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Title: DSEIS RE Braidwood Station, Units 1 &2

Public Meeting: Afternoon Session

Docket Number: 05000456 & 05000457

Location: Godley, Illinois

Date: Tuesday, April 21, 2015

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# UNITED STATES OF AMERICA

## NUCLEAR REGULATORY COMMISSION

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Category 3 Public Meeting to Discuss the

Draft Supplemental Environmental Impact Statement

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#### AFTERNOON SESSION

## EXELON GENERATION COMPANY

BRAIDWOOD STATION UNITS 1 AND 2
Regarding the Renewal of Facility Operating

License No. DRP-20 for a 20-Year Period

Docket No. 05000456 & 05000457

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TUESDAY

APRIL 21, 2015

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GODLEY PARK DISTRICT

500 SOUTH KANKAKEE STREET

GODLEY, ILLINOIS

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The above-entitled matter commenced pursuant to Notice before Cheryl Hausman, Facilitator.

#### PRESENT:

# NRC STAFF:

CHERYL HAUSMAN, NRC Region 3 Facilitator

TAM TRAN, NRC HQ Environmental Project Manager

RICHARD BAUM, NRC HQ Environmental Project Manager

BRIAN WITTICK, NRC HQ Branch Chief

MELISSA WOODWARD, Coordinator

JAMIE BENJAMIN, NRC Region 3 Senior Resident Inspector

STUART SHELDON, NRC Region 3 Senior Reactor Inspector

ERIC DUNCAN, NRC Region 3 Branch Chief

VICTORIA MITLYNG, NRC Region 3 Public Affairs Officer

JOSEPH MANCUSO, NRC Region 3 Acting Resident Inspector

#### ALSO PRESENT:

PEGG WARNICK, Exelon Communications Manager

## PROCEEDINGS

(2:00 p.m.)

MS. HAUSMAN: Good afternoon. I would like to welcome everybody and thank you for participating in the public meeting to provide comments for the U.S. NRC's draft supplemental generic environmental impact statement for the license renewal of Braidwood Station Units 1 and 2.

My name is Cheryl Hausman, and I will be the facilitator for the meeting this afternoon. And my role as the facilitator is the help the meeting run smoothly, to ensure that everybody who wishes to make a comment or has a question gets a chance to do so, and to try and keep us on time. And I would like to introduce the NRC staff at this time.

MR. TRAN: My name is Tam Tran. I'm a project manager for the environmental review for Braidwood Station license review.

MR. BAUM: I'm Richard Baum. I'm also with the Nuclear Regulatory Commission. I'm a project manager, and I'm assisting Tam Tran.

MR. TRAN: For today's meeting, but he will be the project manager after this meeting.

MR. WITTICK: Good afternoon, my name is Brian Wittick. I'm the chief of the environmental

project at the NRC.

MR. SHELDON: I'm Stuart Sheldon. I am the lead license renewal inspector in this region of the NRC.

MR. DUNCAN: Good afternoon everybody.

My name is Eric Duncan. I'm with Region III and a branch chief in projects, which includes Braidwood.

MR. BENJAMINE: Good afternoon everybody.

My name is Jamie Benjamin. I'm the NRC senior resident.

I work, actually at Braidwood.

MR. MANCUSO: Hello everybody, my name is Joe Mancuso. I'm the acting resident at Braidwood for the NRC for the next couple weeks.

MS. MITLYNG: Good afternoon. My name is Vika Mitlyng. I'm the senior public affairs officer at the region of the NRC.

MS. HAUSMAN: Thank you. Are there any elected officials here attending today who would like to introduce themselves? Go ahead, sir.

MR. SCHWARTZ: Robert Schwartz, Detroit fire protection district.

MR. TOVEY: I'm Bob Tovey. I'm a trustee on the village board, village board of Godley. And I'm also the village president elect.

MS. HAUSMAN: Okay. Thank you.

MR. TKAC: I'm not an elected official, but I'm representing one. My name is Dave Tkac. I'm representing county executive Larry Walsh.

MS. HAUSMAN: Okay, thank you. This is a Category 3 public meeting to encourage active participation and information exchange with the NRC and members of the public. And to obtain comments for the draft environmental impact statement. I'm going to cover a couple of details about the meeting this afternoon.

The purpose of the meeting is the Exelon Generation Company has applied to the NRC to renew operator licenses for the Braidwood Station for an additional 20 years. The NRC is reviewing that application and will decide whether to renew the license.

As part of their review, the NRC is reviewing the environmental impact of license renewal. Today the NRC staff will tell you about the preliminary findings of that review. They'll tell you that the results of the environmental review have been documented in the draft supplemental environmental impact statement. And they'll refer to that document as the DSEIS.

They may also refer to the supplemental

environmental impact statement as the SEIS. So if you hear those acronyms, SEIS or DSEIS, try to remember that those terms refer to the supplemental environmental impact statement and the draft supplemental impact statement. And they will also ask for your comments on the DSEIS, and that's the primary purpose of the meeting today.

Before we begin, I'd just like to go over a few ground rules for the meeting. I'd like to let everybody know that this meeting is being transcribed. So please keep any background noise or sidebar conversations to a minimum, so the transcriber can produce an accurate recording of the meeting.

There are two security officers at the meeting today, which is standard practice for all of the public meetings. Please be respectful of others during the meeting so that all the participants who have a question or want to make a comment can do so. And please turn off all electronic devices or put them on vibrate. And if you need to take a phone call, please just do so outside the meeting room here.

There are two exits from the room. One main one. And the restrooms are located outside, inside the main lobby there, and down the hall to the left. The agenda for the meeting today includes a

presentation by NRC staff to present an overview of the NRC's role and mission, a summary of the draft environmental review and upcoming milestones.

Following the presentation, we'll take time to answer questions from audience, and then we'll open the floor for questions and comments. Please keep your questions and comments relevant to the topic today. Hopefully, everybody has signed in and received copies of the agenda and the presentation slides and the feedback form.

If you haven't signed in, please do so before you leave today. And when it's time for the public comment period, I'll just call the people up who have already pre-registered. And then step up to the microphone here, ask your question, make a comment, and just make sure that you speak clearly into the microphone so that the transcriber can get the recording.

And last, the NRC is always looking for ways to improve our meetings, and your feedback is important to us. There are some postage-paid public meeting feedback forms available, and you can fill one out today and give it to any NRC staff member, or drop it in the mail. Any questions about the logistics of the meeting? With that, I would like to turn it over to Tam

Tran.

MR. TRAN: Thank you, Cheryl. And thank you for all of you who are taking the time to come to this meeting. My name is Tam Tran. I'm the project manager for the development of the draft environmental impact statement related to the Braidwood Station license renew review.

I hope the information we provide with this presentation will help you to understand the process that we are going through, what we have done so far, and the role you can play in helping us to make sure that the final environmental impact statement is accurate.

over the agenda for today's presentation by explaining the NRC license renewal process for nuclear power plants, with emphasis on the environmental review process. Then I'm going to present the preliminary findings of our environmental review which assesses the impacts associated with extending the operating licenses of the Braidwood Station for an additional 20 years.

Then I will give you some information about a schedule for the balance of our review, and how you can submit comments in the future. And then, finally, the really most important part of today's meeting is

where we receive any comments that you may have for which you have not given to us during this meeting.

Before I get into discussion of licensing process, I'd like to take a minute to talk about NRC in terms of what we do and what our mission is. The Atomic Energy Act authorized NRC to regulate the civilian use of nuclear materials in the United States, including the use of nuclear material for power productions.

In exercising that authority, the NRC mission is threefold. To ensure adequate protection of public health and safety, to promote common defense and security, and to protect the environment. The NRC accomplishes its mission through a combination of regulatory programs and processes such as reviewing license applications, conducting inspections, issuing enforcement actions, assessing license performance and evaluating operating experience from nuclear plants across the country and internationally.

The Atomic Energy Act is the legislation that authorizes the NRC to issue licenses. The Atomic Energy Act provides for 40-year license terms for power reactors. This 40-year term is based, primarily, on economic considerations and anti-trust factors; not on safety limitation of the plant. NRC conducts license review, license renew review for plants whose owners

wish to operate beyond the initial license period.

This slide gives an overview of the Braidwood Station license renewal process. The reviewing process involves two parallel paths; the safety review and the environmental review. For the purpose of today's meeting, we will discuss the environmental review. This slide provides information on how to find out about the status or the license renewal review for Braidwood Station.

As a part of the license renewal process, the advisory committee for reactor safeguards will provide independent review for the safety review. The members of the advisory committee for reactor safeguards consist of nuclear experts and from industry and academic. They will be reviewing and will have meetings by the committee which are open to the public.

This slide shows important milestones for the environmental review process. The highlighted dates indicate opportunities for public involvement in the environmental review. We received the Braidwood license renewal application on May 29, 2013. A public meeting was held on August 21, 2013, as a part of the scoping process. Some of you may have attended that meeting and provided comments to us.

The comments that were given at the scoping

meeting and that are in the scope of this review are in Appendix A of the draft supplement environmental impact statement. As each plant comes in for license renewal, we publish a plan-specific supplement to the generic EIS. The draft supplemental EIS for Braidwood was published on March 18, 2015, and also known as Supplement 55 to the generic EIS.

We are currently accepting public comments on this document, and that comment period ends May 12, 2015. Today's meeting is being transcribed, and the comments provided here will be considered the same way as written comments submitted the NRC. Once comment period closes, we will develop the final supplemental EIS, which we will, which we expect to publish in September, 2015.

For environmental review, the proposed federal action is the decision whether to issue the renewed licenses for Braidwood Station. The purpose and need for the proposed action is to provide an option for the energy planning decision makers, other than NRC, which allow for power generation capability beyond the term of the Braidwood Station operating licenses.

For example, the energy planning decision makers are the state or the plant owners. This definition of purpose and need reflects the NRC

recognition that, unless there are findings in the safety review required by the Atomic Energy Act, or finding in the National Environmental Protection, National Environmental Policy Act, environmental analysis that would lead the NRC to reject the license renewal application, the NRC does not have a role in the energy planning decisions of state regulators and plant owners.

This decision is, concern is to whether a particular nuclear power plant should continue to operate. In other words, for the need for power and the continued operation of Braidwood Station are dependent on the electric power market, and the energy reliability planning by the state regulators and the plant owners.

The staff environmental review consists of the generic environmental impact statement, and the supplemental environmental impact statement. The generic EIS examines the possible environmental impacts that could occur as the result of renewing licenses of individual nuclear power plants. The generic EIS establishes the grounds and significance of these potential impacts.

The analysis of the generic EIS encompasses all operating light water power reactors. For each type of environmental impact, these analyses attempt to

establish generic findings covering as many plants as possible. For some environmental issues, the generic EIS found that generic evaluation was not sufficient, and that a plant-specific analysis was required.

To supplement the generic EIS, the staff conducted a site-specific review of the Braidwood Station. The site-specific findings for Braidwood Station are contained in the draft supplemental EIS. This document contained analyses of all appropriate site-specific issues. The staff also reviewed generic issues covered by the generic EIS to determine whether the conclusions in the generic EIS are valid for Braidwood Station.

In addition, the NRC staff reviewed the environmental impacts of potential power generation alternatives to license renewal to determine whether or not the impacts expected from license renewal are unreasonable. Together, the generic EIS, the supplemental EIS form the staff analysis of the impacts of license renewal for Braidwood Station.

This slide shows the approach the staff used for environmental analysis. The NRC evaluates impacts of all plants across the entire country to determine if there were impacts that were common to all operating plants. NRC looked at separate impact areas

and found that for 60 issues the impacts were the same for plants with similar features. NRC called this Category 1 issues, and made the same generic determinations about the impacts in the generic EIS for license renewal.

NRC was not able to make generic conclusions about the remaining 18 issues. Seventeen of those issues for which the NRC called Category 2 issues, the NRC decided to prepare a site-specific supplement to the generic EIS for these issues. For example, electric shock hazard associated with the electrical lines at Braidwood is a Category 2 issue.

The supplemental EIS for Braidwood Station license renewal is being discussed today. The NRC did not rule out the possibility that the generic conclusion in the generic EIS may not apply to any specific plant in all cases. If new and significant information is found that would change the conclusion in the generic EIS, then the staff would perform a site-specific analysis on that issue in the supplemental EIS.

Now, I'm going to discuss in more detail about the preliminary results of the review. For each environmental issued identified, an impact level is assigned by the reviewer who are subject matter experts. For a small impact the effects are not detectable or too

small to destabilize or noticeably alter any important attributes of the environmental resource being reviewed.

For a moderate impact, the effect is sufficient to alter noticeably, but not destabilize important attributes of the resource. And finally, for an impact to be considered large, the effect must be clearly noticeable and sufficient to destabilize important attributes of the resource.

For example, the operation of Braidwood Station may cause the loss of adult and juvenile fish at the intake structure. If the loss of fish is so small that it does not appear to have noticeably altered population of the species, then the impact would be small. If loss causes certain populations to increase or decrease, then stabilize at a different level, then the impact would be moderate.

If losses at the intake cause the fish population to decline to the point where it cannot be stabilized and continually declines, then the impact would be large. For Braidwood, the impact for fish is small to moderate.

For special status species, the impact significant determination language comes from the Endangered Species Act. The classifications to

describe the impacts are no effect, may affect, but not likely to adversely affect, or may affect, and is likely to adversely affect. U.S. Fish and Wildlife Service would make the determination whether or not the impact jeopardizes a listed species.

A listed species is any species of fish, wildlife or plant which has been determined to be endangered or threatened under Section 4 of the Endangered Species Act. The staff has been consulting with Fish and Wildlife Services for development of the supplemental EIS.

For cultural and historic resources, the National Historic Preservation Act requires federal agencies to consider the effect of the Agency in protecting our cultural and historic resources. An example of historic resources are national landmarks or historic grave sites.

For environmental justice, federal agencies are responsible for identifying and addressing disproportionately high adverse human health and environmental impacts on the minority and low-income populations. The staff follows the Commission guidelines on environmental justice for review to make its determination. And this is specified in the standard review plan.

In conducting the review, an environmental review team from NRC, Pacific Northwest Laboratory and Ecology and Environment, Inc. analyzes various impacts to the environment. This review involves a wide range of expertise as illustrated on this slide. The team examined environmental justice, ecology, land use, hydrology, climate change and so on for the Braidwood Station supplemental EIS.

The staff reviewed cumulative impacts associated with the continued operation of Braidwood Station. For cumulative impacts, the NRC staff looks at the effects on the environment from past, present and reasonably foreseeable future of human actions. The impacts include both from the Braidwood operation and other activities near Braidwood Station. For example, we looked at the Joliet Station, the Prairie View landfill.

We looked at climate change and so on.

Past actions are those related to environmental resources at the Braidwood Station licensing and construction. Present actions are those related to resources of current operations. And future actions are considered to be those that are reasonably foreseeable through the end of the Braidwood operation, including the period of extended operations.

In other words, the cumulative impact analysis considered potential impact to the end of the current license term, as well as the 20-year renewal license term. From a regional perspective, so to speak, the staff preliminarily concludes that cumulative impacts are small to large, and this is on this slide.

This slide lists the site-specific issues the NRC staff reviewed for the continued operation of Braidwood Station during the proposed license renewal period. Each issue is assigned a level of environmental impact of small, moderate or large by the reviewers. In addition, there is one uncategorized issue associated with the electromagnet fields chronic affects.

For this issue, the staff considered generic EIS finding of uncertain impact is still appropriate. No further review was performed on the chronic effect from exposure to electromagnet fields or, basically, radio waves beyond those discussed in the generic EIS. This is because currently there is still not scientific consensus on this issue.

The staff preliminary conclusion is that site-specific impact related to the license renewal for Braidwood Station is small, except for the impacts of

impingement and entrainment in terms of thermal effects on the aquatic resources which are small to moderate. Examples of moderate impacts to aquatic resources are listed on this slide. As discussed in the supplemental EIS impingement of the state-endangered pallid shiner at the river's screen house may create a noticeable effect on the pallid shiner populations in Illinois, which is a low population species.

Similarly, impact from larval entrainment would also be noticeable for low population species listed on this slide. In discussing the supplemental EIS, Exelon has mitigation measures for aquatic resources in the National Pollutant Discharge Elimination System permit, so-called NPDES permit and engineer-and-operational control to operate the Braidwood Station.

The NPDES permit issued by the Illinois Environmental Protection controls the discharge from Braidwood the Station. An example of an engineer-and-operational considered control Braidwood Station is the reduction of water intake. This is an agreement with Illinois Department of Natural And another example is having reduction to slow down intake velocity that has been shown to be less than the Environmental Protection Agency recommended flow velocity to protect aquatic species.

Another example of moderate impact to aquatic resource discussed in the supplemental EIS is listed on this slide. Under the Clean Water Act, the cooling pond is considered as a waste water treatment facility. Based on the information on fish kills, the thermal impact to the cooling pond aquatic community are noticeable and adverse.

Exelon has consulted with experts for mitigation and concluded that there are no practical simple solutions that could prevent the occurrence of fish dying off at Braidwood Lake. For the purpose of the supplemental EIS, the staff used the term cooling pond and Braidwood Lake interchangeably. Cooling pond is a term listed in the staff standard review plan. And the standard review plan contained the staff review procedure and review criteria.

The staff addressed spent nuclear fuel management in the Braidwood supplemental EIS for the period of extended operations. The staff concluded that there is no impact related to this issue beyond those discussed in the license renewal generic EIS. For the time beyond the 20-year period of extended operation, the supplemental EIS incorporates

conforming environmental impacts from the continued storage generic EIS and the rule.

In the rule for on-site storage, the Commission has generically determined that environmental impacts of continued storage of spent nuclear fuel beyond the license life for operations of a reactor are those impacts identified in the generic environmental impact statement for continued storage of spent nuclear fuel.

For radiological impacts of off-site spent nuclear fuel and high level waste disposal, the impacts are addressed in the license renewal rule for environmental review. In the rule, the Commission concluded that the impacts would not be sufficiently large to, are not sufficiently large to require the conclusion that the option of extended operation of nuclear power plants should be eliminated.

The National Environmental Policy Act mandates each environmental impact statement to consider alternatives to the, to any proposed major federal actions. A major step in determining whether license renewal is reasonable or not is to compare the license, to compare the likely impacts of continued operation of nuclear power plants with the likely impacts of alternative means of power generation.

In the draft supplement, NRC staff initially considered 17 different alternatives to license renewal of Braidwood Station. Of these considerations, the staff then chose the five most likely alternatives, and analyzed these in depth. Finally, the NRC staff considered what would happen if no action is taken, and the Braidwood Station shuts down at the end of its current license without a specific replacement alternative.

This alternative would not provide power generation capacity, nor would it meet the needs currently met by Braidwood Station. The preliminary results indicate that the environmental effects of alternatives in at least some impact categories reach moderate or large significance. The NRC staff preliminary finding is that there is no clear environmental preferred alternative to license renewal. All alternatives capable of meeting the needs currently served by Braidwood Station entail impacts greater than or equal to the proposed action of license renewal.

This slide reflects the preliminary conclusion in the supplemental EIS. The NRC staff preliminary recommendation is that the adverse environmental impact of license renewal for Braidwood

Station are not so great that preserving the option of license renewal for energy-planning decision makers would be unreasonable.

This slide identifies Richard Baum as your primary point of contact with the NRC for the final supplemental EIS. It also identifies where documents related to the review may be found in the local area. All documents related to the review are also available on the NRC website listed on this slide.

NRC staff will address written comments in the same way we address spoken comments received today. To submit written comments online, visit the website regulations.gov and search for Docket ID NRC/2013, actually, it's a dash, -0169. If you have written comments today, you may give them to any NRC staff member who are here today. This concludes my presentation. I'm turning the meeting over to Cheryl.

MS. HAUSMAN: Thank you Tam. Are there any questions from anybody in attendance today about the slides that you've just seen? Anybody on the audio bridge line have any questions about the slide presentation?

PHONE COORDINATOR: I'm showing no voices at this time.

MS. HAUSMAN: Okay, thank you. All right,

then we will now begin the public comment period. And this is the part of the meeting where you have an opportunity to give your comments on the scope and content of the draft environmental review. As I mentioned earlier, the meeting is being transcribed, so to keep any background noise to a minimum so we can get an accurate transcription of the meeting.

For those making comments, please come up to the microphone and state your name. And if you have an organization that you belong with that you would like to make known, please state that, as well. And if you have a question or comment outside the scope of this meeting, NRC staff will be available for approximately 30 minutes following the meeting to answer those questions.

I'll begin by calling on the people who have pre-registered or filled out comment cards. After those folks have spoken, I will open the floor up to anyone else who has a question or comments. And then we'll go to the bridge lines to see if anybody has questions or comments from anybody on the phone. First I'd like to invite Greg Ridenour.

MR. RIDENOUR: My name is Greg Ridenour.

I'm with Congressman Adam Kinzinger's office. I have
a statement on behalf of the Congressman. Dear NRC

Commissioners, Thank you for allowing my office the opportunity to address this public meeting regarding the license renewal application of the Braidwood Generating Station that is currently pending with the NRC.

The issue of maintaining our current fleet of clean, affordable energy generation in Illinois is of the utmost importance to residents, consumers and elected officials throughout the region. Illinois continues to be a leader in the production of carbon-free electricity, with six nuclear plants providing nearly half of the overall electricity generating portfolio and over 90 percent of the carbon-free electricity in the state.

Four of those facilities reside within the 16th Congressional District alone, where they have been a driving force in stabilizing not only the price of power, but also the reliability of the grid overall. If this source of clean base load power generation, approximately 12,000 megawatts overall, were not available, there is little doubt that prices would rise exponentially, and grid stability would be negatively impacted.

Additionally, the nuclear energy industry has a substantial impact on the economy at the state and

local level. These plants are directly responsible for providing thousands of quality, high paying jobs for high skilled workers and, in turn, provide a huge boost to our economy worth nearly \$9 billion annually.

The 825 employees of the Braidwood facility earn over \$60 million annually in payroll. And given that the majority of these employees reside in Grundy and Will counties, they are able to provide a foundation in which to support the local tax base.

We are here today to discuss the license renewal application of the Braidwood Generating Station, which has been providing reliable power to the grid for nearly three decades without emitting greenhouse gases or carbon dioxide that we find with other forms of energy. Moreover, the amount of carbon-free electricity annually produced by Braidwood is comparable to removing 2.9 million passenger vehicles from the road.

In addition to providing clean energy, Braidwood must maintain a radiological environmental monitoring program, along with an onsite ground water protection program to detect any presence of radioactivity in the water. Braidwood's detailed monitoring and consistent compliance with NRC regulations show Braidwood's sincerity and determined

work towards ensuring environmental protection.

The process being followed by the NRC is amiable in the transparent manner in which it conducts these hearings, allowing members of the public the opportunity to provide comments on the environmental aspects of the process, shows a level of commitment to transparency that should take place in all aspects of government licensing.

It is also important to note that the NRC also requires that the plant's application to include an additional environmental report based solely on the plant's potential impact to the environment, should the application be extended beyond its initial license. This extra step helps to ensure the safety and environmental benefits of the facility's surrounding area.

It's my hope that as this multi-year effort takes place, it will continue to do so in as expeditious manner as possible. Extending the life of this facility for 20 years will ensure that a clean source of energy for millions of consumers is able to move forward with certainty in their future operations. Respectfully, Adam Kinzinger, Member of Congress. Thank you.

MS. HAUSMAN: Thank you, Greg. Next I

would like to invite John Greuling.

MR. GREULING: Thank you. My name is John Greuling. I'm president and CEO of the Will County Center for Economic Development, and I speak on behalf of the center today. The Will County Center for Economic Development is a private, non-profit, community economic development corporation whose mission is to support the retention, expansion and recruitment of business and industry to Will County, Illinois.

Over the last 15 years, Will County has been one of the fastest growing counties in Illinois and the Midwest. Our 700,000 residents and our 18,000 businesses need reliable, clean and affordable energy to sustain and grow our economy and support our high quality of life. We believe nuclear energy helps us do that.

To that end, the CED supports the renewal of the Braidwood operating license by the NRC. Illinois' six nuclear plants generate 48 percent of the state's electricity power supply. Braidwood Station is an important of that vital energy supply. Braidwood is, and always has been, transparent about its plant operations, and is interested in hearing public feedback in how it can better communicate with

surrounding communities.

As a member of the plant's community advisory panel, the CAP, I recently attended an Exelon community information night, I think it was in Minooka, right, that was hosted by Exelon. And we learned, excuse me, an event that provided information on the impact of Braidwood, Dresden and LaSalle Stations on These plants provide each of those communities. critical funding for education through property taxes, community organizations support for that identified needs in the communities, and they provide a strong economic foundation to stimulate commerce and new development.

Braidwood Station, like its sister Illinois nuclear plants, is an unrivaled environmental asset for Illinois. Illinois' abundant supply of reliable, carbon-free power makes the state an environmental leader and an attractive location for businesses. In addition, it employees 864 jobs.

It contributes over \$27 million to the local tax base. Overall, the plant directly and indirectly provides nearly \$1 billion annually to the Illinois economy. That's a lot of money. The CED strongly supports the renewal of the operating license for the Braidwood facility. Thank you.

MS. HAUSMAN: Thank you, John. Next Robert Schwartz.

MR. SCHWARTZ: I'm Robert Schwartz. I live at 304 North Brookshore Drive in Shorewood, which is 18 miles, as the crow flies, downwind of the Braidwood Nuclear Station. And I represent members of the Will and Grundy building trades who have built and currently maintain the mechanical equipment at the powerhouse. And they maintain it to meet all the requirements of the NRC and all the different codes that are required of it.

And it's obvious from the presentation today that Exelon has exceeded the environmental requirements of the NRC to continue its operating license. And I respectfully request that the NRC, based on their findings, grant Exelon their renewal license.

It's also important to note, too, that because of the nuclear power generated at the station, that when the wind doesn't blow and the sun doesn't shine, the turbines keep spinning to provide electricity for the safety and convenience of all the residents.

If there's no electricity, no reliable electricity, you wouldn't have lights on at night. Your sump pumps wouldn't run. Traffic signals wouldn't

work. Power wouldn't be at hospitals, fire departments or police stations to provide safety for our residents. So it's important that Braidwood Station gets their license renewed. Thank you.

MS. HAUSMAN: Thank you, Robert. Doug O'Brien.

MR. O'BRIEN: Good afternoon. I'm Doug O'Brien, the executive director of the Illinois Clean Energy Coalition. And we're here today for what is called the NRC's environmental scoping hearing on the Braidwood Station renewal. So I want to talk a little more specifically about the environmental impacts of the plant.

It has to be stated clearly that the future of our carbon footprint in Illinois depends on the continued operation of this and other nuclear plants in Illinois. Without them, we face potential for huge increases in carbon dioxide and other pollutants, including mercury that negatively impact our environment and lead to huge societal costs.

The operation of this plant alone displaces the generation of millions of tons of harmful CO2 emissions every year. Every megawatt of electricity produced by nuclear power is a megawatt that does not rely on carbon polluting, carbon pollution-emitting

fossil fuels.

According to the Illinois Clean Energy Coalition's 2014 study, Illinois' nuclear fleet prevented the emissions of over 92 million tons of CO2. And that's the equivalent of the pollution emitted by every passenger car registered in Illinois and Indiana and Wisconsin and Iowa.

Other sources of clean energy are vital to our future, as well. But the simple truth is that we cannot quickly or easily replace nuclear generation with other clean sources. And a nuclear plant like Braidwood would require thousands of new wind turbines to replace its generation. But we still cannot rely on wind 24/7. And the process of siting wind farms, the capital needed to build them, and the siting aspects are daunting.

Losing any of our nuclear plants would leave us with no short-term alternatives but to increase our use of fossil fuels, which is a move in the wrong direction. The US EPA has announced new rules for states to reduce carbon emissions. Simply put, there is no way Illinois can hope to meet these goals, nor can we as a nation hope to meaningfully reduce carbon emissions if we do not ensure the continued operation of our nuclear fleet.

We've seen the consequences of this scenario very clearly across the Atlantic in Germany, where the decommissioning of much of their nuclear fleet, supposedly for environmental reasons, has led to huge increases in the reliance on carbon-polluting energy sources, not to mention a doubling of consumer energy costs.

from an environmental standpoint, Braidwood is a critical component in our drive to reduce pollution and change the course on climate change. cannot be replaced in the short-term without incurring the significant increase in carbon emissions, and it has responsibly stepped up to the need for safe and secure fuel storage. from environmental used So an standpoint, the Braidwood Station is a huge positive for Illinois and the US, and the Illinois Clean Energy Coalition urges renewal of their operating license. Thank you.

MS. HAUSMAN: Thank you, Doug. David Tkac.

MR. TKAC: Thank you. Good afternoon ladies and gentlemen. I'm here today on behalf of Lawrence M. Walsh, county executive for Will County. He apologizes for not being able to be here himself today. He had some important business to tend to in

Springfield. So I'm going to keep my remarks brief, because many of them have already been stated by others.

But there are some important things to note here in Exelon's pursuit of a licensing renewal. First of all, Will County needs and must have a reliable energy source. If we're going to grow, and if we're going to prosper the way our county executive believes we will, then this is an essential element of that growth and that prosperity.

The second things I'd like to talk about is the, and this is from a personal perspective, I was able to tour the facility, the Braidwood facility in October or November of last year. I was very impressed with how secure that facility is. And I'm sure I only got to see a small part of them, or the public portion of the security apparatus there. But I felt so much better knowing, seeing that and knowing that today, especially given the world that we live in, unfortunately.

But on the brighter side of things, Braidwood is, it represents employment opportunities for, and good, solid employment opportunities for over 800 local residents. And that is something that cannot be understated. Exelon, at Braidwood, has an excellent safety record, and an outstanding emergency preparedness program that they coordinate with other

first responding and emergency management agencies, including the counties.

And there's something to be said for that, because it goes beyond an emergency at the plant. But to also help marshal all the resources county-wide for a different kind of emergency altogether. And it's good practice for such a thing. And so, I wanted to point that out, as well.

And lastly, the Exelon Corporation is a, is a good corporate resident of Will County, providing \$26 million a year to our annual tax base here, property tax base here in Will County, and that's important to everybody. So, having said that, I'd like to thank you, again, for having us here today and for allowing me to speak on Mr. Walsh's behalf.

MS. HAUSMAN: Thank you, David. Next I would like to invite Jay O'Connell.

Mr. O'CONNELL: Thank you and good afternoon everybody. While I am not an associate involved with, on a scope like this, I am a local resident. I am a tournament fisherman, and I enjoy the benefits of Lake Braidwood. We have, as an organization, the Illinois B.A.S.S. Nation. We consist of approximately 35 bass clubs distributed throughout the State of Illinois.

There are four clubs here locally that participate in tournaments here on Lake Braidwood. Starting back in about 2002, I believe, there was a tournament held here called fishing for a cure. Where a lot of us guys came in, and it was a well organized tournament group.

And the proceeds from the tournaments went to all of the local type charities. We've had for multiple sclerosis, for the people that were affected by the tornados just recently and a couple years ago. And what it demonstrates is what a good neighbor Exelon has been to us as local people.

In their process of recognizing the impact to the environment, starting back in the year 2007, through meeting us fisherman through their fishing for a cure tournaments, we were approached as a group to help along with the Illinois Department of Natural Resources to place habitats into the Braidwood Lake. And we're happy to say that, in retrospect of those being planted, that we have seen a remarkable improvement in the fishery here in Braidwood.

With the impact of the hot water and that, some things changed, and Braidwood Exelon's response was let's put some habitats in. And the habitats create areas where these items have been placed that allow fish

to be able to hide for nurseries for freshly spawned fish. And as a result of that, we're seeing good recruitment starting to develop.

It shows in the tournaments that are held in that the average size of the fish has increased tremendously over the years. And it's not uncommon now to see five or six-pound fish weighing in at the tournament. Prior to putting the habitats in, there were points in time where we didn't see that. A two-pound bass would have been a great thing.

Not only did it impact the bass, it's impacted the catfish and the bluegills. There's a fabulous picture here. It brings in people from throughout the community; even from the City of Chicago. It's bringing in revenues. The gas stations are selling bait and fishing licenses and gasoline to us boaters. Just in respect to that, we'd like to share that with you. And in regards to the fishing for a cure tournament, we have one coming up May 2nd.

And the tournament which has all turned around the monies back into the community, we have raised over \$365,000 for local, not-for-profit organizations. We appreciate that, and we appreciate the fact that they care about the environment. Thank you very much.

MS. HAUSMAN: Thank you, Jay. Mike Gorga.

MR. GORGA: Thank you. My name's Mike Gorga. I am an employee from Exelon Braidwood. I do live in Will County. I'm 50 miles, within 50 miles of three nuclear plants. The people who came up before me spoke about the larger impacts; the \$26 million in tax revenue, the millions and millions of tons of carbon emissions. But I was going to talk a little bit more locally and more specific to the community around us.

So, you know, along with the nuclear power plants in Illinois, we do have the greatest carbon emission portfolio. But we also are committed to being a good environmental steward. So within Braidwood Station, we do have an environmental stewardship committee. And within that committee, we do environmental discussions with the local schools; grade schools, high schools.

And we ask them to provide us proposals for our grant. We call it the Gabby Green Grant, where we provide thousands of dollars to the neighborhood schools to work on their environmental projects. So we've funded greenhouses. We've funded outdoor classrooms, and other environmental educational topics in the local schools.

Additionally, we're currently working with

the IDNR to construct osprey nests to support that aquatic bird of prey that we need to see in the area. And additionally, one of the facts that we've got here is that we've talked about CO2, but also with regards to other ozone depleting and greenhouse gases, 74 tons of nitrogen oxide and 176,000 tons of sulfur dioxide were also prevented from being entered into our atmosphere through the operation of the nuclear plant. That's all I've got. Thank you.

MS. HAUSMAN: Thank you, Mike. Chris Rosso.

MS. ROSSO: I'm going to leave my jacket on because I'm a cold body here. My name's Chris Rosso. I also work at Braidwood Station in the mechanical maintenance department. I want to talk a little bit about, expand on the impact of losing Braidwood Station as a low carbon, a zero-carbon energy provider to the state, in light of coming EPA and Illinois guidelines.

So others have talked about the carbon emission impact, how many cars come off the roads, how many tons of CO2 would need to be provided by other easily accessible sources of power such as coal or natural gas. But one of the other major resources that we have in Illinois and the whole Midwest that's often overlooked is Grade A farmland.

And what some of the other alternative fuel sources, such as solar and wind, offer as far as zero carbon production, they lack in energy density and efficiencies in that manner. So what if we lose Braidwood Station and other nuclear power plants, and replace them with the solar grids such as the one that Exelon invested in the South Side of Chicago, or the swarms of wind turbines in the cornfields south of Braidwood and right around LaSalle Station?

So do a little quick research, based on energy efficiencies, when you gather as many of these sources in one area as possible, so big solar plants such as those going out in California, next generation solar, some of the most efficient, the most efficient types of "renewable" energy in the country and in the world.

And looking at one of the newest solar plants that went up in San Bernardino County in California, it's a whopping 392 megawatts. It uses 3,500 acres. So what do you get from that? You get 9.8 acres per megawatt. That's a thermal solar unit. That's the most efficient type of solar right now. It's not the black panels that you see. Those are photovoltaic panels, which also in California, in San Luis Obispo County is the Topaz Solar Farm that's 550 megawatts, but that uses nine-and-a-half square miles.

It's over 6,000 acres. And that gets you 11 acres per megawatt.

Looking at Braidwood Station, it uses a cooling lake, which makes up a large majority of the footprint of the power plant. We're at about, based on our website, a little over 4,400 acres for our 2,300 megawatts. And that's 1.9 acres per megawatt. So if we start looking at the economic impact of taking away those nuclear power plants, from an energy density standpoint, you're not only giving up potentially prime land that could be used to invest in other businesses closer to Chicago, but you're talking about stripping potential for Grade A farmlands to be cultivated and used further out in the state.

So that's something, even though I wasn't part of putting together this document for the license renewal for Braidwood, something I think I haven't heard a lot in these public meetings is what's the land use impact of losing these stations. Thank you.

MS. HAUSMAN: Thank you, Chris. Robert Tovey.

MR. TOVEY: Yes, my name's Bob Tovey. I'm a 49-year member of Pipe Fitters Local 597 out of Chicago. And I was asked to speak here by one of our business representatives, Donald Gregory, who is also

the president of the Will County Building Trades. I've worked in these plants, on the construction of them, from 1968 when I returned from Viet Nam out of the service, up until 2009, when I retired six years ago.

And I was, I worked in over 30 plants from the east coast to the west coast. And there was a time when Exelon wasn't at the top of the rock. But when it kind of started, I was working at Braidwood when they were getting ready to fire up in '87. And the things that were done at Braidwood, like color coding the units so people didn't mess up operating and stuff like that, that went on through the whole Exelon fleet.

And it just like made a change in the fleet.

Make it much, much more safe, much more efficient. And

I just, in my opinion, I feel that Braidwood's been
operating over 20 years now. And I think may they had
one little hiccup. But I think that their performance
record proves that they should be allowed a license for
another 20 years. They, and Exelon, Dresden's been
running over two, over 40 years.

And everybody else has talked about all the environmental and the economic impact, which is great. But I feel that, you know, the performance deserves something. Thank you.

MS. HAUSMAN: Thank you, Robert. Angie

Hutton.

MS. HUTTON: I'm Angie Hutton, president of the Braidwood Chamber. And everyone else has talked about the economics, but just a statement from us, or a couple. Braidwood Station is a good neighbor to the City of Braidwood. The communication between them and the city is ongoing. There are fliers, and the e-mails that are sent, the community information nights. And there's also a citizen's advisory panel, which I am part of.

And at that meeting, we can ask any question we want. It doesn't matter what it is. If they don't have an answer that evening, it is either e-mailed to us or brought out at the next meeting. So there's, citizens in town can ask, and then we can bring it down there. So they are very open in everything that they're doing.

There was an event recently that provided information on Braidwood, Dresden and LaSalle Stations. They do try to get the information out to the residents. Being transparent, the Braidwood has a good rapport with the citizens of Braidwood. They provide about 864 jobs and over \$27 million annually to the local tax base.

But with that said, they also provide immense to out not-for-profits. And there's, you know,

can somebody say oh, they should give more, of course. But I know from, of course, with the CAP meetings that they do provide a lot to our not-for-profits. And without that, like our food pantry in town, it just couldn't exist. We do need that. And a lot of that, I know, is done by the employees, too, of the plant.

So the employees, too, when they do the turnarounds, I mean, they're impacting our gas stations, our grocery store, anything that we have when they can come into town definitely helps our citizens and our local business. So it is a win-win for us all the time. And the clean, reliable energy, it is important for the future. And Braidwood is a bit part of our future. So the Braidwood Chamber does support the license renewal.

MS. HAUSMAN: Thank you, Angie. Dean Rankovich.

MR. RANKOVICH: Good afternoon, Dean Rankovich, 411 West Jefferson Street, Gardner, Illinois, on behalf of the Operating Engineers Local 150. We come from South Bend, Indiana to the west side of the Mississippi River. We have 23,000 members, which 2,000 of them live in Will County. We maintain every one of the plants that Exelon has in our geographical jurisdiction.

Braidwood and other nuke plants are a very positive impact to our overall environment. We're able to provide huge amounts of electricity for our homes and business, without creating carbon emissions. But the environmental benefits depend on plants operating safely. Thousands of building trades members work at the Braidwood plant and all other Exelon plants across our area, providing important maintenance and improving the plants, in addition to having built the plants in the first place.

We don't know from experience, we do know from experience that Braidwood Plant has a strong record of safe operation. If we didn't believe it, we wouldn't be working in there. And those jobs, and the thousands more that the Braidwood supports, gives us a better quality of life in Will County. It provides tax dollars that protect our homes and families and invest in our communities.

When you look at the energy provided, the environmental benefits, and the positive impacts on jobs and our community, you see the huge positive affect of Braidwood. On behalf of the Operating Engineers Local 150, 23,000 members, and 2,000 that live in Will County, and our families, we strongly encourage you to provide the renewal of the plant's operating license.

Thank you.

MS. HAUSMAN: Thank you. Is there anybody else who would like to make a comment or has a question about the scope of the meeting this afternoon? Do we have anybody on the bridge line who has a question or a comment?

PHONE COORDINATOR: Showing no questions at this time.

MS. HAUSMAN: Thank you. Okay, with that, I'll turn the meeting over to Brian Wittick.

MR. WITTICK: Okay, thanking Cheryl for facilitating the meeting. And thank you, Tam for your work in developing the environmental impact statement and your presentation today. And mostly I'd like to thank all of you for coming out today to participate in this meeting.

As mentioned by Greg Ridenour, I echo his comments regarding the feelings of Congressman Kinzinger regarding the transparency of the process. The NRC values one of the key values of the Nuclear Regulatory Commission is transparency.

And in that vein, we will take the transcripts that were generated today, and take all of the written comments that are submitted, and each comment will be looked at and responded to in the course

of developing the final environmental impact statement.

You will see all of the comments in the transcript in

Appendix A in the final impact statement.

We got quite a bit of valuable input today. Robert Schwartz, who recommended renewal of the plant spoke to reliability of power, amongst other things. Bob Tovey, who worked at the plant until 2009, spoke to his experience of working at the plant. David Tkac from the county executive's office, thank you for coming and providing comments, discussing the need for reliable power and the economic impacts of the plant.

We had John Greuling who discussed the support of Braidwood for continued development in Will County. Greg Ridenour, thank you for coming and representing the Congressman's office. Mike Gorga, who spoke to the local impacts of Braidwood Station, the environmental stewardship and various initiatives with the community.

Chris Rosso, who spoke to the environmental impacts, who works at Braidwood and, especially the land use impacts. Chris, I recommend you not give up on solar power in its entirety. I think it does have a future in the country. And hopefully the efficiency of the technology will improve and become a significant portion to our nation's power.

spoke Doug O'Brien, who to the environmental impacts of continued operation. Jay O'Connell, who spoke to the bass clubs, and the fight for a cure, and other associated environmental and fishing activities. Angie Hutton, who spoke of the relations of Braidwood with the local community. And Dean Rankovich, who spoke to the importance of maintenance programs to the safe operation of Braidwood.

Did I miss anybody? Okay, so the environmental, or the comment period for the environmental impact, draft environmental impact statement closes on May 12th. If you desire to submit written comments, again, please feel free. If you have them, please feel free to give them to any NRC member, or mail them in as presented in the presentation previously.

And if you desire to discuss any issues, the NRC staff members will be around for a little while following the meeting. And with that, I adjourn the meeting. Thank you for your participation.

(Whereupon at 3:10 p.m. the meeting was concluded.)

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