFAWN: Okay. And then you later mentioned that they had a demand or an increase of 5500 megawatts?

MR. MONK: In that same period of time.

BOARD MEMBER MCFAWN: In that same period? What kind of percentage? I mean, how would I compare those two figures?

MR. MONK: I have-- Let me look just a second. I believe their total system capacity is something like

60,000 megawatts, so whatever 5 percent of-- whatever 5,000 megawatts out of 60 would be was what it increased

in that period of time.

BOARD MEMBER MCFAWN: I don't know if you can help me with this or not, but we do hear a lot and-- about California and are we comparable or similar problems and that type of thing. Do you know of any resource that describes what California has suffered through most recently as far as its marketing and its capacity and all that?

MR. MONK: Well, there are several trade publications and industry newsletters and things that follow that situation very closely. I have a file about that thick on it that I can give you some information. You know, I-- if you don't mind, I can give you my personal opinion.

BOARD MEMBER MCFAWN: That would be great.

MR. MONK: There are two problems with California that we-- number one, the first problem, we avoid it here in Illinois, and that is they designed a system that was doomed from the start, in my opinion. They didn't really deregulate their system. They just shifted regulation around. They set up a situation where their utilities could only buy power from a

state-mandated, state-operated power exchange. There's

no-- There really isn't an open market for power per se in the California system that was designed. It really, you know, shifted things around, but it didn't really create a competitive marketplace, and that's one of the major problems.

The other major problem is what I touched on in my testimony, and that is they have-- they had before they even started their process of deregulating a tremendous supply problem. They were importing a lot of power from out of state at that point, and they haven't added any power to speak of since then. Their demands are growing exponentially, and what really happened on the power supply side this time was they couldn't get out-of-state power suppliers to sell power into California at the artificially low prices that the government was setting, so that's a big part of their supply problem. And so those two things kind of came together, and unfortunately the people in San Diego were the first ones to feel the effect of that.

BOARD MEMBER MCFAWN: Thank you. That does help a lot.

MR. MONK: Thank you.

HEARING OFFICER JACKSON: Anything else?

CHAIRMAN MANNING: Thank you.

HEARING OFFICER JACKSON: Thank you very much.

MR. MONK: Thank you very much.

HEARING OFFICER JACKSON: At this point, before we call our next speakers forward, why don't we take a short ten-minute break, and we'll come back in ten minutes, then.

(Brief recess taken.)

HEARING OFFICER JACKSON: Okay. We'll go back on the record now. One point of clarification. Mr. Gregory left an exhibit with the court reporter that I was not aware of, so we've now marked that as Gregory Exhibit 1, and it has been admitted into the record in this matter. Our next speaker, I believe, Mr. Silva?

MR. SILVA: Yes.

HEARING OFFICER JACKSON: Okay. Whenever you're ready.

MR. SILVA: Thank you. My name is Patricio Silva. I am the Midwest Activities Coordinator for the Natural Resources Defense Council. The Natural Resources Defense Council is a membership organization of 400,000 members nationwide originally organized in 1970, and we've been working on clear air and clean water issues and most recently electric restructuring heavily in both

California and in New York, and I'm here today in part to convey the experience of our offices in the New York and California examples to offer what lessons they may have to hold for Illinois.

First, I just wanted to kind of step back and point out a couple of general trends that we've noticed of interest to us vis-a-vis what's occurring in California and in the eastern United States in terms of the siting and construction of gas turbines. Particularly, starting in New England, about four to five years ago, there was a massive influx of new capacity being proposed, approximately 25,000 megawatts. Eventually, only about 9,000 megawatts of that capacity was actually permitted and came to construction. Many of the units were-- smaller merchant developers sold them. There was regular consolidation in the IPP industry during that time, so it was actually kind of hard to keep track of.

But in the end, today we have a large number of units that are all combined-cycle units. Many of them are load-following, a few are base-load units, but clearly, the overwhelming majority are not peaking single-cycle units. Part of the reason was the attraction for mainly the host communities was in having units that had a clear value, and in terms of benefits

to the community and the state, there was a definite need and recognition of need for additional capacity, but also, given the status of the severe non-attainment area and serious non-attainment areas, a classification for many of the locations where these units went in, there was a strong argument, and successfully, many of them were permitted with fairly stringent air and also cooling water requirements.

A number of the units rely on dry cooling with low, if any, water withdrawals. Many of them rely on closed-loop systems that have a one-time withdrawal of water, and the permit restrictions are unusually restricting in that many of them are solely natural gas-fired. They have no option of fire oil.

Now, that trend is being repeated across the United States, and the Energy Information Administration now forecasts that by 2020 there will be a need for approximately 300 gigawatts, otherwise known as 300,000 megawatts, of new capacity across the United States. Now, approximately 100,000 megawatts is supposed to arrive by 2010, so what we're actually seeing is a run-up to what should be a very hectic period in the-- across the United States as a large number of units will be sited and permitted and built across the country to

serve different reliability regions and isolated local pockets.

One of the concerns that we have is that some of the locations that are being selected now early in the process may not be ideal and may actually frustrate the siting of new, more advanced units later in this construction cycle. We as an organization are in favor of replacing and backing out older fossil fuel fired-units, particularly coal-fired units, so we have fought and continued to advocate in both federal and state regulatory and in legislative forums for comprehensive legislation that would essentially call for the repowering of coal-fired units and replace them with combinations of more natural gas-fired units, greater reliance on renewable resources, and also a greater investment in energy efficiency.

This actually has two different goals. One is the short-term benefit that it can actually essentially shave off enough of the demand to avoid some of the peak demand episodes that we've suffered both here in Chicago in 1999 and also across northern California this summer and in isolated pockets elsewhere across the eastern seaboard.

In terms of the questions put to the Illinois

Pollution Control Board by Governor Ryan, we do not feel that per se individual single-cycle units require more rigorous analysis than they currently have. Now, that's-- there are a couple of caveats I'd like to make with that statement. We believe that it was a mistake for EPA to issue the 182(f) NOx waiver for the Lake Michigan area. We think that the results of that decision have been counterproductive and will continue to be so.

We're also concerned that that waiver is actually discouraging the siting of the most and cleanest categories of generation in the region in favor of less efficient units which will have a longer lease on life than they otherwise would had the full gamut of Title I requirements under the Clean Air Act been in effect in this region.

In the area of-- And one of the areas that we're also concerned with is also water withdrawals for the single-cycle units. We note that there are in many parts of the state and also across the Great Lakes region units being suggested that would require significant withdrawals on limited aquifers, and that also may jeopardize the ability of future units to come in at a time when additional demand is required.

So one of the things that we have sought in several states, particularly in California and New York-- and I'd like to go into the California experience in-- at some detail in a few minutes-- that a more comprehensive assessment of the actual need for the units be taken into account. Essentially, we would suggest that Illinois consider a process whereby a more comprehensive total energy strategy is developed with stakeholder input that would essentially serve as a blueprint to help guide decisions of various state agencies, whereby the communities right now, many municipalities in the state have complained, rightfully so, that they feel somewhat bereft of state assistance in assessing whether or not some of these projects are a best fit for their particular communities.

And understanding that, some of these kind of centralized processes that are available in states such as California and New York allow for participation of the public and fund that participation as part of the permit applications for the plants. They essentially provide for intervenor funds based on a prorated share of the proposed generation capacity of the unit which is allocated for expert witnesses and technical assistance to the communities and the stakeholders.

For example, under Article X of the New York Public Service Law, it's a 50-50 split on projects where projects are assessed at $1,000 per megawatt up to $300,000 maximum for a project, and that-- those funds can actually be split between the municipality involved and interested stakeholders. Any balance of funds that are not exhausted are then returned to the applicant. That would be-- That's one part. We're not saying that that's the only solution or the best solution for Illinois. That's an option that we thought it was important to mention and provide some solution and a greater sense of control.

Many of us in these communities have been pointing out that there's a sense of loss of control under the local zoning decisions, and those issues are ones that we feel will only worsen in the future if they're not addressed now. Again, we're most concerned, again, looking at the future where we see a situation where we'll essentially have a Balkanized area where some communities are more willing or tolerant to accept these projects, others will fight them at any cost regardless of the actual value or how meritorious future projects may be, and we're talking both about natural gas

combustion turbine units and also renewable projects,

which we believe are going to have similar problems in the future as some of those projects try to move forward.

One of the things that has been mentioned in prior testimony at length is the experience of California and what happened this summer, and I'd just like to go into those particular details for a few minutes. The conventional wisdom was that this summer that the entire energy system in California was essentially surging out of control, that the Internet was creating a huge demand for electricity and a booming economy was to blame. The actual reality is slightly different.

The system peak grew between 1990 and 1999 by less than 2 percent per year and up to about 50,000 megawatts with 41,000 megawatts representing total demand on the three largest investor-owned systems. Total state-wide consumption of electricity increased at less than 1 percent per year from 1990 to 1998. That's actually less than one-third of the rate that California experienced during the 80's.

The most recent data from this summer indicates that the short-term consumption increases over the first

six months of this year compared to a same period last year were not particularly unusual, even with warmer

weather playing a strong role. For example, in the June 2000 electricity spike, there was a 13 percent increase in consumption compared to a much cooler June of the year earlier.

This was used repeatedly by-- in the media to point out that there was something clearly amiss, when in fact we're talking two slightly different situations. It was a much cooler year last year in California and also a much hotter year earlier than anyone expected this year, and there was also an unusual situation going on throughout the Pacific Northwest this summer that was not the case last year or the year before. Hydros contribution across the region was significantly curtailed. Essentially, rainfall across the Sierra Nevadas, the Cascade, was much lower and was actually near historic low, so much of that generation capacity was reduced, and in many cases there were constraints in the system that prevented exports into California.

Complicating matters were that those-- that heat spike also coincided with a spike in natural gas prices, sending them above $5 per million BTU. The first three

weeks of July saw more moderate weather in California, and then both electricity and peak consumption were down compared to the same period a year earlier. The average

wholesale electricity price dropped about 40 percent. However, it is still quite high. It's ranging at around 7 cents per kilowatt hour, and even-- we believe that that could return to be a problem in the coming weeks and months ahead.

One of the things that was pointed out was that-- again and again in some of the testimony was that there hasn't been new generation added to the system recently, in the last 20 years. There are two different things that work. One was the decision by California to invest heavily in energy efficiency and renewables, and in the early 1990's there was a compromise reached whereby there was going to be a great deal of additional natural gas capacity built, but due to federal intervention, none of that capacity was actually added to the system.

Now, that energy efficiency actually has already done a great deal of good. Peak electricity demand has been reduced about 10,000 megawatts and total annual consumption has been reduced about 15 percent. Since 1990 alone, energy efficiency investments have reduced

state-wide electric bills by approximately 2.8 billion. The Rand Corporation recently pegged the per capita benefits from 20 years of energy efficiency programs in California at about $1,000 per capita with cumulative

utility investment for such purposes averaging only about $125 per capita, which is a sizable return.

There was also in the last week a spate of good news for the region, and California-- Governor Davis allowed several bills to be enacted which will add approximately 2500 megawatts of new renewable capacity, including geothermal, wind and some small-scale hydro to the grid over the next ten years. There's also an extension of energy efficiency building on accredits which are rated as offering 150 megawatts per year in sustained load reduction. There's also a separate R&D fund which will allow about 5 billion dollars in investment for energy efficiency, renewable energy and clean energy over the next ten years. It's a renewal of an existing fund that expired this year.

The California experience to us demonstrated that there are several issues at hand. One is that that market is very much in transition. They are incomplete market mechanisms that work today that will not be fully

converted for several years, and as a result, there are going to be price spikes and dislocations in the system, but we don't think that the system itself is fundamentally wrong. We think that there's significant opportunities for improvement, but we think that system

will improve in weather, and it offers Illinois and other parts of the Midwest some lessons on what could be used and what might not be the most useful tools.

I'd like to cut short the rest of my comments and place them in the record and use the remaining time to answer any questions that I hope you have.

HEARING OFFICER JACKSON: Thank you, Mr. Silva. Any questions now?

BOARD MEMBER KEZELIS: I do. Thank you, Mr. Silva, for coming here today. I do have several questions. You referred early on in your testimony to your organization's preference that states such as Illinois focus on renewable sources of energy. When you use the term renewable, for the record, could you clarify what you mean?

MR. SILVA: By renewable, we would mean wind, sustainable biomass, small-scale hydro and other products that amass certification requirements through

green or other third-party certification processes that have evaluated the energy source and have certified that it actually is provided in a sustainable manner and qualifies.

I'd be remiss also not in mentioning of photovoltaic and solar thermal. We're particularly

interested in what Spire Technology is doing in Chicago with its thin-film photovoltaics, but that is something-- all of those technologies are ones that we support. That also doesn't mean that there aren't other renewable technologies in the future that we won't turn and become advocates for, but those are the available ones that we see now that hold the most promise for making immediate contributions.

BOARD MEMBER KEZELIS: For making immediate contributions.

MR. SILVA: Yes.

BOARD MEMBER KEZELIS: You would agree, would you not, though, that something like hydro on a larger scale is simply not practical for a state like Illinois?

MR. SILVA: Gee, probably not.

BOARD MEMBER KEZELIS: Okay. Thank you. You also focused a great deal of your attention today-- and for

that we're very appreciative-- on your experiences and your organization's experiences in California and in New York. We've heard testimony earlier that other states which have experienced some of the controversies associated with peaker plants include Wisconsin and Indiana. Are you aware of any other states?

MR. SILVA: I'm aware of a variety of unsuccessful

single-cycle combustion turbine projects that failed across New England, mainly because the permitted developers failed to make the case with communities that they would be useful additions. There are some projects that were permitted also in California as single-cycle projects but they failed to acquire necessary financing and were withdrawn after obtaining the necessary permits.

I'd offer we recently took a look at the available permitting databases and found that there were in the last three years 750 combustion turbines that received permits across the United States that we had quick data for. We believe that number's closer to 1,000, so--

BOARD MEMBER KEZELIS: Single and combined.

MR. SILVA: Single and combined, and I would say that the majority of those units was clearly

combined-cycle configurations. Many of them were going in initially or were proposed as in phase one, with the second phase intended to augment them to combined-cycle operation, but very few of the units were being proposed as dedicated single-cycle units.

CHAIRMAN MANNING: Those figures are nationwide?

MR. SILVA: Those figures are nationwide, and I would offer the caveat that they were from EPA's

permitting division, and they actually have a database that is not up to date. It's at least six months old. And we did a considerable amount of research on our own, contacting the regions individually to actually augment that database and fill in some gaps in theirs.

HEARING OFFICER JACKSON: I just want to clarify too for the record you just mentioned EPA, and you did earlier regarding the NOx waiver. You're referring to USEPA as opposed to IEPA, correct?

MR. SILVA: Yes. I would refer to it as EPA for the U.S. Environmental Protection Agency and IEPA for the Illinois Environmental Protection Agency.

HEARING OFFICER JACKSON: Thank you.

BOARD MEMBER KEZELIS: Thank you, Mr. Silva.

BOARD MEMBER LAWTON: I would just want to comment

that I'm so happy that the NRDC is here today and participating in our hearings, your organization. Can you hear me? Maybe it's not on.

HEARING OFFICER JACKSON: That's better.

BOARD MEMBER LAWTON: I'll repeat what I said, for what it's worth. I'm happy to see that the Natural Resource Defense Council is participating in our hearings. I think your organization has played an outstanding role in the last 30 years, and it's nice to

see you. You had mentioned some of the-- Maybe the principal part of my question you answered part of already since I wrote the question up, but you mentioned that the interest in peaker plants was at least in part attributable to the fact that it would cause-- I'm not sure I'm using the right expression-- but you mentioned a legal backing out of coal-fired units or at least a diminution of coal-fired units?

MR. SILVA: Yes.

BOARD MEMBER LAWTON: I wondered whether you had given that-- your organization had given thought to some of the areas of concern that have been expressed in the various hearings we've had as to matters that might not be favorable from the use of peakers. One is the noise

that's attributable to them, the nitrogen oxide that you at least commented on in part, the extraction of groundwater, which you also had mentioned, and the matter of proliferation. I just wondered whether those matters stand alone and apart from the fact that they might supplant coal-fired units that have been considered by your organization.

MR. SILVA: It's something that we have definitely not come to any final agreement or decisions on. It-- There are several different strategies that work. One

of our-- the overriding principles in our air and energy program is that the cleanest form of energy is absolutely without question energy efficiency. If you don't have to generate the electricity in the first place, that's the greatest benefit to the environment without question.

As a result, we devote a considerable amount of our resources and advocacy efforts to energy efficiency improvement measures. We currently have a bipartisan bill before congress which we are hopeful will actually offer new tax incentives for energy-efficient residential and commercial building construction. We also obtained a similar commercial building construction

tax code for the State of New York and California. We've also been at work on upgrading and improving national major appliance energy efficiency standards.

Getting back to the peaking units themselves, the natural gas-fired combustion turbine technology has several benefits over coal, most noticeably or both the fact that in terms of the demands on water and their resulting air emissions are a fraction of what a coal-fired unit is. However, we're currently facing somewhere between 55 and 70 proposed projects, and many of the combinations that I've seen are projects

involving six to ten turbines. On a hot summer day when you have background ozone conditions already near or at the one-hour or let alone the eight-hour ozone health standards, the prolonged operation of any of those natural gas-fired units will exacerbate ozone smog pollution. You'll also have fairly modest but noticeable particulate pollution from these plants. However, in comparing them to coal, they are by far and away the preferred solution, and in our minds, the real urgency is backing out as much of that coal.

Unfortunately, these units are going in on top of it. We're under no illusions that these units will be

looking for the sweet spot in the market, and I would just note that the owners of the existing natural gas combustion turbine capacity, including peaking capacity, in California enjoy a bonanza that boggles the mind and has actually pushed two of the incumbent investor-owned utilities towards what they describe artfully as technical bankruptcy just from this summer generating season alone. So this-- there are no easy solutions, unfortunately, to this matter.

Regarding the question of noise, I think that some of the units arguably could have better noise abatement technologies installed. In some cases it's either the

structure that surrounds the unit might require additional acoustic shielding, but frankly, there may be situations where we found that there are projects in the state of New York that were entirely inappropriate for the proposed location based on aesthetic, water, noise and air pollution contribution, in part because many of those host-- potential host communities were already bearing a heavy load in terms of pollution, whether it be aesthetic, noise, air or water.

BOARD MEMBER LAWTON: Thank you.

CHAIRMAN MANNING: Could you follow up on the New

York example? Did it-- Does New York-- the State of New York have some sort of siting requirements that were brought to bear on those issues you just talked about in terms of the New York examples?

MR. SILVA: In the New York example, we actually are an intervenor in the TG&E Athens, New York, project, which is a 1,080 megawatt combined-cycle unit, state-of-the-art technology, and actually, no question that its air pollution controls are going to be among the best in the nation, but what we found was the unit's going to be on the shoreline of the Hudson River in the most scenic section of the Hudson River Valley. Aesthetically, the 150-foot tower stack leaves something

of a footprint or a visual eyesore, and the water withdrawals for the unit would have been considerable.

One of-- We were not satisfied with the conditions proposed entirely on the unit in the granting of its permit by the siting board. It was required to adopt dry cooling. And this is something that I think we're going to have to go through again and again on a case-by-case basis, where are those most advanced or best available control technologies, to borrow a phrase from the Clean Air Act, necessary to preserve particular

qualities in the host community that merit such attention or safeguards.

BOARD MEMBER MCFAWN: You mentioned the need for the siting authority.

MR. SILVA: Uh-huh.

BOARD MEMBER MCFAWN: Could you explain, was that a local siting authority or was it a state siting authority? And before I forget, also could I ask you to explain that-- you said that best available control technology and that type of thing and you mentioned that that particular site or unit had to agree to dry cooling, and then you mentioned the Clean Air Act, and I would have thought the water withdrawal question would be unrelated to the Clean Air Act.

MR. SILVA: I'm sorry if I created any confusion regarding your last question. Yes, it's unrelated to the Clean Air Act. The water withdrawals were in part because there was some concern about adverse impact from the water withdrawals on the Hudson River for several fish species in that section of the Hudson River. I cannot remember off the top of my head if there was any impacts for nesting birds, but I don't believe so.

The siting process for the State of New York is

based on Article X of the New York Public Service Law. It creates a New York state board on electric generation siting and the environment. Most of the board members are appointees of the governor or are actually the heads of various state agencies or their appropriate representatives. It actually requires a multistep review process. There's a preliminary scoping statement that's first required to be submitted. The applicant then has to publicize the project and actually establish a presence in the potential host community to ensure that there's adequate opportunity for the public to gain information.

I mentioned in passing that there was a requirement that when the full application is filed that a fee equal to the prorated amount of its maximum generating

capacity up to $300,000 be made available to provide for expert witnesses and public assistance to the host community and any interested parties or organizations, and that it go through an open hearing process and-- but ultimately-- and we're not taking a position one way or the other-- the-- under Article X, the siting board does have the authority to supersede local municipal zoning ordinance, so that's something that I wanted to point

out. We're-- Quite frankly, the law was actually amended in 1999. The Athens project is one of a handful that are currently in that process, and so we are waiting to see what actual experience tells us about in that process and whether or not it has any pitfalls.

CHAIRMAN MANNING: The Athens project is the one on the Hudson River you just referred to?

MR. SILVA: Yes.

CHAIRMAN MANNING: I assume that that is not a natural gas-fired peak-load facility; that's something other than that. It's probably a base-load.

MR. SILVA: I believe it's-- I was looking for a representative to come-- I believe it is intended to be a load-following unit that we'll be selling onto the wholesale market. I am-- I don't know off the top of my head whether or not they had a long-term contract with

anyone or for any industrial uses, but I believe they're intending to go onto the wholesale market, but I would-- I can actually find that out easily enough and simply insert it into my comments.

CHAIRMAN MANNING: Thank you.

BOARD MEMBER MCFAWN: She mentioned it-- whether-- is it natural gas-fired or is it--

MR. SILVA: Oh, yeah. No, it most certainly is.

BOARD MEMBER MCFAWN: Thank you.

BOARD MEMBER MELAS: Just a follow-up on that previous question in the New England experience. As congested an area as that is, have you heard of any instances where there have been any interference with aviation with the velocity of these fumes of-- plumes going up?

MR. SILVA: As in with commercial aviation?

BOARD MEMBER MELAS: Commercial or private. It's probably more likely to interfere with the smaller planes.

MR. SILVA: No, I'm not aware of, and I would note that there's actually-- I grew up in Boston, and if anyone's ever flown into Boston airport, into Logan, when they're making the final approach, they have to fly over one of-- a very large coal-fired power plant in the

final approach, and we've always wondered what that was doing to some of the commercial aircraft and the jet engines, but I've never heard of any aircraft actually suffering any harm from the flue gas exposure. There has--

BOARD MEMBER MELAS: Of course I would imagine that

the gas-fired turbine chutes, they exhaust up at a much higher velocity than the coal-fired plant would.

MR. SILVA: It does, and I'd also note that one of the things is that natural gas just in the-- as a working fluid and even as an-- there's considerably less volume to deal with. I mean, the-- just the quantity of the pollutant expelled by similar-sized coal-fired power plant compared to similar-sized natural gas-fired facility, it's rather astonishing.

BOARD MEMBER MELAS: Oh, no-- yeah, no question about that. I'm talking about velocity of the pollution--

MR. SILVA: Yeah.

BOARD MEMBER MELAS: -- flow going up, because you have a substantial amount of testimony both in Naperville and up in Grayslake about that question.

MR. SILVA: It can create-- and one of the things that-- some of the dispersion models have to be quite

sophisticated to account for it. There are local microclimate variations that can be created, especially if the unit is going to be located in a river valley, for instance, where there is a thermal clime that develops during winter months. So there are some areas

that we're aware of where there are some issues, especially on low or high pressure days. I know there are several instances along the Ohio River Valley where some stacks are actually at more or less eye level with some communities on-- located on bluffs overlooking them, and those-- they actually do experience hitting and other downwash effects, but that's fairly unusual meteorology and not something that we've ever seen as a common or more difficult problem.

BOARD MEMBER MELAS: One last item. Getting back to the renewables, you wouldn't-- would you or would you not consider a nuclear plant to be renewable?

MR. SILVA: That's like my favorite trick question, and I've got an easy out, because when we're looking at any generation technology, we look at the life cycle of the technology, and one of the things that we've actually been looking at is the waste products in the construction to the decommissioning of the facilities. Nuclear has an ongoing and well-recognized waste product

handling issue that I think until that particular issue is resolved, it puts the future of the industry in some question. I'd just like to note, though, that NRDC is not opposed to nuclear technology as a technology. We

feel that in its current application, the risks outweigh the current benefits.

BOARD MEMBER MELAS: Would that be true were you ever to achieve fusion rather than fission?

MR. SILVA: Well, we could conceive some applications of nuclear technology where there are actually adequate safeguards in the handling and storage of spent fuel that would be appropriate. Fusion, we don't even-- I mean, it's too far down to--

BOARD MEMBER MELAS: Pie in the sky.

MR. SILVA: Pie in the sky, but a lot of this pie in the sky--

BOARD MEMBER MELAS: So was the Manhattan Project.

MR. SILVA: Right. But so was solar-- thin-film photovoltaics, but now we're actually manufacturing that in Chicago. So while we recognize that we don't know exactly what's going to happen, again, we go back-- we go through the whole life cycle of the product and see what it contributes and what its downsides are.

BOARD MEMBER MELAS: Thank you.

BOARD MEMBER FLEMAL: Did I understand correctly that the gas-fired power plants you were referring to in the northeast were largely combined-cycle?

MR. SILVA: Almost exclusively.

BOARD MEMBER FLEMAL: Almost exclusively?

MR. SILVA: I can probably include in my comments a list of all the units.

BOARD MEMBER FLEMAL: The-- And are those dominantly peaker plants or are they base-load, cover the range?

MR. SILVA: The-- There are several units that have been proposed but not yet constructed by several successors to the incumbent utility generating assets. Some developers actually came in and bought coal-fired and oil-fired units and have announced recently that they intend to repower them, and those units are intended to operate as base-load units. The great majority in my understanding-- and I don't believe the economics have changed dramatically-- is that the combined-cycle units that are operating today are load-following units.

BOARD MEMBER KEZELIS: Are what?

MR. SILVA: Load-following.

BOARD MEMBER KEZELIS: Thank you.

MR. SILVA: They are intermediate. They are dispatched-- They are not the first to dispatch, but

they certainly would be operating well before any peak demand conditions.

BOARD MEMBER FLEMAL: What's your understanding about the nature of the peaker plants that have been proposed in Illinois in terms of whether they're single- or combined-cycle?

MR. SILVA: My understanding is that your-- the overwhelming majority of the projects are single-cycle units. I've seen some breakouts, and I've only-- I believe out of fifty or sixty, five or ten seem to suggest that they're actually intended to be base-load units. Some of them include some repowerings in Illinois.

BOARD MEMBER FLEMAL: Well, is there a difference here, then? Are we talking about two different kinds of facilities, those that you're encountering in the northeast and the ones that are down to the spur of why we're here today?

MR. SILVA: At first glance, yes, except that's-- there was a kind of gold rush mentality four years ago in New England. It-- The perception was you had to get in quickly into the market, and quickly meant getting--

bulking a jet engine on the ground, and a single-cycle

was frequently the way to go. Many of those projects failed. They encountered a rather wilting opposition from the communities and in some occasions the permitting agencies that felt that this was not the appropriate technology to be using, and in some of-- in many occasions the public service commissions also had a say, and they were looking for combined-cycle because the units are often more efficient.

At the time there was a limited amount of natural gas supply available in New England. I know that that's an issue that is maybe slightly resolved in that the Alliance Pipeline is starting to serve parts of northern Illinois, and there's expectation that there will be additional capacity expansions in the region. But for New England, there was also the issue of some of the units, there was also a race to get and lock in available natural gas supplies. In fact, two units to my knowledge are intending to rely exclusively on liquefied natural gas imported from Algeria.

BOARD MEMBER FLEMAL: But those are facilities in New England.

MR. SILVA: In New England. They are intending to ship it over by tanker from Algeria, and those units

over there have figured out that's economical.

BOARD MEMBER FLEMAL: Do you see anything in that experience in New England that ought to be object lessons for us here in Illinois?

MR. SILVA: Well, one of them was that there was some fairly recent arguments put forward against what we thought were some fairly marginal projects. I mean, it's similar numbers. It was just a huge volume, 20,000 megawatts, I think, in proposed projects at one point, and there was some-- and many of them were being sited on top of one another, and there were questions about just-- about whether it would be-- unduly tax not only the natural gas delivery system with construction of all the laterals; also the question of the host communities and the adverse impacts.

There's a region in Massachusetts, Blackstone Valley, immediately north of the Rhode Island border that at one point had six or seven projects, and I think that ultimately four were built, and it was again a case-by-case assessment by a variety of siting agencies, and in many cases it uncovered that some of the developers were actually simply preparing three or four sites, and simply whichever site came through first they were permitting, so it may be a case that not all of the

units we're currently facing will actually go in, but I would say that if anything that kind of came clear was that there wasn't necessarily the need to rush to a decision on every single project; that it might be a situation where, you know, the first 8 to 10 thousand megawatts might be a logical place to stop when you consider where you are and see if this is actually in the best interests.

BOARD MEMBER FLEMAL: A lot of the downside that you just mentioned regarding New England's experience seems to be a downside that was borne by the investors.

MR. SILVA: Uh-huh.

BOARD MEMBER FLEMAL: A lot of money was obviously poured into planning some of these and for one reason or another they weren't built. Were there downsides as well to the environment in that experience?

MR. SILVA: Well, in terms of-- and there were potential downsides just in the sheer volume of the number, and there's also-- I mean, much of Illinois is in attainment for most of the criteria of pollutants, so much of Massachusetts is not in attainment. For example, a big chunk of Maine is free and clear, but there are portions of it as well. Most of the states are all impacted by ozone precursor pollution, so there

was also some different issues there. There were already adverse impacts. In the case of Illinois, you have somewhat of a luxury that you can avoid forcing the situation as to what's currently experienced across New England and the eastern seaboard, so in one way we would offer the object lesson that choose carefully.

BOARD MEMBER FLEMAL: In a slightly different direction-- but it actually ties in a little to what you just noted-- you had stated your opinion that the presence of a NOx waiver in Illinois acted in some way to discourage what you would consider to be the optimum setup of a power generation mix. Could you walk us through some examples or an example as to how you see that nexus between NOx waiver and the ultimate mix of power generation that develops?

MR. SILVA: In our eyes, the 182(f) NOx waiver has essentially extended the status quo. It's bought Illinois additional delays for several more years than it arguably would have had so that we would be farther along in actually pursuing reductions from a variety of sources, not just-- power plants I know are your primary focus in this series of hearings, but there are also other industrial boilers, which for Illinois are also a substantial inventory of NOx emissions on their own-- in

their own right.

There's been mention in passing about combined heat and power facilities. That's a very innovative technology where the-- in addition to generating electricity, they also create thermal heat in the form of steam that's used usually on site or at an adjacent facility for a useful process. Projects like those arguably have been in some ways frustrated, because those projects arguably would have been moving in if-- because the Clean Air Act is supposed to be technology-forcing and it's supposed to be pushing existing sources to clean up. The-- Under the Title I, sources would have been facing diminishing allowances that are required to have been offsets, so there would have been an incentive to replace these same sources of pollution with cleaner sources.

Instead, the 182(f) waiver simply stalled everything where it was, and now we're waiting for the NOx SIP call, hoping it will be a cure-all for all the woes, and frankly, we don't believe it will get Illinois into attainment on its own without additional reductions, so in a way, that it's actually discouraged the introduction of the most innovative, state-of-the-art facilities. And also, from the

regulatory assessments that we've seen on the air permits for existing facilities, the region is not looked at elsewhere in the country as a technology leader in terms of requiring the best and state-of-the-art pollution controls, which we think it should be doing in recognition of the severity of the ozone problem. In fact, we expect it's going to worsen considerably over the next decade here without firm regulations.

BOARD MEMBER FLEMAL: You don't believe that the NOx SIP call will be technology-forcing?

MR. SILVA: The NOx SIP call is going to get Illinois towards attainment of the-- I mean, in our mind, the NOx SIP call is just a tool to achieve assignment of the one-hour ozone standard and hopefully eventually the eight-hour ozone standard, but it will have a technology-forcing edge to it, but arguably, the 182(f) NOx waiver has-- will mute its-- the ability. I mean, we're going to see elsewhere across the upper Midwest a great deal more in the way of technology for some turnover in fleets and in sources, and we're going to see some fairly innovative strategies from some of the affected sources.

We saw a whole range of tactics and behaviors in

the existing ozone-- I'm sorry-- NOx trading market that serves the ozone transport region in the northeastern United States, which started in 1999 and entered its second year this year, and we've seen a lot of activity happening there, and a lot of the sources report to us and in trade publications that they're motivated in large part by the requirements of those programs. In our minds, that's kind of a lost opportunity. They're not going to recover ability because of the 182(f) NOx waiver.

BOARD MEMBER FLEMAL: I guess I still don't quite understand how the presence of the caps that occur under the NOx SIP call won't effectively demand that power generators generally apply some of the cleanest possible technology simply so that they can emit under the caps.

MR. SILVA: Well, in part-- and I'm kind of hedging here because I don't want to rob Brian Urbaszewski of the American Lung Association of a large part of his argument-- but one of the things that we find problematic about the way NOx allowances are being allocated under the NOx SIP call on several state rule-makings is that they're favoring the incumbent sources at the expense of future sources and that

cutting-edge technology.

If you're a coal-fired power plant and you're sitting on just enough allowances to squeak by, it's going to cost a-- four or five years down the road, when-- it's not that first or second year, but it's going to be the fourth or fifth year of the NOx SIP call where it's going to become increasingly difficult for new sources to get in. They're going to have to be out there looking and knocking off an incumbent source, whereas an incumbent source will have a fully amortized point source doing whatever it does, maybe manufacturing process, maybe generating electricity. They're going to have no incentive unless that new source that wants to get into the market is willing to outbid them, essentially, and we believe that in some cases, incumbent sources are simply going to hoard their allowances and they won't be willing to offer them into the marketplace. So in that sense, we believe that there's actually disincentive being created.

BOARD MEMBER MCFAWN: But that's not really related, then-- wait a minute. I think-- I lost my train of thought here. But you're saying, then, that that's because of the way that the trade program and the

allocation program under our SIP call is currently proposed. I thought your question went to a different

topic than that, the waiver. Excuse me. It took me a moment to think back, and we've jumped from topic to topic, but I think Dr. Flemal was saying, well, how does the waiver act as a disincentive to innovative technology?

MR. SILVA: The waiver essentially excuses or actually conditions NOx reductions within the affected area, which for our purposes is the Chicago non-attainment area and the rest of the Lake-- the affected Lake Michigan area under the waiver. Without that waiver, the technology-forcing requirements of Title I of the Clean Air Act would require offsets that would actually be valuable enough to existing sources that there would be an essential-- an incentive for them to turn over. And we would not see a wholesale turnover. It wouldn't be anything approaching 100 percent. We're seeing behavior in similar markets. About 20 percent of resources would turn over, but that would be enough for better, cleaner technologies to get a foothold.

And I'm drastically oversimplifying the-- that

argument, and this is one that I've been involved with for four or five years, and we've argued at length in various regulatory forms, but I'll be happy to take

another crack at it in the comments I'll actually submit to see if I can--

BOARD MEMBER MCFAWN: We would appreciate that. It is a difficult topic.

CHAIRMAN MANNING: Going on to a different one and maybe final one, if I might, we've-- you testified early in your comments about the growth of total electric demand in the country.

MR. SILVA: Yes.

CHAIRMAN MANNING: I think you said in 2020 we'd have something like another 300,000 megawatt capacity needed. Do you have any specific information regarding Illinois' place in all of that and what maybe Illinois' total electrical demand increases are going to be over the next several years?

MR. SILVA: The 2020 figure is based on the--

CHAIRMAN MANNING: It was 2020 instead of 2012? I'm sorry.

MR. SILVA: Well, no, out to 2020. The Energy Information Administration using a forecast model, which

they have adjusted and is subject to peer review analysis by some economists on a biannual basis, they tweak to recognize changes such as the restructuring in various states, changes in industry, ownership, the

entrance of new market participants and changes in demand across the country to essentially forecast. The snapshot that they offer is that 300,000 megawatts of new capacity will be required by 2020 at a minimum.

That model also points out that if you look to 2010, there's going to be an intermediate need of at least 100,000 megawatts. Now, using that-- their model forecasts that the overwhelming majority of that new capacity will be natural gas-fired. We-- There are a variety of other industry-- or in some of the proprietary analyses that indicate that there are slight differences and different estimates. It assumes that-- a fairly healthy economy with a load growth that more or less tracks future growth in gross national product.

Some people actually take issue with that, noting that there's actually been a slight decoupling in the energy intensity of the U.S. economy over the last few years. We don't know if that number is accurate. It serves as a useful planning benchmark. Unfortunately,

that model is very difficult to run on a regional basis, and we are aware that the reliability councils do some planning out to-- usually in ten-year increments-- a year ahead in ten-year increments for their own reliability planning purposes, but we haven't seen a

fairly sophisticated model that we have access to, and being a nonprofit-- a corporation or trade association may have access to information, so that might be a question you might want to put to some of the industry participants.

I did see in several instances in testimony submitted already examples for-- specifically for MAIN, but quite frankly, I spent about four days looking for similar data and could find it nowhere anywhere on the Internet without paying several thousand dollars for it.

CHAIRMAN MANNING: Thank you.

BOARD MEMBER KEZELIS: I have one more question.

CHAIRMAN MANNING: Go ahead.

BOARD MEMBER KEZELIS: As you know, California and Illinois are both in various stages of deregulation of their electric utility industries, and we've heard testimony over the last number of days about the effect of deregulation and the encouragement that it may have

caused to the peaker industry here in this state. What is your opinion or your organization's opinion with respect to the flurry of activity for peaker plants in the New England states? What precipitated that?

MR. SILVA: Part of it was that there was deregulation in quite a few of the states. That was the

driving mechanism. You can also go back to simply FERC with their Order 888 when they opened up the wholesale market, creating conditions where you saw nationwide interest in new capacity, and it really was the driver-- restructuring has been the ultimate driver behind this.

Also, frankly, unabashedly, we've been trying to hitch our wagon to the train, because we see this as an opportunity to recognize and capture some of the environmental externalities associated with electric generation. We don't think that people should be polluting air and water to generate electricity in the way they're currently doing, and we're maximizing the opportunity. In some cases we've been at a state level very successful. Massachusetts, for example, we're backing out of a lot of coal-fired capacity right now and replacing it with much cleaner natural gas generation. There's a renewed emphasis on energy

efficiency opportunities and such. So in a way, there are a lot of-- restructuring is the big driver, but there are also some interesting and in some cases fairly unique issues at hand. In some cases, some people simply hate incumbent utility.

BOARD MEMBER MCFAWN: If you will indulge me, I have a couple of questions, one that follows up on your

last comment. You mentioned just now that the northeast is moving towards more efficient energy production and also reduction in demand, and you mentioned that throughout your testimony, and can you tell me, what was the impetus in California and New York, and now you just mentioned the Northeast too, for this move toward energy efficiency and renewable resources and also shaving the need or the demand? Because other trade journals actually say that we've moved away from that.

MR. SILVA: Well, I guess there are-- incumbent electric utilities-- and if you look at the-- there are various articles tracking this-- it's really quite astonishing-- have largely abandoned energy efficiency measures, mainly because they were largely mandated programs by public service commissions across the country, and as-- for various reasons, including

restructuring, public service commissions withdrew those requirements, and the result was you've seen a wholesale kind of abandonment of energy efficiency.

BOARD MEMBER MCFAWN: That's why they moved away from that, but why did California go-- you mentioned that California went towards it.

MR. SILVA: California actually took the opposite tact. It actually goes back to a day starting in 1974,

with legislation. They actually decided that one of the things that they were going to pursue was trying to diversify the energy resources. It was-- '74, obviously it was a reaction in part to the energy crisis, and they felt that they needed to kind of diversify their energy portfolio, and energy efficiency was seen as an opportunity to lower demand and kind of soften the blow in the economy.

That actually-- And NRDC was very much engaged in that advocacy very early along, along with a host of other organizations. As much as we'd like to claim all the credit, there were a lot of very good people making some very good arguments, including the Union of Concerned Scientists, utility rate payers, Consumer Federation of America and others that pushed those very,

very hard in states like California, which frankly had very sympathetic regulators and legislatures that wanted to see those programs succeed and created the conditions for them to succeed.

BOARD MEMBER MCFAWN: And they were sustained over the last 25 years, then.

MR. SILVA: Yes.

BOARD MEMBER MCFAWN: Okay. On a point-- just a clarification point, you said that NRDC was concerned

about water use in single-cycle units. I've always thought that the single-cycles didn't cause that concern and it was the combined-cycles.

MR. SILVA: There-- A great many single-cycle combustion turbine projects that we've seen-- not just the few that we've looked at in Illinois, but in-- elsewhere across the country-- rely on once-through cooling. Water is used once for evaporative cooling at the inlet duct and then essentially discarded. That, depending on the size of the unit-- and remember, the single-cycle turbines, we've seen anywhere from 80, some projects have 1,000 megawatts, so the water demand is going to be quite dramatic. Some of the combined-cycle units we've seen actually rely on dry cooling where

there is essentially a process that involves a closed loop and one-time withdrawal of water.

So the demands-- even though the unit-- the technology's more efficient, in some applications the combined-cycle units can be hogs as well. They can be quite water intensive. So-- But there is-- there are technology options. They also do have some drawbacks. One of the things is that they usually suffer derates, meaning losses of efficiency, up to about 5 percent when you impose thrifty or water conservation measures on

those.

BOARD MEMBER MCFAWN: In your-- When you say the word "unit" in that context, are you talking about single and/or combined, the derate question?

MR. SILVA: The derate question would apply to both a single- or combined-cycle unit. Derate may not be the perfect term, but it would suffer a loss of efficiency of up to 5 percent. I think that is what I've seen most recently in literature.

BOARD MEMBER MCFAWN: Okay. One last question. You mentioned that the NRDC has sought in California and New York more comprehensive assessment of the need for the units and the siting and all that, and then you

explained to us about New York's way of siting units. Was the NRDC involved in New York adopting that approach, or how-- have you been successful in seeking this--

MR. SILVA: We lobbied for portions of amendments to the Article X law. It's my understanding that several NRDC staff-- and this law-- parts of this law have been enacted ten to fifteen years-- were integral in its formulation and also in its implementation. Some of them actually left when the law was originally enacted, went over to the New York State government, and

we now have to deal with them, and they don't always listen to our arguments, as the Athens project showed us that. We were pointing out that no-- this really should be somewhere else, and they were saying, no, they did everything they actually had to, and we're going to approve it.

BOARD MEMBER MCFAWN: And it was approved?

MR. SILVA: And it was approved.

BOARD MEMBER MCFAWN: Thank you.

MR. SILVA: Thank you.

BOARD MEMBER GIRARD: I just have a brief question to clarify the role of that state board in New York.

Does it then rule on the siting application for every new generating facility in the state, or does it only act as an appeal board if a local decision is contested by one of the parties?

MR. SILVA: I'm searching for the-- What I'm searching for is there's a threshold amount generation. Eighty megawatts.

BOARD MEMBER GIRARD: Okay.

MR. SILVA: So any unit over 80 megawatts, it goes through the New York Siting Board, and it actually coordinates with New York Department of Environmental Conservation in the issuance of the state public water

discharge permit and the Title V clean air permit for the facility, so the intention and driver behind the process is one-stop shopping, and that's when the issue of the local zoning-- well, the local zoning process happens in parallel. If it actually does come in conflict with the siting decision, there is an opportunity for judicial review, but it trumps local zoning decisions against approved projects.

BOARD MEMBER GIRARD: Could you give us your opinion on whether that's a model that would be useful in Illinois?

MR. SILVA: I think that for Illinois, it would be quite worthwhile to look at most of these processes that offer integrated evaluation. I don't think that it's necessarily the best approach. Another example that's immediately adjacent to you is Wisconsin, which has a long and a fairly well-- highly regarded among energy officials and energy analysts as having a very good process of evaluation.

Now, that doesn't mean that the-- it's going to be a great fit for Illinois' circumstances. I think when it comes down to it, frankly, you're going to have to pick and choose among what the existing programs are defined, what works best. I'm also saying that,

frankly, recognizing political realities, that a lot of the stakeholders in this process have interests that they're seeking to protect, and they will probably lobby quite forcefully to protect those interests.

So I am not suggesting that a comprehensive perfect siting law is the only thing you should be looking at, but I think the whole process of looking at good siting laws that offer an inclusive process for municipalities in particular that currently are feeling like they're getting battered by the current existing process, and

it's kind of football we have going on between, you know, the regulative and state agencies over whether or not they can stop this, whether or not they have the authority to make-- issue a moratorium or not.

I think it would be more useful actually seeing where you can actually collaborate and add some certainty, because the other thing is that many of these projects that you're looking at are worthwhile and will add a significant reliability to the system. The question is that, you know, which ones and how do you avoid adverse public health and environmental hotbeds.

BOARD MEMBER GIRARD: Thank you.

MR. SILVA: Thanks.

HEARING OFFICER JACKSON: Thank you very much, Mr.

Silva. We know you've come quite a distance to speak today, and we really appreciate it.

CHAIRMAN MANNING: Thank you.

MR. SILVA: Thank you very much for the opportunity.

HEARING OFFICER JACKSON: Thank you. Mr. Silva, you were going to submit public comments later on, right, as opposed to filing something?

MR. SILVA: Yes.

HEARING OFFICER JACKSON: Mr. Urbaszewski? Oh, hang on one second. Let's go off the record here, five minutes.

(Brief recess taken.)

HEARING OFFICER JACKSON: We're back on the record.

MR. URBASZEWSKI: My name's Brian Urbaszewski. I'm the Director of Environmental Health Programs for the American Lung Association. I'm also a board member of the Illinois Environmental Council, and I'm offering joint comments for both organizations.

As you know, the American Lung Association was founded in 19-- well, the American Lung Association of Metropolitan Chicago was founded in 1906, and it actually predates the American Lung Association national organization. We advocate for people with lung disease

in Cook County. That's over 14,000 people. The Illinois Environmental Council is a state-wide group representing several dozen environmental groups and acts as an environmental education resource and a legislative aid to those various groups around the state.

We are both actively involved in the policy question of how to reduce power plant emissions in the state of Illinois. We have been vocal in a current

rule-making before the board that will mandate significant reductions in NOx emissions from large electrical generation units state-wide. Likewise, we believe significant pollution reductions from existing and future power generation facilities are warranted to protect the health of Illinois citizens.

I'd like to again support the testimony submitted a while ago by Mr. Keith Harley before this board-- I believe that was at the Lake County hearing, but I can't be certain on that-- but stating again that the NOx waiver for the Chicago Metro area should be repealed. We believe Governor Ryan has it in his power to do this. The State of Illinois asked for the NOx waiver several years ago based on preliminary airshed modeling, and USEPA granted it. However, this occurred prior to the call for significant NOx reductions in Illinois and

19 other states under the provisions of the NOx SIP call from USEPA.

Due to improved regional ozone modeling and the requirements of the NOx SIP call, Illinois will now be requiring all EGU's in Illinois, regardless of geographic location in the state, to significantly reduce ozone season NOx emissions. Illinois EPA has

also proposed significant NOx reductions from power plants state-wide more than a year before the SIP will be in effect, largely due to commitments needed to achieve NOx emissions to get the St. Louis Metro East area into attainment with the one-hour standard. That would occur in 2003. The NOx SIP call would occur in 2004.

The state is being logically inconsistent in retaining the NOx waiver. The waiver is premised on the contention that the NOx reductions in the-- that NOx reductions in the Chicago ozone non-attainment area, the six-county region, would increase ozone levels due to a NOx disbenefit. Yet in constructing the proposed Illinois NOx rule for electrical generation units, the state is requiring EGU's within the Chicago ozone non-attainment area to reduce NOx emissions as well as EGU's located outside this area. The reasoning used in

granting this conditional waiver is moot if reductions within the area are being required in order to achieve regional attainment with the one-hour ozone standard.

The continuing presence of this waiver is precisely why peaker simple-cycle unit power plants are counted as minor NOx sources in the Chicago ozone non-attainment

area when they emit less than 250 tons of NOx per year. For the same reason, combined-cycle steam generation plants could be treated as major sources only when they emit more than 100 tons of NOx per year. There's a difference between the way federal law treats a steam unit or steam-powered unit versus a combustion turbine unit. That accounts for the difference between the two numbers.

Absent the waiver, any power plant emitting more than 25 tons a year of NOx would be required to meet stricter major source standards. New major sources of NOx within the Chicago non-attainment-- ozone non-attainment area would therefore be required to meet lowest achievable emission rates, or LAER, for NOx and be required to submit offsets in a ratio of 1.3 to 1, as stated in the Clean Air Act Amendments of 1990.

The proliferation of these additional NOx sources, whether classified as major or minor, will invariably

erode benefits achieved through the-- an Illinois cap and trade program for NOx under the NOx rule. As these projects will require NOx credits, all these credits-- all these units that are going in will require NOx credits under the trading rule, the State of Illinois

could become a net importer of NOx credits in a multi-state trading arena. As such, the State would in actuality be emitting more NOx than assumed in the airshed modeling which is being used to assert that Illinois will meet the one-hour ozone standard requirements. Simply, with more NOx being emitted in the state, it is likely that ozone levels will be higher than they otherwise would be and as they are assumed in the attainment model.

In addition, ozone has been shown to be dangerous even at levels below the one-hour standard, and this fact prompted the USEPA to set a tighter eight-hour ozone standard in 1997. Industry has fought this standard in litigation, but even the courts have noted that a scientific basis for establishing a tighter standard has been more than adequately proved. The main question in the case, the court case, is whether congress is allowed to give USEPA the authority to set scientific health standards and not whether a real

public health need for such a standard exists. We expect the standard will be upheld when oral arguments are made before the U.S. Supreme Court next month, starting next month.

The vast majority of new peaker or simple-cycle combustion turbine power plants in northeastern Illinois are being permitted for NOx emission rates in the range of 15 to 25 parts per million, although there is one project that ranges as high as 42 parts per million. There are similar simple-cycle facilities in other states that are being permitted at levels as low as 3.5 parts per million. These are achievable rates and are potentially several times lower than what is being permitted in Illinois. This is the LAER, the lowest achievable emissions rate, target generators in northeastern Illinois should be meeting for simple-cycle turbines.

We should not be repeating past mistakes in approving new power plants when we know with certainty that these new power plants could and should be required to meet significantly lower NOx levels than those at which they are currently being permitted. By not asking for the removal of the waiver, the Governor is ignoring this problem and activity discouraging new power plants

from meeting tighter and achievable emission standards.

I'd also like to talk about energy efficiency and renewable energy. Energy efficiency and renewable

energy sources could provide a significant portion of electrical demand in Illinois. Encouraging the wise use of electrical power through the use of more efficient lighting, climate control and mechanical systems would negate the need for a portion of new power generation and the associated-- and remove the need or remove the presence of associated air pollution, noise and water demands due to fuel combustion at electrical generators. For unavoidable growth in electrical demand, greater use should be made of nonpolluting or less polluting renewable sources of electricity, and I would rely on the definition that Mr. Silva gave for renewable sources.

The State apparently wishes to gift significant NOx allocations under the NOx SIP call, allocations worth significant dollars in the market, to the oldest and most polluting facilities in the state. Very few NOx allocations are also being set aside for cleaner, although potentially unneeded, new fossil-fueled generation facilities, largely natural gas peakers and combined-cycle plants. At this point in time, it

appears the State does not support NOx allocations for energy efficiency and renewable energy products, even

though such projects-- sorry-- renewable energy projects-- that's a typo-- even though such projects would actively displace NOx emissions in the state. As Mr. Silva said, energy efficiency is the best system. It means you don't have to burn fuel and create the pollution to get the electricity you need.

We have actively called for a set-aside in IEPA meetings and before the board in hearings on the EGU NOx rule. We do so here again, as such a strategy could displace unneeded and polluting additional electrical generation units in the state.

The board is charged with determining whether peaker power plants need to be more strictly regulated than Illinois' current air quality standards and regulations provide. Even though it can be convincingly argued that natural gas-- and has been convincingly argued that natural gas power plants are significantly cleaner and produce far fewer emissions per unit of electricity produced than existing coal plants for a number of pollutants, this should not be cause for celebration, and I include both simple-cycle and combined-cycle as being cleaner than existing coal

generation. This should not be cause for celebration.

Nor should this fact lead to a dismissal of the question as to whether new peaker power plants need to meet regulations far more stringent than these existing coal plants. We believe stronger standards are warranted, particularly in ozone non-attainment areas where we have an existing problem and will continue to have a problem under the eight-hour ozone standard.

Peaker power plants, simply because they are being built after 1977, are already meeting more stringent air quality regulations than the coal plants. All coal plants in Illinois are already grandfathered out of ever meeting LAER or even the lesser best available control technology performance standards plants built in recent years have had to meet, and anything built since 1977 that is going to be a major source would have to meet BACT and LAER.

The real question the board should be examining, whether as part of the charge from the Governor or of its own initiative, is why so much deadly pollution continues to pour from the existing fleet of largely coal plants.

Fine particulate matter is composed of a number of tiny particles, both solid and liquid aerosol, that have

a diameter of less than two and a half microns. Inhalation of fine particles are associated with the following health impacts: Upper and lower respiratory infections, asthma attacks, development of chronic bronchitis and, most importantly, premature deaths. Due to these public health threats, USEPA established a fine particulate standard in 1997 based on the available medical evidence at that time. New studies done in subsequent years have validated the health impacts established in prior studies.

Elevated levels of fine particulate matter are a problem in northeastern Illinois as well as several downstate areas. In 1999, the Illinois EPA collected accurate annual samples of ambient levels of fine particulate matter for the first time. Last year, that annual standard set by the USEPA was exceeded at twelve of thirteen monitors in the six-county Chicago region, four monitors in the Metro East region, as well as at monitors in Decatur, Springfield, Moline and Peoria. Nationally, fine particulate levels cause over 60,000 premature deaths annually, including an estimated over 3,000 deaths annually in Illinois.

Research has shown that 30 to 48 percent of fine particulate matter in northern Illinois is composed of

sulfate particles. Sulfates are the oxidized products of sulfur dioxide, a product emitted from power plants burning coal. Illinois coal-fired generation facilities, in fact, remain the single largest industrial sources of sulfur dioxide in Illinois, accounting for over 75 percent of sulfur dioxide emissions from all stationary sources.

In addition, two of the most impressive national studies on particulates, the 1993 Harvard Six Cities Report and the 1995 American Cancer Society Study, have been dismissed by industry as junk science in recent years. However, this past July, the Health Effects Institute, an institution jointly funded by USEPA and industry to act as a neutral arbitrator in such disagreements, announced the results of their reanalysis of these landmark studies. The HEI found that the studies were valid and surprisingly found slightly higher associations between particulate levels and premature deaths than the original authors claimed. Although it is appropriate to mention that this PM 2.5 standard is in final litigation and is now before the U.S. Supreme Court, the federal Court of Appeals for the D.C. Circuit has accepted the fact that the science behind the standards-- the standard verifies that fine

particulates are both dangerous and deadly.

It is clear that we have-- already have a serious air pollution problem due to the emissions from coal plants in Illinois. The State should ensure we do not create a similar problem for the future by allowing newer plants to be permitted at higher emission levels than are prudent and possible. We should hope that the State would not repeat this mistake of continuing the grandfather status of old facilities and make new gas facilities as clean as possible. Likewise, the board should begin the process of examining solutions to the problem of high PM 2.5 levels in Illinois, especially as they relate to power generation.

In conclusion, we believe Governor Ryan should officially request USEPA repeal the NOx waiver; new generation facilities should meet LAER standards in the Chicago ozone non-attainment area; the State of Illinois should support energy efficiency and renewable energy by including the 10 percent energy efficiency/renewable energy set-aside in the Illinois NOx SIP call rule, as suggested by USEPA; the existing fleet-- and finally, the existing fleet of older coal-fired power plants significantly contributes to unhealthful levels of airborne fine particulate matter in the areas where the

majority of Illinois citizens live.

Such high air pollution levels, tied to thousands of premature deaths in Illinois every year, ought to be addressed through board-established limits on sulfur dioxide emission from electrical power generation facilities.

Thank you. I'd be more than happy to answer any questions you may have.

HEARING OFFICER JACKSON: Thank you, Mr. Urbaszewski. I will note for the record that you provided a copy of your comments, and we will mark those as American Lung Association Exhibit 1.

MR. URBASZEWSKI: Also for the Illinois Environmental Council.

HEARING OFFICER JACKSON: Right, right.

MR. URBASZEWSKI: I'm afraid Mr. Silva drained all the questions out of the board.

BOARD MEMBER FLEMAL: We're just warming up.

CHAIRMAN MANNING: I do. I'll start. One of our speakers in Lake County called for the State to have an energy-- I think you called it energy strategy, and I assume you're-- some of your remarks are along that same vein. In terms of energy reductions and energy efficiencies that you're calling for, does either IEC or

American Lung Association have any specific ideas in terms of programs or incentives that they would urge upon the State to look into?

MR. URBASZEWSKI: Well, the one-- I-- as for broad strategies, I probably couldn't provide that right now. One important building block towards a comprehensive strategy and a way to encourage energy efficiency/renewable energy is to make it part and parcel of the NOx EGU rule that's before the board right now. We've advocated for this for well over a year, before the Illinois EPA proposed or gave language to the board for that rule. I've continued to advocate for that in board hearings on that rule.

USEPA has put forth guidance that suggests that a set-aside be pulled out of the existing EGU budget and set aside for energy efficiency and renewable energy projects. Anything that is not used for those projects would go back to the existing EGU pool, so if it's not used, it's not permanently lost to existing polluting facilities.

However, energy efficiency or renewable energy produces electricity or saves electricity and prevents pollution from going into the atmosphere and causing ozone problems downwind. Since these allegations have

been essentially monetized, a credit is worth money on the open market. You can buy and sell it. If people are spending money to install an energy efficiency system, they are preventing pollution from going out of a power plant somewhere at the other end of the line. The people who are spending the money to save that electricity should get the monetized value of that credit. It shouldn't be going to a coal plant or gas plant that doesn't need that credit because it didn't emit the pollution. We believe that that system should be instituted.

BOARD MEMBER MCFAWN: Is that the one that's-- Are you referring to the third item under your conclusion?

MR. URBASZEWSKI: Let me see what the third item-- there's so many numbers there. Yes. And I should also say that Mr. Dan Rosenblum from the Environmental Law and Policy Center is planning to submit extensive comments, written comments, in the board hearing on the EGU NOx rule on specifically this subject. I just touched upon it in my testimony for the board previously.

BOARD MEMBER FLEMAL: I want to say first of all, hello, Brian. We're seeing you on a regular basis these days. For those of you who may not be aware, we are

conducting, simultaneously with these hearings, hearings on a proposal that the agency has given us to implement the NOx rule, and Mr. Urbaszewski has been an active participant in that proceeding as well and has offered us some good perspective on that additional rule.

Let me pose to you a scenario and just get your reaction on it. The scenario is this: That what we do with the NOx waiver or what we do with imposition of LAER or even BACT standards on power plants is largely irrelevant because with the severe cap that the NOx SIP call imposes on us, all of the objectives of LAER in fact are going to be practically met anyway. Right or wrong?

MR. URBASZEWSKI: Well, as I said, there are numerous plants that are being permitted out there right now that have emission rates, and there are various peaker plant proposals out there that are being permitted at levels far higher than are achievable. If there was an understanding that the NOx SIP call was going to put a lid on this and we were going to be-- we as, you know, someone who would be building a peaker power plant would say, wow, we're going to have to meet LAER, why aren't they being permitted at those levels?

I--

BOARD MEMBER FLEMAL: Your concern is the fact that somebody's going to actually be emitting at the level they're permitted.

MR. URBASZEWSKI: Correct. Why would they ask for that if they weren't going to use it?

BOARD MEMBER FLEMAL: Well, I guess there's some possible answers to that, but if in fact-- well, if we-- if in fact we can rely on the NOx SIP call putting this cap on emissions, which for large electrical generators would be something just in excess of 30,000 tons per year, way below what current emissions are, is it not possible that-- permit limits aside, that none of the emissions will occur at those levels?

MR. URBASZEWSKI: Well, there is-- Okay. Let me see if I can separate out. If I take the coal plants getting an allocation and emitting their allocation as a given and shunt that off to one side, we have all the existing new facilities that have been permitted, peaker and combined-cycle, that as you know are vastly oversubscribing the new source set-aside by a factor of, I don't know, I think six or seven to one. There's six or seven times as much need as there are actual

allocations that the State can give out, but those units that are going to-- are still going to operate, they're

going to be forced to buy credits on the market, and if you assume that the existing coal plants are going to use their existing allocations to cover their own emissions and there's only going to be a portion of the-- the new source set-aside is only going to cover a portion of all the new units that are coming on line, we're going to have to import NOx credits into this state, which is to say we're going to exceed what our NOx budget is, but because you have a multi-state trading area, that's allowed.

Now, the NOx modeling that's looking at what the ozone levels are going to be in Chicago at some point in the future are saying, we're assuming that what's going to be emitted in Illinois is only what Illinois is getting now. I believe that's not true. I believe that we're going to have significant importation of credits to cover the emissions that are coming out of these plants. Now, if you say that rather than having a peaker plant emitting at twenty-five parts per million, it's going to be required to emit at three and a half parts per million, that means the importation goes

significantly down, meaning less NOx emitted actually in Illinois and less ozone in the Chicago non-attainment area. Does that answer your question?

BOARD MEMBER FLEMAL: You just did.

MR. URBASZEWSKI: That's what we had hoped.

BOARD MEMBER FLEMAL: Good.

BOARD MEMBER MCFAWN: But wouldn't you think that perhaps the power plant-- peaker power plant in your example would choose to overcontrol maybe down to 3.5 parts per million so that it doesn't have to rely on finding credits to buy or paying the price for them?

MR. URBASZEWSKI: We're not seeing that, though. They're being permitted at--

BOARD MEMBER MCFAWN: I know they're being permitted, but won't the market force possibly change that example to where they will overcontrol voluntarily?

MR. URBASZEWSKI: I think for that-- for the economic vision of that peaker plant owner, it would probably be cheaper to buy credits on the open market, and as you've said, as you've seen before the-- in the NOx hearing, that the costs of those credits are coming down as people understand how the market works and how-- you know, that's the whole idea behind the market. It's

going to lower the cost of compliance.

My beef with that is is that I'm not buying that NOx credit, I'm not emitting it, but I'm breathing it, as are the hundreds of thousands of people with hung

disease ultimately going to be breathing the ozone that NOx creates.

BOARD MEMBER FLEMAL: But nonetheless, barring some significant import of allowances, we would still be capped at that 30,000 tons, whether it comes from a coal line, power line, a peaker power plant or any other. Isn't the net effect on the environment, with that one exception of whether or not we get into a significant import market, it is irrelevant as to where the-- what the source is?

MR. URBASZEWSKI: I'm not too sure I follow your question.

BOARD MEMBER FLEMAL: If the environmental impact is measurable by the total amount of emissions and that emissions is capped, does it not make-- or is it irrelevant where the emissions are coming from, what type of owner they're coming from, old or new, base-load, peaker, whatever?

MR. URBASZEWSKI: For the purposes of ozone

generation, yes. However, you have to put the caveat on it that if you have an existing coal plant and an existing natural gas-powered plant that are essentially for all other respects equal in size, etc., capacity to generate, you're going to see a significantly lower NOx

rate with the natural gas plant. You're also going to see a very, very significant drop in sulfur dioxide emission levels. You're also going to see significant drops in the amount of mercury emitted from that plant.

There's an interesting study where a plant in southern-- south central Illinois, the Grand Tower plant-- it's owned by Ameren-- is repowering from coal to run on natural gas, and they're actually increasing the capacity of the plant. It's going to put out more megawatts than it does or historically has. And if I remember correctly, the amount of sulfur dioxide emitted from that plant is going to go from the neighborhood of 20,000 tons a year down to approximately 20, 2-0, tons per year, so in addition to the NOx and the ozone effects, there are secondary effects.

BOARD MEMBER KEZELIS: The name of that facility again, please?

MR. URBASZEWSKI: I think it was Grand Tower.

BOARD MEMBER KEZELIS: Brand Tower.

MR. URBASZEWSKI: Grand.

BOARD MEMBER KEZELIS: Grand. For the court reporter. Thank you.

BOARD MEMBER MELAS: Brian, getting off the topic a little bit, I appreciate very much those points of your

conclusion. I'd like to see, do you have any comments or any thoughts on the specific charges that the Governor gave us in setting up these hearings, that we meet stronger site requirements for peaker plants, etc., all those points that were laid out by Claire at the beginning of the-- do you think you could comment on any of those?

MR. URBASZEWSKI: Well, from my perspective, what I know most about is the air pollution health effects.

BOARD MEMBER MELAS: Right.

MR. URBASZEWSKI: I mean, that's what I tailored my comments to. And I guess the one point that I would say is that, yes, we should have tighter standards for newer power plants, and it largely revolves around the continuing existence of that NOx waiver, which in reality shouldn't be there. The State in getting the waiver said we don't need to have NOx reductions within

the Chicago ozone non-attainment area, because if you reduce NOx in that six-county area, you actually make ozone go up.

Well, now, under the NOx SIP call rule, we're seeing reductions being required from power plants state-wide, everywhere, whether you're in the ozone non-attainment area or not in the ozone non-attainment

area. Why would the State be doing that for attainment reasons if it wasn't reducing ozone, if it wasn't necessary for attainment of the ozone standard? Likewise, why would USEPA be requiring the State to do that if it wasn't needed for attainment of the ozone standard? So to us, it just doesn't make sense that that continues to exist out there, and it's just sort of going on inertia, but we believe that's one thing the Governor can push along and potentially solve part of the problem of bringing a lot of new capacity into the region by requiring the capacity that is added to the region meet much tighter standards.

BOARD MEMBER MELAS: Okay.

BOARD MEMBER GIRARD: I have a question, Brian. Thank you. My question is about your second conclusion, which deals with new generation facilities meeting LAER

standards in the Chicago ozone non-attainment area. We have two non-attainment areas in the state. The Metro East area is the other one. Did-- Are you not making the same conclusion for the Metro East because it's a different level of non-attainment?

MR. URBASZEWSKI: I don't have to. The NOx waiver does not affect Metro East St. Louis non-attainment area, and so facilities built in the Metro East area are

already required to meet LAER, and I believe there's at least one combined-cycle facility that is proposed for that region. There may be more. They are going to be required to meet LAER standards.

BOARD MEMBER GIRARD: Thank you.

BOARD MEMBER MCFAWN: I had a question about-- it's a factual question.

MR. URBASZEWSKI: Sure.

BOARD MEMBER MCFAWN: You mentioned that there are 3,000 premature deaths annually in Illinois because of pollutants other than NOx, but is that--

MR. URBASZEWSKI: Fine particulates.

BOARD MEMBER MCFAWN: Exactly. And I was wondering, is that number taken from your American Cancer Society study?

MR. URBASZEWSKI: It's originally derived from a study done by NRDC several years ago. It has been discounted. I believe the original number was a range of 3500 to 5,000 deaths state-wide. It was an estimate. And because of some overestimations on their part, we discounted it to say more than 3,000. The corresponding number to the Chicago area is about 2,000 out of that 3,000.

BOARD MEMBER MCFAWN: If we wanted to review that

article, could we?

MR. URBASZEWSKI: Sure. It's actually a report.

BOARD MEMBER MCFAWN: A report?

MR. URBASZEWSKI: It's a very thick report, actually. I can get the title for it. I'd also like to point out that this is based on a number that said 60,000 deaths. There's a professor at Harvard School of Public Health who has said that it's potentially as high as 70,000 premature deaths, so I just wanted to let you know that I've discounted this to a very conservative estimate.

BOARD MEMBER MCFAWN: For us to be able to cite to that number, it would be very helpful for us to review this--

MR. URBASZEWSKI: I can find that.

BOARD MEMBER MCFAWN: Thank you. The report, and if it was you that-- the Chicago chapter that discounted it or if it was discounted by another report.

MR. URBASZEWSKI: I can find that information for you.

BOARD MEMBER MCFAWN: Thanks. I had-- Just walk me through this a little bit. If in fact the waivers was repealed, where we voluntarily ask for it to be withdrawn, then the requirement for LAER would come into

being for major sources, now defined at 25 tons per year.

MR. URBASZEWSKI: Correct.

BOARD MEMBER MCFAWN: And then you also mentioned the offsets in a ratio of 1.3 to 1. Is that a critical element in the scheme to the American Lung Society?

MR. URBASZEWSKI: Yes, and it's operated somewhat separately from the NOx SIP call trading scheme. It preexists that. This was written in the later half of 1990. The general idea behind the offsets is that if you're going to build a new major facility in a non-attainment area, you have to draw the permission to emit NOx in that area at 1.3 times what you would be

actually emitting, so the idea is there's a net drawdown of the total NOx being emitted in that non-attainment area.

BOARD MEMBER MCFAWN: Okay. I thank you for that explanation, and I somewhat understand the offset requirement, but what I wondered is how important is that element to the American Lung Society? Because we've been talking about LAER and BACT, and other states have adopted BACT even when they're not required to, and the same could be done with LAER possibly, so I wonder if you could just address this.

MR. URBASZEWSKI: We believe it's very important. It's something that's written into the Clean Air Act. It should be being done right now, but because of this inertia of the NOx waiver-- which is actually only granted as a temporary fix before the final NOx SIP call was announced. It doesn't only affect peaker plants. It affects any large major source of NOx, large industrial facility or, you know, anything else that would be emitting a large amount of NOx, so it's not exclusively linked to this. We believe all major sources should be meeting these standards. And again, the same goes for LAER. Any large facility that's

coming in emitting NOx, peaker or some other type of industrial facility, should also be required to meet those standards.

BOARD MEMBER MCFAWN: Can I ask a real fundamental question that I probably should know the answer to?

MR. URBASZEWSKI: I hope I do.

BOARD MEMBER MCFAWN: The waiver, does it have to do with SO2 emissions?

MR. URBASZEWSKI: No, no. It's only exclusively connected to NOx.

BOARD MEMBER MCFAWN: That's what I thought. Okay.

MR. URBASZEWSKI: And it's related to the ozone

problem.

BOARD MEMBER MCFAWN: And the definition of major source, then, is the 25 tons for SO2?

MR. URBASZEWSKI: For NOx.

BOARD MEMBER MCFAWN: For NOx. And a major source of SO2 in the non-attainment area is defined at what level?

MR. URBASZEWSKI: I'm not too sure.

UNIDENTIFIED AUDIENCE MEMBER: There's no non-attainment areas.

MR. URBASZEWSKI: We're not-- We aren't--

UNIDENTIFIED AUDIENCE MEMBER: There are no non-attainment areas.

BOARD MEMBER MCFAWN: Oh, that's correct. Thanks.

MR. URBASZEWSKI: Particulate matter is a secondary pollutant, like ozone, and it's derived from SO2.

BOARD MEMBER MCFAWN: Sorry. Thank you for that.

MR. URBASZEWSKI: Even though SO2 itself is a criteria for--

BOARD MEMBER MCFAWN: I lost sight of the SO2 attainment. Forgive me.

MR. URBASZEWSKI: You're very welcome.

BOARD MEMBER MCFAWN: Thank you.

CHAIRMAN MANNING: For purposes of the record, the

IEPA indicated that they had indicated before to us that we're in attainment for SO2.

BOARD MEMBER MCFAWN: Lost sight of it.

HEARING OFFICER JACKSON: Thank you, Mr. Urbaszewski.

MR. URBASZEWSKI: Thank you for giving me the opportunity to speak to you.

CHAIRMAN MANNING: Thank you.

HEARING OFFICER JACKSON: We're going to skip around a bit on our list. The two next listed

participants, Susan Zingle and Carol Dorge, will be available tomorrow morning, so we're going to hold off on calling them forward at this time and proceed with Mr. Bud Nesvig. Before you begin, I do want to note for the record you've handed me three documents, and I think we've already had one exhibit entered on your behalf. Let me double-check. Two, actually. So what we will do, the first document you've handed me I guess is-- are your comments for today?

MR. NESVIG: That's right.

HEARING OFFICER JACKSON: The comments will be marked as Nesvig Exhibit 3. Second document appears to be a hard copy of a Powerpoint presentation. It looks to be entitled "Elwood Energy II and Elwood Energy III,"

and we will mark that as Nesvig Exhibit 4. And then finally, a one-page document. At the heading at the top of the document it reads, "Figure 1, U.S. Electricity Imports and Exports 1995-1999," and that would be Nesvig Exhibit 5, and I-- you can go ahead and begin your comments, and I'll pass these documents out to the board.

MR. NESVIG: Thank you.

HEARING OFFICER JACKSON: Thank you.

MR. NESVIG: Thank you for listening. I come from a little different interest than polluting as such, but first, my name is Nesvig-- that's N-E-S-V as in Victor, I-G as in George. My first name is Elliot, E-L-L-I-O-T. I am a licensed professional electrical engineer, retired. My main reason for being here is to emphasize the fact that I did get the opportunity to go through the Elwood site, which all of you had that opportunity.

In going backward as reminders, ComEd sold their coal-fueled electric generating plants; approximately 55 percent of the normal needs, about 13,000 megawatts of capacity. The coal plants are still operating and polluting.

ComEd has a four-year declining usage contract with

Mission Energy, which is owned by Southern California Edison, to purchase the output of the coal plants. So ComEd must add at least 3,000 megawatts of sustainable capacity per year during these four years. Plus, they need a source of summertime periodic capacity of about 5,000 megawatts per year, depending on how hot it is in the summertime.

I attended the IEPA permit meeting for Elwood II

and III. Prior to the meeting, I was allowed to tour the Elwood Energy I site, as did this board on September 14, 2000. I was impressed. The four operational gas-fired peaker turbine generators are the larger peaker units that I have ever seen. Each of the four can produce 150/172 megawatts of electricity. The higher amount of 172 is reached when the outside temperature is at or below 60 degrees Fahrenheit or water spray is used to cool the incoming air. The output of the generator is connected to a high-voltage transformer and then to a 345,000-volt ComEd transmission line. This is a major effort.

These four units can produce 600/688 megawatts, which is more than half the output of a nuclear power generator. This is not what we formerly called a peaker generator. This is all new General Electric equipment

packaged into impressive units. Probably General Electric because they are in the finance and credit business came up with the 75 to 100 million dollars needed to fund the equipment and installation. Also, which has been passed out in the data on Elwood I and proposed Elwood II and III, which was presented that evening.

During the tour, I was startled to find the Elwood control center manned by four individuals, and this was late September. Were they waiting for requests for power? I understood that these peaker plants would only be used in the summer on 90 degree plus days.

At the IEPA meeting, there were approximately fifteen people, three from IEPA, about ten or eleven representing the owner, and myself. It was suggested that as I had no financial or employment interest in Elwood Energy or the Illinois government, I helped to legitimize the small permit hearing. It lasted about 30 minutes total.

The IEPA permit hearing was to finalize the issues of Elwood II and III construction permits. They would add five more single-cycle gas turbine generators, 750 to 860 megawatts in addition to the 600/688 already operational. The total at this site would then be 1350

up to 1548 megawatts, and 1548 megawatts would be 50 percent more than a ComEd nuclear unit. This is a lot of stuff. But on top of that, as I'm sure you know, there has been permitted for that site but not built is twenty-- no, is ten 250-megawatt units, so if they decide to construct them, there will be 2500 more

megawatts of electrical power available from that single site. As I said earlier, that's a lot of stuff. With more than 19 sites to fill with peaker units, why are you doing this?

Other questions: What happened to the idea of seeking alternatives before polluting? Two alternative electric power sources are Mexico and Canada. Both have fuel and already sell power into the United States. Attached is the 1999 import/exports with Mexico and Canada.

Have you determined that the ComEd transmission system is accepting electric power from all present and future peaker plants, accepting electric power from Mission-- formerly ComEd-- coal plants which may be selling all or part of their output out of state, polluting Illinois and benefiting other states, and allowing Unicom or ComEd to continue to sell-- to send electric power by contract to other users, such as

utilities in state and out of state? They are in the wholesale business. Why can't we be told what Unicom and ComEd and our political leaders have planned for us in the way of electric power? Thank you.

HEARING OFFICER JACKSON: Thank you, Mr. Nesvig.

Are there any questions? Thank you very much.

MR. NESVIG: Thank you.

HEARING OFFICER JACKSON: We appreciate your interest in this proceeding.

MR. NESVIG: Thanks.

HEARING OFFICER JACKSON: Sure. Let's go off the record for one brief second.

(Brief recess taken.)

HEARING OFFICER JACKSON: Okay. Back on the record. We will go ahead and take testimony from Carol Dorge at this point on behalf of Lake County Conservation Alliance. At this point it looks like Ms. Dorge will be our last presenter this afternoon, and then tomorrow we will start with Ashley Collins, Susan Zingle, and then conclude with the Illinois Environmental Protection Agency. They'll have a panel of speakers here tomorrow.

Okay. Before we start, let me just identify these documents that you've given me. First of all, we have

your comments, correct?

MS. DORGE: Correct.

HEARING OFFICER JACKSON: Okay.

MS. DORGE: You have-- The first group of documents

includes my comments from September 7.

HEARING OFFICER JACKSON: Correct. I was just checking to see if we had any other exhibits from you in this proceeding yet, and I don't think we do, so we will mark the first set, being your comments, Dorge-- D-O-R-G-E-- Exhibit 1. Dorge Exhibit 2 will be the handout entitled "Peaker Natural Gas-Fired Turbines Permits Issued." Dorge Exhibit 3 will be the handout entitled "Peaker Natural Gas-Fired Turbines Permits Issued -- PSD." Whenever you're ready.

MS. DORGE: Thank you. My name is Carol Dorge, and I'm an attorney representing the Lake County Conservation Alliance. I presented an initial set of comments--

BOARD MEMBER MELAS: Slow down.

MS. DORGE: -- on September 7.

HEARING OFFICER JACKSON: Thank you.

MS. DORGE: As I struggled with the additional thoughts I had on the subject of peaker plants and the question of the many tools and programs we think we have

to address environmental concerns, at least in your area, I kept coming back to the thought of these tools are not working. They cannot be working if 30 years

after the Clean Air Act was adopted, it will still be non-attainment for ozone. They're not working if IEPA is supposed to be issuing permits within 180 days of receiving a complete application and routinely asks for more time.

This begs the question of when an application is complete, and we will have more on that subject later. They are not working if they allow sources with truly major impacts to be permitted as minor sources. These merchant power plants all look major and should be treated as major, and I will have more on that later.

The sources can theoretically be permitted to emit NOx at levels of about 75 parts per million under a 20-year-old new source performance standard when they can easily achieve 15 parts per million or less with widely utilized technology.

The tools are not working if they allow the permitting of these sources without reliable manufacturers' data on emissions of conventional pollutants and toxins during routine operations and start-up. They are not working if 40 some permit

applicants can threaten a large increase in emissions of NOx and other pollutants in Illinois without securing

offsets and their combined impact is not addressed.

They are not adequate if they allow major sources to be permitted without utilizing state-of-the-art catalytic technology, which we argue is truly LAER. They are not adequate if they allow the kind of variation and quality of information that we have seen in the applications that we have reviewed. They're not adequate if citizens are denied a meaningful opportunity to comment in the permitting process, and that includes providing access to manufacturers' performance data and the calculations that these permits are being based on and to a timely appeal of granting of a permit. They are not adequate if we do not really know who is going to own and operate a facility and who will assure that it's properly decommissioned.

The costs to IEPA and the public in terms of dollars and time suggest that there must be a better way. You could even argue that the public anxiety caused by these proceedings has its own human health implications.

We believe a number of things are required in the context of air permitting, and I would like to refer you

to my comments of September 7, which is in the packet

marked Exhibit 1. On pages 3 and 4 we list items of information we had asked that the manufacturers be subpoenaed to provide this information. It is not being supplied in the permit applications, and we feel that it's critical information and that permit decisions should not be made without this very critical information, particularly data on emissions of toxins and emissions during start-up.

We are also asking for a better definition of what constitutes a complete application. We've identified this information which we believe should-- is necessarily part of a complete application. At this point I would like to demonstrate the need for this information by walking you through some application materials.

HEARING OFFICER JACKSON: Slow down just a little bit, please.

MS. DORGE: As many of you know, I have been practicing law in the environmental area for about 20 years. I also have a master's in environmental engineering and worked as an engineer in the Air Enforcement Branch of the EPA. I represented the LCCA in two Zion peaker plant proceedings, Carlton and Zion

Energy, which by the way are across the street from each other, and also worked closely with Scott Evans of Clean Air Engineering, who provided technical assistance in those proceedings and who's been involved in the permitting of many of these facilities on behalf of the applicants.

I'm going to discuss portions of the Carlton application, which was presented as a synthetic minor. We also have many concerns involving Zion Energy, and I'll touch on those. Zion Energy is a much larger facility being permitted as a major source. I've also prepared a copy of the application, one copy for the record, which includes the original application to permit three simple-cycle GE turbines dated December 1999, a supplemental application for an alternative configuration with six simple-cycle GE turbines dated March 2000, and the applicant's calculation of emissions during start-up and emissions of toxins which was presented for the first time at the public hearing on August 14. IEPA also requested modeling, which has not been included but which was submitted May 25, 2000. The emission calculations were based on internal Mostardi Platt data that was claimed to be proprietary and was not substantiated anywhere on the record.

The second document in the packet I've handed you includes some of my notes on what we felt was missing from the application. I'm going to go through some of the things that we felt were essential and that were missing. First--

HEARING OFFICER JACKSON: And this is in Exhibit 1?

MS. DORGE: This is Exhibit 1 titled "Notes 10-4-00." The owner/operator of this facility is identified as Carlton, Inc. Carlton, Inc., is a home-based business located at John Notch's home in Wilmette, and I checked the phone book yesterday and confirmed that the residential address and phone number were the same. John, who by the way is a very nice guy, may not even be easy to reach at home because he probably is spending most of his time on his boat in Waukegan Harbor. He is a very pleasant fellow, but that's who was filing the operation-- filing to own and operate this facility.

The address was not included. There was a general address on Ninth Street, so the address was not included in the application. Form APC-203, which is for start-up emissions, was not completed.

You've seen the kind of general schematics that are

being included in these applications to show how the unit operates. We have questions about a number of things, but one question we ask is how-- who's going to turn it on, who's going to run it. We've heard that GE runs some of these things from a central computer. We don't even know who's turning the facility on and who's going to make sure it only goes on once a day and some of the other things that are required.

I could go through all of these. They did not complete hours of operation. Their-- They purported to limit their emissions by limiting the amount of fuel that they would burn. They had conflicting stack heights. There was no toxins information in the permit application itself submitted at the hearing, and one figure was off, I believe. One figure for gas usage was off by several orders of magnitude. That was never corrected. The second set of comments applied to the supplemental permit application and are similar.

Now I would like to turn your attention to the next group of documents, which are three pages of performance data for the two-turbine configurations, and I would like to review just a few of the items on the list. Excuse me. I coded the columns to allow me to direct you to some of the items of greatest interest, at which

time I will refer you to it. Very difficult to read. This is somewhat typical performance data. This is really the only meaningful information that's contained in the permit applications.

It's my understanding that these sheets are typically provided by GE sales department and that some numbers are added, particularly the temperatures, and the first line you will see-- this is so hard to read-- line A, a little bit off, but that would be ambient temperature. Line H is percent of total operation at a particular temperature.

What you find as you study these sheets is that pollutants such as NOx and CO go off-- they increase in terms of pounds per hour at lower temperatures. They're also higher when line C is on, the evaporative cooler. This sheet reflects operation at 95 degrees. Look at-- let's see-- H2 and H4. That's 25 percent of the time with the evaporative cooler on and 10 percent of the time with it off, so that gives you 35 percent of your time at 95 degrees. Shouldn't be computed that way. They should have assumed some sort of middle temperature range.

As you go across to 11-H, I, J, you see they're proposing to emit 219 pounds of NOx in this case and 243

tons of CO. On the next sheet, or two sheets further on, they're the same sorts of issues, but in their case they're at 247.7 for NOx and 228.6 for CO. This information stated does not include emissions during start-up. The source is clearly major. We obviously made those arguments in the permitting proceeding.

We stated at the proceeding that we were concerned that the agency's resources were stretched, that we couldn't possibly see how they could be handling the volume of applications that they're getting. What we-- The point we're trying to make here is that it's very important that if the agency's resources are stretched that citizens have input in these proceedings and that there be an early appeal of these decisions so that we don't make the mistake of building these facilities if they aren't going to be able to operate as minor sources.

HEARING OFFICER JACKSON: Let me just clarify real quick for the record. The pages you were referring to, the charts that were kind of difficult to read, were the last--

MS. DORGE: Three or four pages.

HEARING OFFICER JACKSON: -- last three pages of what we've marked as Dorge Exhibit 1.

MS. DORGE: Correct.

HEARING OFFICER JACKSON: Thank you.

CHAIRMAN MANNING: And what permit application is this?

MS. DORGE: This is Carlton, Inc., being permitted as a synthetic minor.

BOARD MEMBER MCFAWN: As a synthetic?

MS. DORGE: Yes, synthetic minor.

BOARD MEMBER KEZELIS: It's also called North Shore Power Project.

MS. DORGE: Correct. Carlton is the operator. I'm going to hand the court reporter this packet, which has our written comments in the Carlton proceeding, our written comments in the Skygen proceeding, the Carlton application minus the modeling, and it also includes Skygen's calculation of air toxins, which I'll talk about a little later too.

HEARING OFFICER JACKSON: We'll mark that packet, then, as Dorge Exhibit 4.

MS. DORGE: I noted that the data we reviewed did not represent emissions during start-up. Our consultant, Scott Evans, had access to information from GE, which some of the applicants said they did not have,

that they were not able to get information from GE, but

our consultant had access to some information and did his own calculations.

Assuming one start-up per day, which is what the permit allowed, emissions were as much as 30 percent higher than reported on an annualized basis, and what we're hearing is that-- this is coming from GE-- that it could be as much as ten times higher for, say, a period of twenty minutes, so we think we're being fairly conservative in our calculations, but if you're operating for five hours a day or even ten hours a day, they become very significant at that level, and that affects your-- it affects your CO primarily, your NOx to a lesser extent, but would also affect the volatiles such as your toxins, which is-- in this case, formaldehyde is the primary one of concern. And Scott Evans' calculations are included in Exhibit 4.

Now I'd like to refer you to Exhibit 2. This is a summary that Susan Zingle prepared of peaker draft permits. These are the synthetic minors, and if you run down the center of the page, the NOx column, you see how close so many of them are to their major source threshold. The same is true for CO. You can also see--

We believe that if start-up emissions were included, most of these sources would be major and that they are

not being properly accounted for.

There are also problems with the sources that are being permitted as major sources. Turning to Exhibit 3, these are your PSD sources, your major sources. And we can just look at-- eyeball this, but you can see they're being permitted at levels-- NOx levels as high as 25 parts per million but in many cases 9 to 15 parts per million without catalytic controls, where a number of them have demonstrated a clear ability to achieve the lower levels, which are under 5, in this case reporting 4.5 parts per million with catalytic controls.

We also question why things are so different. I'm looking at Enron, for example, which I understand has GE turbines. This is a 664-megawatt facility with 432 tons of NOx, where Skygen, our 900-megawatt facility, has 716 tons, which doesn't-- you would think Skygen should be able to achieve emission levels that Enron can achieve. They may not be because they have diesel. They're permitted to use diesel for up to 500 hours per turbine. We don't understand how that could possibly be BACT for these turbines.

And just this questioning, why do these numbers seem so odd? Again, Enron is at 714 for CO. Skygen is at 258 for CO. How could they be so different when

they're using very similar technology?

So the question is, why are we permitting these sources this way? Why are they not being required to account for start-up in their modeling? I didn't mention that, modeling. Of course modeling did not include emissions for start-up because they weren't calculated until the last minute. Why aren't we getting the data we need to calculate emissions and guaranteed performance according to manufacturers' specifications for the manufacturers? This information is essential.

The agency seems to feel compelled to act on these applications because of the 180-day clock. There's so much depending on when an application is deemed complete. I think we need regulations to make clear what is required, perhaps a history of acting on working with the applicants and being very flexible, but with that 180-day clock in the statute, I think it's necessary at this point to make it more clear that certain things are absolutely required in the case of these peakers.

Just a couple comments responding to some of the other questions that were raised earlier. We're obviously concerned about the fact that Illinois seems to be permitting even the major sources at levels that

are higher than other states, and we think that all of these merchant power plants-- we can exclude some of the very small ones-- seem to be utility boilers, but they're just so close to the line that they should absolutely be treated as major and be subject to BACT.

We're concerned that with the SIP call, are-- these peakers here in Illinois will just purchase their EGU's from out of state, and perhaps there's some East Coast states that are so much more advanced that we won't see any impact on our air quality. You know, I decided to focus on air again because I think that the problems are just so blatant. Of course we continue to be concerned about noise and the other issues that have been identified.

I also want to mention that next week I'm attending an ABA meeting in Pennsylvania, and peaker plants and NOx are on our agenda. I'm going to try to learn as much as I can about what other states are doing, and we'll still get back to you in writing with the

information that we've collected. Thank you.

HEARING OFFICER JACKSON: Thank you very much.

MS. DORGE: Can I answer any questions?

BOARD MEMBER KEZELIS: Ms. Dorge, how many megawatts is the Carlton facility, if you can tell me?

MS. DORGE: Uh-huh.

BOARD MEMBER KEZELIS: The North Shore Power Project.

MS. DORGE: They're two-turbine configurations. Let's see.

BOARD MEMBER KEZELIS: Let me short-circuit. Your Exhibit 2 suggests several figures and I'm not sure how to read that best, and I don't know whether questions should be directed to you with respect to that Exhibit 2 or to Ms. Zingle, because you indicated she prepared this document.

MS. DORGE: No, I can get that for you and give it to you I think tomorrow. I don't recall. There are two-- There were two determined configurations, and it's different for the two.

BOARD MEMBER KEZELIS: And should I direct my questions on Dorge Exhibit 2 to you or to Ms. Zingle?

MS. DORGE: I can probably answer more of the

technical questions.

BOARD MEMBER KEZELIS: Then would you bear with me for a moment? Take Reliant-Aurora, that line on Exhibit 2, and just so I understand how to read this and so the court reporter can take this down for the record, could we go through very quickly those columns and then what's

indicated there so we know how to read them? For example, name, Reliant-Aurora, that's pretty straightforward. Date, I assume, is the date the permit was issued by IEPA?

MS. DORGE: I believe it's the date of the application. Can Susan come up? I think I can answer most of your questions.

BOARD MEMBER KEZELIS: There's a lot of material, but I'd rather we know what it means.

HEARING OFFICER JACKSON: Ms. Zingle, I would just ask that you identify yourself for the record.

MS. ZINGLE: My name is Susan Zingle with the Lake County Conservation Alliance.

HEARING OFFICER JACKSON: Thank you.

MS. ZINGLE: The date is the date the application--the date on the application when it was sent to the IEPA.

HEARING OFFICER JACKSON: And you need to speak into the microphone too.

BOARD MEMBER KEZELIS: And not the date the permit might have been issued, right?

MS. ZINGLE: Correct. It's when the clock--

BOARD MEMBER KEZELIS: And continue--

MS. ZINGLE: When the clock started ticking.

BOARD MEMBER KEZELIS: Thank you. Continue to the next column, please.

MS. ZINGLE: That's the number of turbines.

BOARD MEMBER KEZELIS: Okay. We're still-- We're talking about Reliant-Aurora, okay? Continue on, please.

MS. ZINGLE: Megawatts is the total number of megawatts from those ten turbines.

BOARD MEMBER KEZELIS: Thank you.

MS. ZINGLE: The next column, the limit method, some of the permits are limited by the amount of natural gas that is burned. Others are limited by the number of hours. A few of them in the application I couldn't find that data, so I left it blank.

BOARD MEMBER KEZELIS: And SCF means?

MS. ZINGLE: Standard cubic feet.

BOARD MEMBER KEZELIS: Thank you. Continue on.

MS. ZINGLE: NOx tons, that is the total number of tons of NOx that would be emitted by that plant.

BOARD MEMBER KEZELIS: Okay.

MS. ZINGLE: NOx parts per million--

BOARD MEMBER KEZELIS: Oh, that's per year, tons per year?

MS. ZINGLE: Per operating period. So if it's for

2300 hours, for that amount of gas that's burned, that's how much NOx will come out.

BOARD MEMBER KEZELIS: Thank you.

MS. ZINGLE: NOx parts per million is self-explanatory. I couldn't necessarily find it in the applications.

BOARD MEMBER KEZELIS: Okay.

MS. ZINGLE: Tons of carbon monoxide, tons of VOC's, tons of PM 10, tons of sulfur dioxide, and then a note on the NOx control method the plant is using, if I could find it.

BOARD MEMBER KEZELIS: And for the record, DLN and WI refer to?

MS. ZINGLE: DLN is dry low NOx; WI is water injection.

BOARD MEMBER KEZELIS: Thank you. Thanks.

MS. ZINGLE: Thank you.

CHAIRMAN MANNING: Can we go back to that limit method? I don't-- I still don't know what 9878mmScf means.

MS. ZINGLE: That means that they'll allow the plant to burn 9800 million cubic-- standard cubic feet of natural gas.

MS. DORGE: The example was Carlton. Rather than

set a limited number of their operating hours, set the limit based upon the gas usage, although they do estimate their operating hours, and that is in last three pages of this exhibit, 8700 for six turbines, six-turbine configuration, and a total of 5400 hours for the three-turbine configuration.

HEARING OFFICER JACKSON: And again, you're looking at Exhibit 1, Dorge Exhibit 1.

MS. DORGE: Exhibit 1, yes.

MS. ZINGLE: For the record, I should say I would like to thank Marilyn Clardy and Betty Asher for their help that went into getting this information together. They really did a lot of work.

BOARD MEMBER MCFAWN: Can I just verify, these

permits have been issued, then?

MS. ZINGLE: Draft permit.

CHAIRMAN MANNING: A draft permit-- If it's a draft permit, it's not been issued. I mean, I don't understand whether the draft permit been issued. The permit's issued, I would assume it's a legally-- a legal document, a draft permit.

MS. DORGE: These are draft permits.

MS. ZINGLE: The most recent ones are drafts. The older ones are in fact final permits.

BOARD MEMBER MCFAWN: Now, the missing information, is that because it was missing from the application?

MS. ZINGLE: Or I just couldn't find it.

BOARD MEMBER MCFAWN: Even in the draft permit?

MS. ZINGLE: It may very well exist. It may be more my skill.

MS. DORGE: Just to clarify the record, the agency did make some assumptions as to emissions during start-up, but they were never-- they were not supported by any inquiry or manufacturers' information.

BOARD MEMBER MCFAWN: Were there assumptions factored into the numbers here?

MS. DORGE: They were factored into the draft

permit.

MS. ZINGLE: Sometimes.

MS. DORGE: Sometimes.

MS. ZINGLE: We went-- On Coastal, if you look about two-thirds of the way down the page, Verena and I attended the public hearing for the Coastal plant in Big Rock, and it was of particular interest because you can see it says-- I need a little-- 249.3 tons, which is the closest I'd ever seen to the 250, so-- I had not read the application, so my first question in public comment was did that include start-up, and Mr. Romaine's answer

was no, so obviously immediately it's over the 250 tons and it's going to be a major source. That air hearing was August 3, and that final permit has not yet been issued, so I don't know what changes they would make to it.

CHAIRMAN MANNING: Could we maybe go to a facility we're little bit familiar with at least? And that's in your-- in the PSD, the ones that are PSD, the Elwood facilities particularly. You have two listed, Peoples, dash, Elwood and Elwood, and one of them you have as having fourteen turbines, I assume, when you say number fourteen, and then the other one numbered two. The

facility-- The Peoples energy facility, Peoples-- old Peoples gas facility that we visited at Elwood had four turbines. Which of these would be that facility?

MS. ZINGLE: From this, I can't tell you. I have the permits and the applications both at home. I could go back and find it. I can't tell you here today.

CHAIRMAN MANNING: Okay.

BOARD MEMBER KEZELIS: Back to Dorge 2 for a moment. If you read the line that starts with Rolls Royce, under NOx parts per million, there appears to be the beginning of the word "yes." What is that a reference to?

MS. ZINGLE: I-- That was an editorial comment.

BOARD MEMBER KEZELIS: Okay.

BOARD MEMBER MCFAWN: You have Reliant listed twice in the middle of Dorge Exhibit 2.

MS. ZINGLE: Reliant is building three plants. I don't know why I didn't put the cities next to the first two, and then the one in Aurora. It's three separate permits, three separate facilities.

BOARD MEMBER KEZELIS: Do you know which is which city?

MS. ZINGLE: I'm sorry. I don't.

BOARD MEMBER KEZELIS: Okay.

CHAIRMAN MANNING: The Indeck on the list, is that the Indeck that's been referred to in Libertyville several times in the proceeding?

MS. ZINGLE: I believe so, because the date is February of this year.

CHAIRMAN MANNING: Thank you.

MS. ZINGLE: Thank you.

HEARING OFFICER JACKSON: Anything else for Ms. Dorge or Ms. Zingle? And I do note that Ms. Zingle will be speaking to us again tomorrow morning.

BOARD MEMBER MCFAWN: Wait. One quick question. The-- Ms. Dorge, I'm hurrying, so maybe the answer is--

maybe you've given us the answer. Forgive me if I missed it. What is the status of the Carlton permit application?

MS. DORGE: Public hearings were held on both August the 13th for Skygen and 14th for Carlton, and we understand that they're proposing to-- planning to issue the permit at the end of November.

MS. ZINGLE: October.

MS. DORGE: October. Excuse me. The end of October.

BOARD MEMBER MCFAWN: Thank you.

HEARING OFFICER JACKSON: Thank you very much.

CHAIRMAN MANNING: Thank you.

HEARING OFFICER JACKSON: As I said earlier, that's going to do it for our presentations today. We will reconvene tomorrow morning in this same room at 10 a.m., and we have Susan Zingle, Ashley Collins and the IEPA on the agenda. I do want to reiterate that anyone who has made a presentation either today or any of the other hearings can obviously supplement their oral presentations with written public comments, and the written public comments will be accepted by the board until November 6.

That's all I have, so at this point we will go off

the record and see you tomorrow morning at 10. Thank you very much.

(Whereupon the proceedings were adjourned until October 6, 2000, at 10:00 a.m.)

STATE OF ILLINOIS)
) SS
COUNTY OF ST. CLAIR)

I, KAREN BRISTOW, a Notary Public and Certified Shorthand Reporter in and for the County of St. Clair, State of Illinois, DO HEREBY CERTIFY that I was present at the William G. Stratton Building, 401

South Spring Street, Springfield, Illinois, on October 5, 2000, and did record the aforesaid proceedings; that same was taken down in shorthand by me and afterwards transcribed upon the typewriter, and that the above and foregoing is a true and correct transcript of said proceedings.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my Notarial Seal this 9th day of October, 2000.

_____

Notary Public--CSR

#084-003688