

**Environmental Impact Statement  
Scoping Process**

**Summary Report**

**Braidwood Station, Units 1 and 2  
Will County, IL**

**April 2014**



**U.S. Nuclear Regulatory Commission  
Rockville, Maryland**

## 1 INTRODUCTION

The U.S. Nuclear Regulatory Commission (NRC) received an application from Exelon Generation Company, LLC (Exelon), dated May 29, 2013 (Exelon 2013), for renewal of the operating license for Braidwood Station (Braidwood), Units 1 and 2. Braidwood is located in Will County, IL. The purpose of this report is to provide a concise summary of the determinations and conclusions reached, including the significant issues identified as a result of the scoping process in the NRC's environmental review of this license renewal application.

As part of the application, Exelon submitted an Environmental Report (ER) (Agencywide Documents Access and Management System (ADAMS) No. ML131550528) prepared in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) Part 51, "Environmental protection regulations for domestic licensing and related regulatory functions," which contains the NRC requirements for implementing the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq., herein referred to as NEPA). The requirements for preparation and submittal of ERs to the NRC are outlined in 10 CFR 51.53(c)(3).

The requirements in Section 51.53(c)(3) are based upon the findings documented in NUREG-1437, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants" (GEIS) (NRC 2013a). In the GEIS, the staff identified and evaluated the environmental impacts associated with license renewal. After issuing a draft version of the GEIS, the staff received and considered input from Federal and State agencies, public organizations, and private citizens before developing the final document. As a result of the assessments in the GEIS, a number of impacts were determined to be generic to all nuclear power plants (or, in some cases, to plants having specific characteristics such as a particular type of cooling system). These generic issues are designated as "Category 1" impacts. An applicant for license renewal may adopt the conclusions contained in the GEIS for Category 1 impacts unless there is new and significant information that may cause the conclusions to differ from those of the GEIS. Other impacts that require a site-specific review are designated as "Category 2" impacts and are required to be evaluated in the applicant's ER. Appendix B to Subpart A of 10 CFR Part 51 lists Category 1 and 2 issues and summarizes the GEIS findings for these issues, as supported by the above noted revision to the GEIS. The NRC issued GEIS, Revision 1, in 2013 (78 FR 37323, June 20, 2013).

On July 24, 2013, the NRC initiated the scoping process by issuing a *Federal Register* notice (78 FR 46379). This notified the public of the staff's intent to prepare a plant-specific supplement to the GEIS regarding the application for renewal of the Braidwood, Units 1 and 2, operating licenses. The plant-specific supplement to the GEIS is referred to as the supplemental environmental impact statement (SEIS). The SEIS will be prepared in accordance with 10 CFR Part 51.

The scoping process provides an opportunity for public participation to identify issues to be addressed in the SEIS and to highlight public concerns and issues. The notice of intent identified the following objectives of the scoping process:

- Define the proposed action.
- Determine the scope of the SEIS and identify significant issues to be analyzed in depth.
- Identify and eliminate peripheral issues.

- Identify any environmental assessments and other environmental impact statements being prepared that are related to the SEIS.
- Identify other environmental review and consultation requirements.
- Indicate the schedule for preparation of the SEIS.
- Identify any cooperating agencies.
- Describe how the SEIS will be prepared.

The NRC's proposed action is to determine whether to renew the Braidwood, Units 1 and 2, operating licenses for an additional 20 years.

The scope of the SEIS includes an evaluation of the environmental impact of Braidwood, Units 1 and 2, license renewal and reasonable alternatives to license renewal. The Scoping Comments and Responses section of this report includes specific issues identified by the comments. The subsequent NRC responses explain whether the issues will be addressed in the SEIS and, if so, where in the SEIS they will likely be addressed. At the onset of the scoping process, the NRC identified a number of significant issues for this license renewal review. These issues are site-specific to Braidwood, and they are applicable Category 2 issues as listed in Appendix B to Subpart A of 10 CFR Part 51. Among the significant issues that were identified in the scoping process are the potential groundwater impact related to tritium release and water usage.

Throughout the scoping process, the NRC staff identified and eliminated peripheral issues. This report provides responses to comments that were considered to be peripheral and will be evaluated no further. Those that were significant or have not been covered by another environmental review by the staff will be evaluated in detail and documented in the appropriate sections of the SEIS for Braidwood license renewal.

The staff identified other related environmental impact statements (EISs) that have been prepared by the staff, in accordance with 10 CFR 51.29(a)(4). These are the EISs for the Dresden Nuclear Power Station and LaSalle County Station. The applicant's ER identified these plants as located within 50 miles of Braidwood Station. These EISs are related to but are not part of the scope of the EIS for the Braidwood license renewal review.

The NRC staff is required to consult with the National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (FWS), as appropriate, under the Magnuson–Stevens Fisheries Conservation and Management Act and section 7 of the Endangered Species Act to evaluate the potential impacts of continued operation on endangered species. The staff is consulting with FWS as applicable during this review. No endangered species occur near the site, which are under NMFS's jurisdiction. In addition, essential fish habitat does not occur near the site. Therefore, the staff has not initiated consultation with NMFS as appropriate.

The NRC staff plans to comply with section 106 of the National Historic Preservation Act (NHPA) in connection with meeting the requirements of NEPA. In accordance with 36 CFR 800(c), the NRC intends to use its process and documentation for the preparation of the SEIS for the proposed action to comply with section 106 of the NHPA in lieu of the procedures set forth at 36 CFR 800.3 through 800.6. To fulfill its obligations, the NRC initiated consultation with the Advisory Council on Historic Preservation, the Illinois Historic Preservation Officer, and Indian tribes who were considered to have historical ties to the vicinity of Braidwood. The following tribes are being consulted:

- Citizen Potawatomi Nation;
- Forest County Potawatomi;
- Hannahville Indian Community, Band of Potawatomi;
- Ho-Chunk Nation;
- Kickapoo Tribe in Kansas;
- Kickapoo Tribe of Oklahoma;
- Miami Tribe of Oklahoma;
- Pokagon Band of Potawatomi;
- Prairie Band of Potawatomi Nation;
- Sac and Fox Nation;
- Sac and Fox Nation of Missouri in Kansas and Nebraska;
- Sac and Fox Tribe of the Mississippi in Iowa/Meskwaki Nation; and
- Winnebago Tribe of Nebraska.

The staff lists the consultation with agencies and Indian tribes in Appendix C of the SEIS as appropriate. The staff did not identify any cooperating agencies for the Braidwood license renewal review. The staff expects to publish the draft SEIS in 2014.

The staff will prepare the SEIS with contract support from Ecology and Environment, Inc. (E & E). E & E will provide expertise for the review areas of Air, Meteorology, and Alternatives. In addition, BLH Technologies, Inc., will provide contract support for technical editing for the scoping summary report and the draft and final EISs for Braidwood license renewal.

The NRC invited the applicant, Federal, State, and local government agencies, Indian tribal governments, local organizations, and individuals to participate in the scoping process by providing oral comments at the scheduled public meetings or by submitting written comments before the end of the scoping comment period on September 27, 2013. The scoping process included two public meetings. The meetings were held in the afternoon and evening of August 21, 2013, at the Fossil Ridge Library, 386 W. Kennedy Road, city of Braidwood, Illinois 60408. The NRC issued press releases, purchased newspaper advertisements, and distributed flyers locally to advertise these meetings. Approximately 60 people attended the meetings. Each session began with NRC staff members providing a brief overview of the license renewal process (both environmental and safety reviews) and a detailed NEPA environmental review process. Following the NRC's prepared statements, the floor was opened for public comments. Twenty-four attendees provided oral comments that were recorded and transcribed by a certified court reporter. The transcripts of the comments from these meetings are included in Section 5 of this report. The NRC issued a summary of the scoping meetings in September 2013 (NRC 2013b).

All documents associated with this scoping process are available for public inspection in the NRC Public Document Room (PDR), located at One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852, or from ADAMS. The ADAMS Public Electronic Reading Room is accessible at <http://www.nrc.gov/reading-rm/adams.html>. Persons who encounter problems in

accessing documents in ADAMS should contact the NRC's PDR reference staff by telephone at 1-800-397-4209 or 301-415-4737 or by e-mail at [pdr.resource@nrc.gov](mailto:pdr.resource@nrc.gov).

In addition to the public comments received at the August 2013 meetings, the NRC received four additional comment submissions related to the scoping of the SEIS. The ADAMS accession number for each meeting transcript and written submission is listed in Table 1 of this report.

At the conclusion of the scoping period, September 27, 2013, the staff reviewed the transcripts, meeting notes, and the four written communications received and docketed in ADAMS in order to identify individual comments. All public comments are included at the end of this report and are listed in Table 1. Each comment is marked with a unique identifier including the Commenter ID (specified in Table 1) and a comment number allowing each comment to be traced back to the transcript, letter, or e-mail in which the comment is documented. Comments are consolidated and categorized by SEIS subject areas or by general topics if outside the scope of the GEIS. After grouping the comments by subject areas, the NRC staff determined the appropriate action for each comment. The action (where in the SEIS the staff will address the comment) or resolution (why the comment is peripheral to this environmental review and will not be reviewed further) for each comment is described in the staff's responses in this report.

## 2 SCOPING PARTICIPANTS

The comments and suggestions received as part of the scoping process are documented in this report, and the disposition of each comment is discussed in Section 3. Each comment received an identifying number for the purpose of discussion in this scoping summary report. The meeting transcripts and written comments are included in their original format at the end of this report, Section 5.

Comments have been grouped into the following general categories:

- General Comments in Support of or Opposition to Exelon, Nuclear Power, or License Renewal for Braidwood;
- Alternatives to License Renewal of Braidwood;
- Socioeconomic Impact of Braidwood;
- Water Usage or Hydrology;
- Human Health;
- Terrestrial or Aquatic Ecology;
- Plant Closure Planning;
- Comments Beyond the Scope of NRC's Environmental Review:
  - Plant Security and
  - Safety Issues and Aging Management of Plant Systems;
- Comments From Consultation; and
- Climate Change.

In those cases where the commenter did not provide any new environmental information, only a brief response is provided to the comment and no further evaluation will be performed in the supplemental environmental impact statement (SEIS).

The preparation of the SEIS will take into account all the relevant issues raised during the scoping process. The SEIS will address both Category 1 and 2 issues, along with any new information identified as a result of the scoping process. The SEIS will rely on conclusions supported by information in the generic environmental impact statement (GEIS) for Category 1 issues and will include analysis of Category 2 issues and any new and significant information. The U.S. Nuclear Regulatory Commission (NRC) will issue a draft SEIS (DSEIS) for public comment. The DSEIS comment period will offer the next opportunity for the applicant, interested Federal, State, and local government agencies, Indian tribal governments, local organizations, and other members of the public to provide input to the NRC's environmental review process. The comments received on the DSEIS will be considered in the preparation of the final SEIS. The final SEIS, along with the staff's safety evaluation report, will provide much of the basis for the NRC's decision on Exelon Generation Company, LLC's (Exelon's) application to renew the Braidwood licenses. The NRC will issue its Record of Decision in accordance with 10 CFR 51.103 as a part of the issuance of the renewed license, as appropriate.

**Table 1. Individuals Providing Comments During the Scoping Comment Period**

<b>Commenter</b>	<b>Affiliation (If Stated)</b>	<b>Comment Source</b>	<b>Commenter ID</b>	<b>ADAMS Accession Number</b>
Bill Rulien	Braidwood Mayor	Comments from the transcript, afternoon	Braidwood 1	ML13248A191
Lawrence Walsh	Will County Executive	Comments from the transcript, afternoon	Braidwood 2	ML13248A191, ML13247A009
Herbert Brooks, Jr.	Will County Board	Comments from the transcript, afternoon	Braidwood 3	ML13248A191
Seth Jansen	U.S. Congressman Kinzinger Office	Comments from the transcript, afternoon	Braidwood 4	ML13248A191
Rich Girof	Braidwood Police	Comments from the transcript, afternoon	Braidwood 5	ML13248A191
Mark Kanavos	Exelon	Comments from the transcript, afternoon	Braidwood 6	ML13248A191
Mike Gallagher	Exelon	Comments from the transcript, afternoon	Braidwood 7	ML13248A191
John Grueling*	Will County Center for Economic Development	Comments from the transcript, afternoon	Braidwood 8	ML13248A191
Tom Wolf	IL Chamber of Commerce	Comments from the transcript, afternoon	Braidwood 9	ML13248A191
Don Moran*	Will County Board member, Union Sheet Metal Workers, and IL State Rifle Association	Comments from the transcript, afternoon	Braidwood 10	ML13248A191
James King	REED-Custer (CUSD)	Comments from the transcript, afternoon	Braidwood 11	ML13248A191
Doug Obrien	IL Clean Energy Coalition (ICEC)	Comments from the transcript, afternoon	Braidwood 12	ML13248A191
Irfan Khan	Exelon	Comments from the transcript, afternoon	Braidwood 13	ML13248A191
Dee deGroh	Community Advisory Panel (CAP)	Comments from the transcript, afternoon	Braidwood 14	ML13248A191

<b>Commenter</b>	<b>Affiliation (If Stated)</b>	<b>Comment Source</b>	<b>Commenter ID</b>	<b>ADAMS Accession Number</b>
Angie Hutton	Braidwood Chamber of Commerce	Comments from the transcript, afternoon	Braidwood 15	ML13248A191
Chris Rosso	Exelon	Comments from the transcript, afternoon	Braidwood 16	ML13248A191
Dave Kraft*	NEIS - Chicago	Comments from the transcript, afternoon	Braidwood 17	ML13248A191
Sue Rezin	State Senator, 38th District	Comments from the transcript, evening	Braidwood 18	ML13248A191, ML13248A271
Greg Ridenour	U.S. Congressman Kinzinger Office	Comments from the transcript, evening	Braidwood 19	ML13248A191
Denis Forrest	Community/Exelon	Comments from the transcript, evening	Braidwood 20	ML13248A191
Philip O'Connor	Proactive Strategies, Inc.	Comments from the transcript, evening	Braidwood 21	ML13248A191
Steve Quigley	Will County Governmental League	Comments from the transcript, evening	Braidwood 22	ML13248A191
Frank Antos	CAP	Comments from the transcript, evening	Braidwood 23	ML13248A191
Nancy Ammer*	Grundy Economic Development	Comments from the transcript, evening	Braidwood 24	ML13248A191
Alan Keller	Illinois Environmental Protection Agency	Comment from regulation.gov	Braidwood 25	ML13207A105
Tom Zimmer	Braidwood Resident	Comment from regulation.gov	Braidwood 26	ML13263A219
Shawn Cirton	Fish and Wildlife Service	Comment from regulation.gov	Braidwood 27	ML13269A373
Anne Haaker	State Historic Preservation Officer	Comment from regulation.gov	Braidwood 28	ML13269A369
Kent Collier	Kickapoo Tribe of Oklahoma	Comment from regulation.gov	Braidwood 29	ML13274A239
David A. Kraft	Nuclear Energy Information Service	Comment from regulation.gov	Braidwood 30	ML13277A305

\* scoping participant who provided mailing address or e-mail address and requested to be on the NRC distribution list in accordance with 10 CFR 51.28(a)(6)

### 3 SCOPING COMMENTS AND RESPONSES

In this section, the staff provides responses to public scoping comments in accordance with 10 CFR 51.29. In providing the responses, the staff identifies the significant issues to be analyzed in depth and eliminated from detailed study the issues that are peripheral or not significant, or that have been covered by prior environmental review. For those issues that will not be evaluated further, the staff provides (1) a brief explanation of why the issues are peripheral or will not have significant effect on the quality of the human environment or (2) a reference to their coverage elsewhere.

#### 3.1 General Comments in Support of or Opposition to Exelon, Nuclear Power, and License Renewal for Braidwood

The comments in this category are in Section 5 of this report and labeled with the following identifiers: 2-2, 3-2, 13-1, 15-2, 15-4, 16-1, 18-1, 20-2, and 23-1. The comments listed below are extracted from the original sources in Section 5.

Comment 2-2: So, I think that their record, even though not one hundred percent, has been more than satisfactory. We continue to work. We continue to work together in a partnership that only makes it better for all concerned, for the plant and for our communities. But I strongly support, strongly support the re-licensing of the Braidwood Nuclear Generation Station.

And the speaker of the Accounting Board will be up here to speak in a few minutes. But I do have the resolution, Resolution No. 13187 that was [passed] on July the 24th, just last month, in regards to a unanimous support from the county board on supporting the re-licensing. So, thank you.

Comment 3-2: This plant provides consistent and cost effective energy that is reliable for Will County and the entire region. Without this facility, the plant, we would be hard pressed to find a reliable energy source without the Braidwood Nuclear Station. Will County has a good working relationship with this facility and the plant, and our communication with this plant and the County Board has greatly improved. And we're working on further improvement.

Comment 13-1: And our job number one in our organization, our organization at Braidwood is safety. So, every task we perform, we perform it safely and we ensure that it is safely performed.

I'm also part of the North American Young Generation in Nuclear, which is an organization that fosters professional development for employees under 30. And we also have many activities for community outreach and for volunteering. And I just wanted to convey my support for the continued operation of the Braidwood Station.

Comment 15-2: With that, everyone has said how they've helped with the schools, all the events. [They] do the Fishing for the Cure. They've helped with the Red Carpet Corridor event. More than they know, they've helped with that.

With that being said, helping with all the events, it has had to open the communication because you can't go to an event or talk to them without something coming up about the plant. So, they do have to answer everyone here in town frequently. They definitely made a big difference here in town.

I had not been, as the Chamber President, and I also have, you know, with what I do for work, with people I meet, I have not had anyone say to me that they should not have their license renewed. So, with that, the Chamber would like to see the Braidwood Station's license renewed.

Comment 15-4: And as Dee said, the CAP, we go in there and they have no idea what questions we're bringing. Anything that the public wants to know, anything that we want to know, and they do answer it right away, and if not, it's at the next meeting, but they have no idea. And with all that they do for support, they're meeting people every day with no idea what people on the street are going to ask, and they do answer it. And that, in this day and age, is a big deal, there's no, well, I'll get back to you or let me see what I can find out, they do answer it.

So, with that and the support that they've given us, and Exelon will be speaking at our next chamber meeting, so, and they'll have no idea what those people are going to ask that morning. With that, we would like the license for the station to be renewed.

Comment 16-1: So, it's an industrial safety aspect that really bleeds over into every aspect through -- engineering department into the environmental side and really beyond. So, as a new member in nuclear, I'm extremely impressed, excuse me, impressed at the culture that's at Braidwood and it's something that even if I move on in nuclear, I'll always take with me. So, thank you.

Comment 18-1: Since I won't be near Rockville, Maryland anytime soon, thank you for the opportunity to make the comments here tonight. It's much more convenient. Just briefly I'd like to say, my senate district is a high energy producing district, and with it we have three nuclear power plants in here. Exelon has been an excellent company for our communities in terms of, you know, reaching out to the communities, but also providing good paying jobs in the area as well. So, we appreciate them. We also appreciate you being here as they're going through the re-licensing, and anytime that we've had any questions with them, they're very responsive to us and we appreciate that as well.

Comment 20-2: As an employee, I'm a maintenance analyst at Braidwood. I'm proud to say that I was part of the start-up team from the 1980s, so I've been there quite a while. Not only is the equipment updated, but the people are updated as well, we are developed, so thank you to Exelon, they've developed me as well.

As I get new employees into the site, I'm so proud of our plant and the way that it looks and the perception when you see it, that I take my people for tours out in the plant so that they can talk to their neighbors and say, wow, that is just a great operation. It's not scary when you actually see it. It's all the talk behind the scenes, when you don't actually get to witness it and see how clean and how professional it is.

Safety, so I am a community, I am community, Mark knows I say that all the time. So when we tied into the septic, or the sewer, selfishly I was worried about how that would, how my toilet would handle that at home. Pleased to announce no problems at all. So I'm always worried about the community aspect.

They are an excellent neighbor. The plant doesn't stink, it's not loud. When we do night activities we notify the community. It's just a respectful company to work for.

Lastly, industrial safety, radiation safety, I have no fears at all being, living in the community and living my entire life in the community. We have so many systems, so many controls and so many monitors in place, and even with all that, you still, you have to have a culture. If you have the people and the equipment in place but you have a culture that doesn't support that questioning attitude of being your brother's keeper and looking out for everything, then you're not going to have a, you're not going to succeed in this business.

The expectation at Braidwood, and at any Exelon plant, is that if you see something that doesn't look right, you bring it up. We don't hide anything, we put it out there in the open and then we address it. And that's everybody's, everybody's responsibility, it's not just for Mark, it's not just for the manager, it's for the clerical person all the way up, the contractor, anybody to bring it up. So knowing that culture, and that is the expectation, I'm grateful to be at Braidwood and I would like to be extended as well.

Comment 23-1: As a long time resident of the area, I don't see any problem with them getting renewed on their license. They've been excellent, good neighbors. All I can tell you, that's, go for it.

**Response:** *These comments are general expressions of support for Exelon, nuclear power, or license renewal of Braidwood.*

*The comments provide no new and significant information for the environmental review and will not be evaluated further in the development of the SEIS.*

### **3.2 Alternatives to License Renewal of Braidwood**

The comments in this category are in Section 5 of this report and labeled with the following identifiers: 1-1, 1-3, 2-5, 4-2, 7-1, 7-2, 9-1, 10-2, 10-4, 11-2, 12-1, 12-3, 19-2, 21-1, and 30-3.

**Response:** *These comments refer to energy-source alternatives to license renewal of Braidwood, such as wind, solar, etc., including the "no action" alternative. Energy-source alternatives will be addressed in the SEIS. Appendix A of the SEIS will include expanded responses to these comments.*

### **3.3 Socioeconomic Impact of Braidwood**

The comments in this category are in Section 5 of this report and labeled with the following identifiers: 1-2, 1-4, 2-1, 2-3, 2-4, 3-1, 4-1, 5-1, 6-4, 6-8, 8-1, 8-2, 8-4, 8-5, 9-2, 10-1, 10-3, 11-1, 12-2, 12-4, 14-3, 18-2, 19-1, 20-1, 21-2, 22-1, 24-1, and 30-2. The comments listed below are extracted from the original sources in Section 5.

Comment 1-2: Now, not too long, probably about 1980, I was doing a little bit of construction in the Goose Lake area, which is near the Dresden power plant. I was working for a construction company. And I noticed that people were building houses nearby. And I wondered about that, how that would work out.

Well, all I can tell you is for 25 years, we have lived side by side with nuclear power plants in Braidwood now that are operated. A benefit from that is good jobs. They contribute to our tax base for our library, our schools, and our fire department. It's been really good for our economy from that point of view.

They've been generous to our communities. And Godley, they've spent millions of dollars to build a water system for the people at Godley. And Braceville, they've spent millions of dollars that subsidize that city. Our food pantry, they contribute thousands of dollars of help to our food pantry and many other projects in our communities. Last year they helped out our city with \$15,000 to buy an electronic sign and to help out with our little tourist attraction we're trying to build for Route 66 to improve our economy here in Braidwood.

Comment 1-4: In about 1980 I was doing a little construction work out by Goose Lake, and it seemed that folks were starting to build houses out by nuclear power plants, and I thought that was a pretty remarkable thing. Well, for 25 years we in the Braidwood area now have lived side by side with working nuclear power plant, and it's brought many benefits to our area. They include good jobs, contribution to our tax base has been enormous, for our library, our schools and our fire district.

They've been generous to our community. Kindly they've given millions of dollars to create a water system there in Braceville, millions of dollars in subsidy, food pantry, thousands of dollars in help to our food pantry, help our needy, and many other projects too numerous to mention. Last year they helped out the city when I asked them to help us buy the electronic sign outside of city hall, and to help us create a tourism spot that we hope will help us create tourism energy and economic benefit on Route 66.

So, they've been a really good neighbor, and I just wanted to say that a guy here earlier today, he mentioned that, you know, his whole thing was what's going to happen if the power plant was to close down. Well, you know, we think about those things, and my administration's planned on those things, and we're planning to use the money we get in this area from our nuclear power plant and the good jobs and everything to help prepare us for that future. We've set aside acreage for industry and things like that, and we intend to be ready for that date.

But I also, personally, believe that the infrastructure that's there on that power plant site But I also, personally, believe that the infrastructure that's there on that power plant site now, they will develop a way to use that, because they're going to have a major investment in that site, and they might build Braidwood three and four there, I don't know, it'll probably be after I'm long gone, but I look forward to that.

Comment 2-1: As the Mayor has said, Braidwood Nuclear Generation Station has been a good neighbor. We've had our ups and downs and we've had our bumps in the road. And issues like tritium that we never maybe even knew of ten years ago became a part of our vocabulary.

But with that came the willingness when we brought this issue forward to the station, Braidwood, their willingness to work with us, to work with the community. It opened the door of transparency that wasn't there before, that opened the door of communications that wasn't there before, meaningful communications, meaningful transparency.

And as the Mayor said, a nuclear power plant located here in the southwest portion of Will County in Braidwood, 800 to 900 good paying jobs. Jobs that can support a family. Jobs that can support a community. Jobs that can support the other governmental entities such as schools, fire protection district, police departments; all of those are beneficiary of having a neighbor like the Braidwood Generation Station.

Comment 2-3: WHEREAS, a strong, diverse and competitive energy generation industry not only brings direct economic benefit in the form of high-paying, skilled jobs, it also supports thousands of additional jobs across the economic spectrum.

Comment 2-4: WHEREAS, the Braidwood Generating Station employs nearly 900 full-time staff and supports thousands of additional jobs through vendors and maintenance contracts benefiting area building trades and small companies.

WHEREAS, the Braidwood Generating Station creates additional community benefits through tax payments, charitable involvement and sponsorships and maintaining wildlife habitat available to area sportsmen.

Comment 3-1: And this plant supports many jobs, not only locally here in Braidwood but all over Will County and even outside of Will County, and of that we're very proud.

Comment 4-1: This facility provides lower energy costs for residents and businesses and supports hundreds of high-paying jobs in Illinois, while helping to ensure state compliance with federal Clean Air Act regulations. It will undoubtedly play an important role in meeting the energy needs of Illinoisans well into the future.

Nuclear energy production plays a critical role in Illinois, where nuclear energy generates 48 percent of the state's electricity and employs nearly 5,000 skilled workers. I can attest to the value of the Braidwood generating facility has to its local residents and communities, which benefits through reduced energy costs, high-quality jobs and significant tax revenue.

Comment 5-1: It does supply a lot of jobs, helps the school a whole lot in the taxing bodies. I know there [have] been some issues in the past. But we still have people moving in. It's a great place to live. Anything that I can do to help people through Exelon is, like I said, we talk back and forth all the time. They invite you out for lunch, dinner, whatever.

But, all I want to say it's a great place and the jobs, the support, the family that lives here that are supported. And everybody said everything there is to say, you know? And I appreciate their help.

Comment 6-4: Our investment in the future doesn't stop with investment equipment. We've hired 152 new employees in the last two years, and we maintain a workforce of approximately 850 employees.

During our annual maintenance and refueling outages, that population grows temporarily to between 1,500 and 2,000 additional workers to the area which brings a significant boost to the economy.

Comment 6-8: To ensure that Braidwood continues to operate safely for years to come, Exelon continues to invest in Braidwood. We've spent millions of dollars each year to improve and modernize our equipment and enhance our plan operations and safety systems. Our investment in the future doesn't stop with the equipment. We've hired 152 new employees in the last two years, and we maintain a workforce of approximately 850 employees.

During our annual maintenance and refueling outage, that population grows by another 1,500 to 2,000 employees, bringing a boost to the local economy. We also take pride in our investments in the community.

Comment 8-1: Since 1990, Will County had more than doubled its population to just under 700,000 people. And we have become one of the fastest growing employment centers in the Chicago metropolitan area. Will County is also home to the largest inland container port in North America, supporting global freight movement.

Comment 8-2: The Braidwood facility itself is an economic engine for the region. With over 850 good paying jobs and an annual payroll of \$82 million, Braidwood is one of the largest

employers in Will County. In addition, the facility made \$20.7 million in tax payments in 2012, local tax payments. The significant contributions that Exelon Generation and its employees make to the local community cannot be overstated.

Comment 8-4: We support critical infrastructure investments as well, such as energy infrastructure, to make sure that the investments and reinvestments are being made appropriately to serve our rapidly growing area. Since 1990 Will County has more than doubled in population to where today we're just under 700,000 people, and we've become one of the fastest growing job generators in the metro Chicago area. We're also home to the largest Inland Container Port in North America, supporting global freight movement.

Comment 8-5: The Braidwood facility itself is an economic engine for the region. With over 850 good paying jobs and an annual payroll of \$82 million, Braidwood is one of the largest employers in Will County, and certainly one of its most significant. In addition, the facility made \$20.7 million in tax payments in 2012. The significant contributions that Exelon generation and its employees made to the local economy cannot be overstated. Support for groups like the United Way, Fishing for a Cure, and other local and business, local business and civic associations are critical to the fabric of our community in this part of Will County.

Comment 9-2: At the same time, nuclear generation employs thousands of Illinoisians and [injects] billions of dollars into our state's economy every year. In today's political world, it's hard to get any kind of serious energy policy going and it's hard to predict how new technologies will affect future electricity generation opportunities, but it doesn't take a nuclear physicist, and I'm not a nuclear physicist, but it doesn't take one to figure out that a diverse reliable supply of electricity will create cost competitive power that our economy and our businesses need to thrive.

So, in that light, because Braidwood has been a key part of Illinois' nuclear fleet, which has in turn been a critical part of Illinois' electricity infrastructure, because Exelon has shown itself to be an excellent, responsible owner and operator of the Braidwood generation facility and its other nuclear plants in Illinois and across the country, and because Braidwood is such a benefit for the community in terms of employment, tax revenue, direct and indirect spending and community involvement, for all those reasons and more, the Illinois Chamber of Commerce strongly supports this application and hopes you see fit to grant Exelon the license renewal.

Comment 10-1: Beginning in the fall of 2007, a full year before the rest of the country's economy was affected, the construction industry was decimated by the worst case of unemployment it had seen since the Great Depression. Literally thousands of our members lost their jobs, their homes, their families during the next five and-a-half years of economic plight.

One bright spot during all of those years has been the construction jobs provided during refueling and upgrading of Braidwood Station. Having been involved in the building and maintenance of the station over the past 30 years, I'm very confident in the continued safe operation of the plant into the future, and I'm thankful for their commitment to the local trades by providing good jobs and benefits to local people.

Comment 10-3: Beginning in the fall of 2007, a full year before the rest of the country's economy was [a]ffected, the construction industry was decimated by the wors[t] case of unemployment it had seen since the great depression. Literally thousands of our members lost their jobs, their homes, their families, during the next five and a half years of economic blight.

One bright spot during all those years has been the construction jobs provided during the refueling and upgrading of the Braidwood Station. Having been involved in the building and maintenance of the station over the past 30 years, I'm very confident in the continued safe operation of this plant into the future, and I'm thankful for their commitment to local trades by providing good jobs and benefits to people.

Comment 11-1: We employ about 300 folks in various capacities, everything from bus drivers and custodians through teachers and administrators. Our current budget is just approaching \$25 million a year and 77 cents of every dollar comes from Exelon. At one time, that was closer to 96 cents on the dollar.

Our district could not exist without Exelon's presence. Exelon provides our source of funding, the revenue that we need to educate these kids, and a lot of these children have grown up and they are now working at the nuclear plant. I know because I educated them at Joliet Junior College and they're maintenance and IM mechanics at Exelon.

Comment 12-2: But as was noted earlier in the discussion of the EIS process, a big part of our environment is also our quality of life. So when it comes to jobs that are created, when it comes to benefits to the community, when it comes to tax revenues that are generated, those are very, very important parts of the assessment of environment impacts. It does not just go to impacts on eco systems. It's a comprehensive look and that's why everybody's voice here is relevant.

Comment 12-4: And I think it's also important to note that while we care tremendously about the local impacts, the environmental impact statement that we're talking about primarily here looks at a broad range of issues. In addition to local environmental issues, it looks at quality of life issues, [and] revenues that are created. [J]ob creation and economic impact are all part of the environmental impacts of the Braidwood Generating Station.

Comment 14-3: The station, the Braidwood Station has been really a wonderful neighbor, because they're not only employing people in the area and helping to feed tax money into our schools and fire department and police and library, et cetera. They are interested in community organizations and help all of us, including the Historical Society and the Lions Club and Park District and many such groups, Chamber of Commerce and so on. So, they're really wonderful neighbors and they support all of these groups, and when they do that it makes our town more viable, more lively, more full of life because they're helping us to continue in day-to-day issues.

Comment 18-2: The Braidwood station employs over 800 people in high paying-skilled jobs. The Station contributes hundreds of millions directly into our local economy, supporting local vendors and employing scores of trade union members on regular maintenance projects.

Furthermore, Braidwood is the backbone of our electricity generation in Illinois and in the Midwest. It produces large amounts of energy safely, consistently and cost effectively. This helps keep Illinois' manufacturing, technology and service industries competitive in global markets and also helps attract new businesses to our area. The plant is also an important component to ensure better air quality in Northern Illinois.

Comment 19-1: This facility provides lower energy costs for residents and businesses, and supports hundreds of high paying jobs in Illinois, while helping to ensure state compliance with federal clean air act regulations. It will undoubtedly play an important role in meeting the energy needs of Illinoisans well into the future.

Nuclear energy production plays a critical role in Illinois where nuclear energy generates 48 percent of the state's electricity and employs nearly 5,000 skilled workers. Having visited the Braidwood Generating Facility, I can attest to the value it has to local residents and communities, which benefit through reduced energy costs, high quality jobs, and significant tax revenue.

Comment 20-1: We do all of our shopping in Braidwood, we see the physicians in Braidwood, even the people who don't live in Braidwood still use all the services that Braidwood offers. When I hear the truck go by spraying for mosquitoes at night I think, Braidwood may have impacted that by their tax money, so.

How, the impact, so I live on Bodeen Drive. My neighbors on both sides of my house are directly impacted by Braidwood Station, either as a contractor or as an employee. My neighbor on the back side of me is an operator. A block away from me two employees from Braidwood Station. My son-in-law lives on Third Street, his neighbor is a contractor. So Exelon and Braidwood Station ha[ve] a direct impact on the economy, just from a personal perspective.

Whenever I go to the grocery store or I'm at the mine, I'm always running into people that I work with, even the people who don't live locally, just out of convenience they'll stop at the grocery store. [O]ur gas is cheaper here. [W]e gas our cars here. Our taxes are cheaper here, so purchases are sometimes cheaper.

So, not only for the Exelon employees but also family-owned contractors. We support a lot of contractors by bidding out business at the plant, so a lot of them are also impacted directly.

Comment 21-2: So Byron and Braidwood are no longer owned by a utility, it's true they're affiliated with ComEd, but they are not part of the utility rate base, and they have been operating successfully as fully competitive assets in a highly competitive generation market. So the bottom line here is that Braidwood and Byron, if they are allowed to operate well into the future by being re-licensed, are likely to continue to play a positive role in maintaining Illinois' advantageous electricity price position, and that, of course, is a big plus for job creation and prosperity in Illinois.

Comment 22-1: And one of the things, Mr. Greuling took about half my speech so I just left my notes on the thing, but we do represent almost 700,000 residents. Economic development is a very important aspect of what mayors do in their communities. John does it in a bigger picture, our mayor's do it, you know, for their own communities. Having clean, efficient service and reliability is a great economic benefit when mayors are going out and trying to do outreach to bring businesses into their communities, and the Will County community as a whole.

Comment 24-1: The robust energy market has been good for consumers, and it has also been good for existing businesses as well as in the attraction efforts of new businesses, especially as we're seeing some reemergence of manufacturing in our area, that have very energy-intensive types of businesses so that we are now, have statistically, the employment, the lowest in the country. It just gives more validation to what we've been working on.

The quality jobs that we see at Braidwood, that we see at Dresden, that we see at Exelon cannot be understated, especially in this environment of high unemployment. When you take those 800 plus jobs with excellent payroll, excellent benefits, multiple it by three, by all three of the stations, and all of a sudden you start to see significant impacts of payrolls in excess of \$80 million here, multiply that by three with the three stations, employment of over 2,500.

**Response:** *The comments provide no new and significant information and will not be evaluated further. The comments highlight the socioeconomic benefits provided by the utility (operating company and its services) and the nuclear power plant (operation of the plant).*

Comment 30-2:

Analysis of socio-economic impacts are incomplete. No analysis of impacts of early or unexpected closure are considered or provided.

The Exelon ER documents a significant local tax impact for the presence of the Braidwood Nuclear Station, yet only addresses the positive impacts. No mention or analysis of negative impacts resulting from abrupt, planned, or unexpected early closure of Braidwood is presented. This is a significant omission.

According to the Exelon ER Braidwood represents less than 2% of the Will County total tax base, roughly \$20 million annually for the years 2008 through 2010. However, it accounts for upwards of 78% of the Reed-Custer School District 255U's adjusted property tax levy. These are not insignificant amounts for the local communities around Braidwood, as opposed to the county as a whole. Their abrupt disappearance would wreak local economic havoc on the affected governmental and essential service entities' ability to operate; while leaving Will County as a whole largely unaffected.

The ER either fails to recognize or mention at all some of the possible events that could result in such a situation:

- Unexpected major accident, resulting in immediate and presumably premature closure
- NRC ordered shut down
- Exelon's unilateral decision to close the plant on economic or other grounds, as it did at Zion, resulting in an immediate loss of about 55% of Zion's tax base
- Devaluation through sale, as occurred at the Clinton station, resulting in enormous loss of tax base
- Eventual old-age, license expiration closure (the outcome most hoped for)

Exelon even provides a possible indication of the kinds of circumstances that would lead it to close Braidwood on economic grounds. Section 3.2 on Refurbishment indicates that Exelon is well aware that Braidwood Unit 2 may need a steam generator replacement during the extended operational lifetime. It is also tracking the potential for reactor vessel head replacements at its operating PWRs at both Byron and Braidwood. Should either or both of these conditions emerge at a time of deflated energy prices, or at a time Exelon acknowledges might occur as early as 2024 when renewables are much more cost competitive and approaching base load capabilities (Sec. 7.2, page 7-9), or as the result of multi-season drought curtailing water availability - Exelon being a business will certainly make the calculations it made when it closed Zion, and decide if Braidwood should continue to operate.

In this omission the ER makes the same mistake the U.S. Government made when it invaded Iraq - *it had no exit strategy*. To simply assume that the only socio-economic effects of Braidwood's presence will be positive ones is simply irrational.

Finally, the Exelon ER is somewhat dismissive of the effects that Braidwood seems to have on local property values. Exelon seems to focus primarily on “property value,” as opposed to salability, which anecdotally seems to be of much greater concern in the communities directly surrounding the reactor site. It matters little what your property is “worth” if you are trying to sell it to move out of the area and can’t. Such figures should be easy to obtain from local realtors, and should be included in t[h]e ER.

**Recommendation:** Planning for some kind of eventual closure must be made long before it happens to minimize economic and service disruptions to the entities whose tax base will be affected. Debate about the license extension serves as a good reminder of this fact, and an opportunity to take action. We recommend that dependent governmental and taxing entities begin formal negotiations with Exelon to establish an escrowed “closure mitigation fund,” based on some mutually agreeable assessment and payment structure, so that dependent entities will have some kind of temporary funds available to soften the economic blow of closure, and not radically disrupt essential services. Salability of property should be investigated and reported more directly, especially in the communities adjacent to the plant.

**Response:** *Comment 30-2 addresses the negative socioeconomic impacts on local and regional communities and economy, resulting from abrupt, planned, or unexpected early closure of Braidwood. Socioeconomic impacts of license renewal will be addressed in the SEIS. Appendix A of the SEIS will include expanded responses to this comment.*

### **3.4 Water Usage or Hydrology**

The comments in this category are in Section 5 of this report and labeled with the following identifiers: 6-2, 6-6, 25-1, 26-1, and 30-1.

**Response:** *These comments address the impacts of Braidwood on surface and groundwater use and water quality, which will be addressed in the SEIS. Appendix A of the SEIS will include expanded responses to these comments.*

### **3.5 Human Health**

The comments in this category are in Section 5 of this report and labeled with the following identifiers: 6-1, 6-5, 8-3, 8-6, 15-1, and 15-3.

**Response:** *These comments address the impacts of radiation effects on human health, which will be addressed in the SEIS. Appendix A of the SEIS will include expanded responses to these comments.*

### **3.6 Terrestrial or Aquatic Ecology**

The comments in this category can be found in Section 5 of this report and are labeled with the following identifiers: 6-3, 6-7, and 27-1.

**Response:** *These comments address the impacts of Braidwood on the terrestrial or aquatic ecology which will be addressed in the SEIS. Appendix A of the SEIS will include expanded responses to these comments.*

### 3.7 Plant Closure Planning

The comment in this category is in Section 5 of this report and labeled with the following identifier: 17-2. The comment listed below is extracted from the original source in Section 5.

Comment 17-2: You need to not just look at the benefits of having a nuclear power plant in your neighbor. But perhaps the re-licensing should remind you that it is inevitable that this facility will close some day. Now, I know you're all hoping that that someday will be 60 years in the future and everything's going to fine with the plant and you'll never lose six million gallons of tritium again. But reality doesn't always cooperate.

You know, there are unforeseen incidents that came up. I guess you could ask the Japanese about that and you can probably even ask some of your own people in terms of the tritium issue. That was not a planned release. You know, we could run the laundry list of disasters. You know, everything from Challenger and Columbia down to Chernobyl, Fukushima, Windscale, Fermi 1, Santa Susana, and on and on and on.

The point is, the world doesn't always cooperate and at some point in the future, if this plant is closed on an emergency basis, all of those benefits you described will cease with the tax base goes away. So, the message I left with the people in the Rockford and the Byron area yesterday was this may be an opportunity for you to sit down, you the financial planners, you the elected officials, to sit down with Exelon and start examining what closure is going to look like.

We didn't have an exit plan for Iraq and it really didn't serve us well. I think now is the time is to begin looking at an exit plan for when a nuclear facility has to close. As I said, our organization, I'm sure everybody in this room wants it to be quietly, peacefully after a long life of production. But, again, reality doesn't always work out that way.

And I brought two examples last night that I think you need to pay attention to and perhaps those of you who are CFO's and elected officials here should talk to the officials in Lake County and down by the Clinton site in central Illinois because in 1997 when Exelon, excuse me, when Commonwealth Edison made the executive decision to close the Zion nuclear plant, that community lost \$5 million of its tax base overnight.

So, I ask you, what will you do when you come in on Wednesday morning and 70 percent of your school budget is gone? Unless there's a plan in place that softens the economic blow of the eventual closure of the nuclear facility, you leave your community open to the pitfalls of the company town. When they pull out, all the benefits go with them. If you don't plan today, it will be devastating for the community of the future. So, now is the time to really start making those plans.

And it kind of reminded me of the old Aesop's fable of the grasshoppers and the ants. As long as it's summertime and things are great, the grasshoppers are having a great time. But the ants are sweating it out and doing a little bit of drudge work in the advance knowing that things aren't always so great and winter comes along.

So, I would like for you in the community to consider making that part of your process of examination of whether this license should be renewed or not. And, you know, that's something you're going to have to sit down and talk to the Exelon people about.

Back in 1997, I mentioned to the then state public official, Adeline G. O'Karus in the Zion community that perhaps an escrow fund needs to be set up now for over a period of time some money is put into it. It's kept intact out of general revenues so that when the plant has to close, whether it's from an emergency of some kind, whether it's from government decree in Washington or whether it's normal closure, you have some sort of a fund that the communities can draw on to soften the economic blow.

**Response:** *The comment was directed at the Braidwood community leaders, regarding advance transitioning planning by the community for the eventual closure of the Braidwood Station. Since the comment was directed at the Braidwood community leaders, the staff will not respond to the comment.*

*The comments provide no new and significant information for the environmental review and will not be evaluated further in the development of the SEIS.*

### **3.8 Comments Beyond the Scope of NRC's Environmental Review**

The comments in this category are in Section 5 of this report and labeled with the following identifiers: 14-1, 14-2, 14-4, and 17-1. In summary, these comments refer to plant safety and security. The comments listed below are extracted from the original sources in Section 5.

Comment 14-1: According to the meeting I attended August 8th, the NRC held at the city hall, the Braidwood Station had met and maybe exceeded the expected safety and security performances. And we welcome a license renewal by the NRC of our Braidwood Station because they really have been a good neighbor. And I thank all of you.

Comment 14-2: At any rate, the concerns about the safety and health issues were alleviated during those, that time, and it took 12 years to build the plant and open it, it opened in '88, and at that time the community was allowed to go in and see the plant. I was fortunate enough to be one of them, and very, very impressed with all of the security concerns and health issues and just getting in and out at that time.

And then I joined this Community Advisory Panel a few years ago when it was started, and we got to tour the plant, and with the changes and additions due to 911, it's unbelievable what security one goes through, on a daily basis if you're an employee and have to get into the plant every day. It took us, well of course there was about 15 of us, 12 of us maybe going on that tour, but it took us a good 20 minutes or more. You may have read in the Braidwood Journal last week the reporter had just taken a tour and she was just in awe of what she saw and all the security she went through.

Comment 14-4: And, I went to the presentation August 8th at City Hall by NRC, and at that meeting they made it very clear that Exelon has met, if not exceeded, all their expectations regarding safety. And because of that, I just welcome the approval of the renewal license for our good neighbor, Exelon.

**Response:** *The comments are beyond the scope of the license renewal environmental review. The NRC addresses plant performance, including operational safety and security, as part of the ongoing regulatory oversight provided for all currently operating power reactors. Therefore, the NRC does not reevaluate current operation as part of the license renewal review. This is consistent with 10 CFR 54.30, "matter not subject to a renewal review."*

*The NRC staff safety review addresses the aging management of structures and components within the scope of the license renewal separately from the environmental review. The staff examines Exelon's programs and processes designed to manage the effects of structure and component aging and to ensure adequate protection of the public's health and safety during the 20-year license renewal period. This may result in additional aging management measures as necessary. The staff documents its safety review in the Safety Evaluation Report related to the Braidwood license renewal.*

*For security review, security issues are periodically reviewed and updated at every operating plant. As a part of the NRC oversight activities, the staff performs these reviews throughout the period of an operating license, whether the original or renewed license. The staff will address any identified security issues promptly, in accordance with the Braidwood license, including order issuance to ensure compliance.*

*Information on the background of nuclear security and past security orders issued by the NRC to nuclear power plants, including Braidwood, can be found at:*

<http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/security-enhancements.html>

and

<http://www.nrc.gov/reading-rm/doc-collections/enforcement/security/>

*The comments do not provide new and significant information for this environmental review and will not be evaluated further in the development of the SEIS.*

## **Safety Culture**

Comment 17-1: So, our first comment actually goes towards the Nuclear Regulatory Commission itself.

And what we urge the Commission to do in the process of re-licensing this and other plants is to take a qualitatively different attitude towards their safety culture, which they are aggressively promotion amongst those of you who work in the nuclear industry.

I was at a meeting last December at the Palisades plant in Michigan where then Region III Director Chuck Castro made some remarks about NRC safety culture. And he put up some view graphs and today I brought them with me. I didn't have them with [me] yesterday.

I just want to read it to you. The NRC believes that the definition of a nuclear safety culture is the core values and behaviors resulting from a collective commitment by leaders and individuals to emphasize safety over competing goals to ensure the protection of people and the environment. And that sounds great, but it's important to dig a little deeper into what that means so not only I but other people in the audience in Michigan were asking Mr. Castro what would be some of these competing goals? What does this actually mean with the rubber hits the road?

And what he ended up saying actually, I'm quoting him here is, we're trying to go beyond what's required. And that is the message I really want to leave with the NRC, is that these exercises in relicensing need to be more than just a check box exercise of got them, got them, don't got them.

It has to be an attitude that goes beyond what is merely required. Requirements have to be the floor, not the ceiling, of what goes on these processes. And our organization will be participating in the licensing process with that attitude in mind; that, yes, certain things may meet certain very legalistic requirements but in the broader scheme of things, will they actually afford safety over the 20 year extended operating period.

So, we urge NRC to take its own advice and approach the licensing process with that kind of attitude towards the safety culture in mind.

**Response:** *This comment refers to the NRC safety culture associated with the licensing process and the Braidwood license renewal review for the period of extended operation.*

*The comment is beyond the scope of the license renewal environmental review. The NRC staff safety review addresses the aging management of structures and components within the scope of the license renewal separately from the environmental review. This may result in additional aging management measures as necessary. The staff documents its safety review in the Safety Evaluation Report related to the Braidwood license renewal.*

*In support of the NRC's safety goal, the Commission has issued policy on safety culture and the staff has proactively engaged outreach and information dissemination efforts with external stakeholders on safety culture. For example, in March 2014, the NRC issued "Trait Talk," an information tool developed to provide a better understanding of the nine safety culture traits found in the NRC's Safety Culture Policy Statement. The NRC also issued the companion NUREG-2165 - Safety Culture Common Language to (a) further clarify the terms used and (b) provide attributes and examples, in discussing safety culture.*

*The NRC safety culture policy and activities are listed at the Web site below.*

*<http://www.nrc.gov/about-nrc/safety-culture.html>*

*The comment does not provide new and significant information for this environmental review and will not be evaluated further in the development of the SEIS.*

### **3.9 Comments From Consultation**

The comments in this category are in Section 5 of this report and labeled with the following identifiers: 27-1, 28-1, and 29-1.

**Response:** *These comments are part of the consultation process in accordance with 10 CFR 51.28(a)(3), (4), and (5), which will be addressed in the SEIS. Appendix C of the SEIS will include expanded responses to these comments.*

### **3.10 Climate Change**

The comment in this category is in Section 5 of this report and labeled with the following identifier: 30-4.

**Response:** *This comment refers to climate change impacts as a significant environmental issue in general, which will be addressed in the SEIS. Appendix A of the SEIS will include expanded responses to this comment.*



#### 4 REFERENCES

10 CFR Part 50. *Code of Federal Regulations*, Title 10, *Energy*, Part 50, “Domestic licensing of production and utilization facilities.”

10 CFR Part 51. *Code of Federal Regulations*, Title 10, *Energy*, Part 51, “Environmental protection regulations for domestic licensing and related regulatory functions.”

10 CFR Part 54. *Code of Federal Regulations*, Title 10, *Energy*, Part 54, “Requirements for renewal of operating licenses for nuclear power plants.”

78 FR 46379. U.S. Nuclear Regulatory Commission. 2013. “Exelon Generation Company, LLC, License Renewal Application for Braidwood Station, Units 1 and 2.” *Federal Register* 78:46379–46381. July 31, 2013.

[Exelon] Exelon Generation Company, LLC. 2013. *Braidwood and Byron, Units 1 and 2—Application for Renewed Operating Licenses*. Kennett Square: PA, Exelon. May 29, 2013. 3,503 p. ADAMS No. ML131550528.

[NEPA] National Environmental Policy Act of 1969, as amended. 42 U.S.C. §4321 et seq.

[NRC] U.S. Nuclear Regulatory Commission. 1996. *Generic Environmental Impact Statement for License Renewal of Nuclear Plants*. Washington, DC: NRC. NUREG–1437, Volumes 1 and 2. ADAMS Nos. ML040690705 and ML040690738.

[NRC] U.S. Nuclear Regulatory Commission. 1999. Section 6.3—Transportation, Table 9.1, Summary of findings on NEPA issues for license renewal of nuclear power plants, final report. In: *Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Main Report*. Washington, DC: NRC. NUREG–1437, Volume 1, Addendum 1. ADAMS No. ML040690720.

[NRC] U.S. Nuclear Regulatory Commission. 2013a. *Generic Environmental Impact Statement for License Renewal of Nuclear Plants*. Washington, DC: NRC. NUREG–1437, Revision 1. ADAMS Nos. ML13106A241, ML13106A242, and ML13106A244.

[NRC] U.S. Nuclear Regulatory Commission. 2013b. *Summary of Public Scoping Meetings Conducted Related to the Review of the Braidwood Station, Units 1 and 2, License Renewal Application*. ADAMS No. ML13248A191.

## **5 MEETING TRANSCRIPTS, COMMENT LETTERS, AND E-MAILS**

The following pages contain the comments from public scoping meeting transcripts and submittals.

accurate. And the yellow cards are located outside.

And, again, once you get invited to the podium, please introduce yourself.

And at this time, I'd like to start with the first public comment from Bill Rulien, the mayor of Braidwood.

MR. RULIEN: Bill Rulien, the mayor of Braidwood, as she said.

I was about ten years old, I used to get my dad's newspaper and read it. And I started to learn about the first commercial nuclear power plant in the whole country that started producing power. And it was just an amazing thing to me with no fuel and no pollution. And that plant was started by Commonwealth Edison. That's our little Dresden plant over there. They were on the cutting edge of this technology.

Now, when I was about 20, I built my first solar collector. And I also decided to build and experimented with some wind generators. Didn't take me too long to figure out when the wind don't blow, it would make great supplemental power, but could never be reliable as a source of power.

In the 43 years since then, almost nothing has changed. If you want reliable, safe, massed produced pollution free power, you're going

Comment 1-1

to get it from a nuclear power plant. So, as far as we can see in the future, that's what our future holds for us.

Now, not too long, probably about 1980, I was doing a little bit of construction in the Goose Lake area, which is near the Dresden power plant. I was working for a construction company. And I noticed that people were building houses nearby. And I wondered about that, how that would work out.

Well, all I can tell you is for 28 years, we have lived side by side with nuclear power plants in Braidwood now that are operated. A benefit from that is good jobs. They contribute to our tax base for our library, our schools, and our fire department. It's been really good for our economy from that point of view.

They've been generous to our communities. And Godley, they've spent millions of dollars to build a water system for the people at Godley. And Braceville, they've spent millions of dollars that subsidize that city. Our food pantry, they contribute thousands of dollars of help to our food pantry and many other projects in our communities. Last year they helped out our city

Comment 1-2

with \$15,000 to buy an electronic sign and to help out with our little tourist attraction we're trying to build for Route 66 to improve our economy here in Braidwood.

So, we believe here that license renewal is in the best interest of our city. And I thank you for that comment.

MS. RAY: Thank you. I'd like to invite Larry Walsh of the Will County Executive.

MR. WALSH: Thank you very much. Good afternoon, everyone. I am Larry Walsh and I am a Will County executive, Chief Executive Officer of County Government.

I'm here to stand in strong support of supporting Braidwood Nuclear Generation Station's renewal policy.

As the Mayor has said, Braidwood Nuclear Generation Station has been a good neighbor.

We've had our ups and downs and we've had our bumps in the road. And issues like tritium that we never maybe even knew of ten years ago became a part of our vocabulary.

But with that came the willingness when we brought this issue forward to the station, Braidwood, their willingness to work with us, to work with the community. It opened the door of

Comment 2-1

transparency that wasn't there before, that opened the door of communications that wasn't there before, meaningful communications, meaningful transparency.

And as the Mayor said, a nuclear power plant located here in the southwest portion of Will County in Braidwood, 800 to 900 good paying jobs. Jobs that can support a family. Jobs that can support a community. Jobs that can support the other governmental entities such as schools, fire protection district, police departments; all of those are beneficiary of having a neighbor like the Braidwood Generation Station.

So, I think that their record, even though not one hundred percent, has been more than satisfactory. We continue to work. We continue to work together in a partnership that only makes it better for all concerned, for the plant and for our communities. But I strongly support, strongly support the re-licensing of the Braidwood Nuclear Generation Station.

And the speaker of the Accounting Board will be up here to speak in a few minutes. But I do have the resolution, Resolution No. 13187 that was past on July the 24th, just last month, in regards to a unanimous support from the county board on

Comment 2-2

supporting the re-licensing. So, thank you.

MS. RAY: Thank you. I'd like to invite Herbert Brooks, Jr., the Speaker of the Will County Board.

MR. BROOKS: Thank you, Sheila. Good afternoon, everyone. My name is Hebert Brooks, Jr. and as Sheila said, I am the Speaker of the Will County Board. And what I do, I am the leader of the legislative body by Will County Board as Larry, the Executive.

But I'm here today just to let you know that the Will County Board totally supports the re-licensing of the Braidwood Nuclear Plant. And this plant supports many jobs, not only locally here in Braidwood but all over Will County and even outside of Will County, and of that we're very proud.

Comment 3-1

This plant provides consistent and cost effective energy that is reliable for Will County and the entire region. Without this facility, the plant, we would be hard pressed to find a reliable energy source without the Braidwood Nuclear Station. Will County has a good working relationship with this facility and the plant, and our communication with this plant and the County Board has greatly improved. And we're working on further improvement.

Comment 3-2

And ladies and gentlemen, we are in total support of the re-licensing of the nuclear plant here in Braidwood. Thank you so much, Sheila.

MS. RAY: Thank you. I'd like to invite Seth Jansen of Congressman Kinsinger's office.

MR. JANSEN: Hi, my name's Seth Jansen. I'm a field representative for Congressman Kinsinger, and I have a letter that the Congressman is submitting.

I write to express my full support for the renewal of the operating license of the nuclear generating station at Braidwood, Illinois. This

facility provides lower energy costs for residents and businesses and supports hundreds of high-paying jobs in Illinois, while helping to ensure state compliance with federal Clean Air Act regulations. It will undoubtedly play an important role in meeting the energy needs of Illinoisans well into the future.

Nuclear energy production plays a critical role in Illinois, where nuclear energy generates 48 percent of the state's electricity and employs nearly 5,000 skilled workers. I can attest to the value of the Braidwood generating facility has to its local residents and communities, which

Comment 4-1

benefits through reduced energy costs, high-quality jobs and significant tax revenue.

While many areas of Illinois struggle to meet clean air standards, the generating station at Braidwood offers affordable, abundant energy with a fraction of the greenhouse gas emissions as other conventional energy sources.

Comment 4-2

As Americans' and Illinoisans' demand for energy rises, nuclear generating stations like Braidwood will be vital to meeting the energy needs of our citizens. I fully support the operating license renewal for this generating station and believe it will play a critical role in making America and the State of Illinois more energy secure. Sincerely, Adam Kinsinger.

MS. RAY: At this time, I'd like to invite Chief Rich Girof of the City of Braidwood.

MR. GIROF: I didn't know. I just handed her a card and she called on me. That's pretty quick.

I'm Chief Rich Girof. I've lived in Braidwood for about 25 years. I'm also a former mayor of the City of Braidwood and I've had good dealings with Exelon back in the '90's. We communicate all the time, especially with Mr. Miller

back there. We e-mail each other a lot. We have breakfast a lot. I get notifications of anything that goes on in the plant.

Since I've lived here, any problems always come up first. They take care of it and I'm glad I'm living here. I see the plant from my backyard, so no problems.

It does supply a lot of jobs, helps the school a whole lot in the taxing bodies. I know there's been some issues in the past. But we still have people moving in. It's a great place to live. Anything that I can do to help people through Exelon is, like I said, we talk back and forth all the time. They invite you out for lunch, dinner, whatever.

But, all I want to say it's a great place and the jobs, the support, the family that lives here that are supported. And everybody said everything there is to say, you know? And I appreciate their help.

They have donated in the past. They bought two canine dogs for the City of Braidwood. They donated money for equipment for the squad cars. They also donated a lot of ammunition for us. They go out and shoot up. That's hard to get anymore.

Comment 5-1

So, I mean, they're always there as a neighbor. They help us all the time. And even now they have an outage coming up, police department, Exelon, we work together hand in hand for safety reasons.

But I believe in Exelon and I hope them the bet for another 27 years, which I won't be living here in 27 years, but I think they'll do good for the community. So, that's all I have to say. Thanks.

MS. RAY: Thank you. I'd like to invite Mark Kanavos, the Site Vice President of the Braidwood Station.

MR. KANAVOS: Good afternoon. I'm Mark Kanavos and I'm the Site Vice President at the Braidwood generating station. I have the overall responsibility for the safe and reliable operation of the facility, including the coordination and the management of personnel and overall station performance.

A little bit about my background. I have over 32 years of progressive nuclear plant experience. Before taking on my current role as site vice president, I was the plant manager at Braidwood for over two years. I've been the plant manager at the Clinton station in Clinton, Illinois

for over three years, and the Comanche Peak Nuclear Station in Glenrose, Texas. I've also worked in maintenance, project management and engineering.

Operating the station safely and reliably is a key responsibility of all the employees at the Braidwood generating station. The ones that we take very, very seriously and our commitment to ourselves and our commitment to our community and to our industry.

I'm proud to say that we've been a key part of this community for over 25 years. Braidwood generating station operates in a manner that preserves the environment. We maintain a comprehensive radiological monitoring program that extensively monitors the air and the water and the food products around the facility that ensures that we are not adversely impacting the environment.

We also have a comprehensive on-site environmental ground water protection program that can monitor and detect the presence of radioactivity in ground water before it has a chance to migrate off-site. This program includes 19 on-site wells designed to detect and alert us of any unusual level of radiation in the ground water so that we can address any changes that we see quickly. We have

Comment 6-1

detailed procedures which outline how we test all water leaving our station.

Radiation monitors are staged in over 40 locations within a ten mile radius of our station to monitor any radiation of those levels and ensure the safety of the community.

We've also had great success in our tritium re-mediation efforts. In the last seven years, Braidwood has made significant progress. Hydro geologists have confirmed that re-mediation is having the intended effect. As of today, the square footage of land effective by tritium has been reduced by 97 percent. And the highest concentrations of tritium in the ground have been reduced by 99 percent. We will continue to monitor and we still retain the ability to re-mediate via pumping should it become necessary.

Braidwood's environmental management systems are certified under the strictest criteria of the International Organization of Standardization or ISO. Specifically, we receive the ISO 14001 re-certification which is an industry recognition of our environmental efforts.

This is an internationally recognized benchmark for environmental management. The ISO

Comment 6-2

14001 certification requires a commitment to excellence in meeting our regulatory requirements in the prevention of pollution and continuous improvement of our environmental systems.

Last year, the Wildlife Habitat Council recognized Braidwood generating station's commitment to the environmental stewardship by awarding us the Wildlife at Work certification. This distinction was awarded for our commitment to ensuring the continuance of healthy wildlife in and around our plant, and our fish habitat restoration project. The project places artificial habitats in the Braidwood lake that greatly benefit the fish throughout their life. It has greatly enhanced the fishery.

Comment 6-3

To ensure Braidwood continues to operate for years to come, Exelon continues to invest in Braidwood. We spend millions of dollars each year to improve and modernize our equipment and enhance plant operations and safety systems. Our investment

in the future doesn't stop with investment equipment. We've hired 152 new employees in the last two years, and we maintain a workforce of approximately 850 employees.

Comment 6-4

During our annual maintenance and

refueling outages, that population grows temporarily to between 1,500 and 2,000 additional workers to the area which brings a significant boost to the economy.

We also take pride in our investments in our community. Last year, our employees contributed over \$240,000 to the United Way Crusade of Mercy. In our signature event, the Fishing for a Cure at the Braidwood Lake has raised over \$300,000 for charity.

We also support the Braidwood Summerfest, the Braidwood Shoot Out and other numerous community events. Our employees host blood drives, toy drives, fund drives for various groups and agencies. They also volunteer and in short, we try to become the very best neighbor we can.

Over the past 25 years, Braidwood has performed reliably and safely and has set numerous benchmarks in the nuclear power industry. We look forward to our license renewal and work hard on it every day through dedication and to continuous improvement.

In conclusion, we look forward to working with the Nuclear Regulatory Commission in the review of our license application. Thank you

for this opportunity to address the public.

MS. RAY: Thank you. I'd like to invite Mike Gallagher, the Vice President of License Renewal at Exelon.

MR. GALLAGHER: Good afternoon, everyone. My name is Mike Gallagher, and I'm Vice President of License Renewal for Exelon. I have overall responsibility for the Braidwood generating station's license renewal application.

First of all, I'd like to thank the NRC for this opportunity to speak on behalf of Exelon because this project is very, very important to us.

And I appreciate the opportunity to speak.

Exelon has a great deal of experience with license renewal as we have already obtained the renewed licenses for Dresden and Quad Cities plant right here in Illinois and we have three of our other facilities in Pennsylvania and New Jersey, we have renewed licenses also. We've also, an application pending with, under NRC review now, but for our Limerick power plant in Pennsylvania.

So, just briefly about myself. I've been working in the nuclear power industry for 32 years. I was a license senior reactor operator and plant manager of the Limerick generating station in

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Pennsylvania, and I've worked at two of our other nuclear plants and our corporate office.

Mr. Kanavos, the Site Vice President for Braidwood, spoke to you about how rigorously we safely operate the plant and about the reasons for renewing the license. I'd like to speak to you about the process for preparing this license renewal application and the amount of work and engineering analysis that was put into preparing the application.

Because the Braidwood station can operate safely and reliably, Exelon decided to pursue license renewal. Braidwood's safe, efficient operation promotes a critical supply of carbon-free electricity for Illinois and beyond. Braidwood produces enough power, clean power for more than two million homes.

So, in 2011, we announced our intention to seek license renewal for Braidwood and a similar plant, Byron, the generating station that's up in Ogle County. So, later that year we started the work necessary to prepare the application. After over two years of work, we submitted the application to the Nuclear Regulatory Commission on May 29th, 2013.

Safe and reliable operations has been a hallmark of Braidwood station since it came on line and our goal during the license renewal process is to demonstrate to the NRC and to our neighbors that we'll continue this legacy during the additional 20 year operating period.

The application, you know, when you print it out, it's very large. It's about 3,800 pages. And when you put it in a binder, it's about four large binders about this thick. It's a huge amount of information. But that only represents a small part of the work that was done for the engineering analysis to prepare the application. The total amount of this engineering analysis, if we printed it all out, would be about 400 binders of that information. We invested over 90,000 engineering man-hours to complete this work. And once we completed our engineering work to prepare the application, we brought in experts from outside of Exelon to review the application to ensure that it is complete, thorough and accurate.

Our total cost to prepare and get our application reviewed by the Nuclear Regulatory Commission for both Braidwood and Byron stations will be approximately \$45 million. There are two

different parts to this application, the safety review and the environmental review.

For the safety review, we took an in-depth look at the history and condition of the safety equipment in the plant. We did that to determine whether the necessary maintenance was being performed on that equipment and to make sure the equipment will be able to operate safely for an additional 20 years.

So, when you look back at Braidwood when it was built, all the equipment was brand new. It was thoroughly tested to make it would perform properly. But like anything else, equipment does age and therefore we need to do certain activities on that equipment.

Preventative maintenance is performed, sometimes equipment is refurbished. Some equipment may be replaced. There may be modifications done to the plant to upgrade the equipment. In fact, Exelon has invested over \$230 million in the last four years alone at Braidwood to improve and modernise equipment and enhance plant operations and safety.

We also reviewed the calculations that were performed as part of the design of the plant that were done to ensure the plant could operate for

the initial 40 year license. We analyse those calculations, and we're able to confirm that the plant would be able to operate safely for 60 years.

Overall, our conclusion from our engineering view was that Braidwood could operate safely for 60 years.

We also took a look at the environmental aspects and impacts of continuing to operate Braidwood. We looked at all aspects of continuing impacts of the plant on the environment. And our conclusion is that the impacts on the environment are small. And I use the term small in the sense of the regulation. The regulations define small as the environmental effects are not detectable or are minor.

We also reviewed the alternatives if Braidwood would not have its license renewed and another source of electric generation would have to be installed either here on site or someplace else to generate that replacement electricity. We concluded that any other means of generating the replacement electricity would have more have an impact on the environment than the continued operation of Braidwood.

In conclusion, we operate Braidwood

Comment 7-1

safely and we can continue to operate the plant safely for an additional 20 years. Braidwood will provide approximately 2340 megawatts of Basalo generation that's not only safe but it's clean, it's reliable and it's economical. Continued operation of Braidwood will benefit this community, the state and our nation. Thanks for this opportunity.

MS. RAY: Thank you. I'd like to invite John Grueling of the Will County Center for Economic Development.

MR. GRUELING: Thank you. Good afternoon. My name is John Grueling and I'm with the Will County Center for Economic Development. The Will County Center for Economic Development is a private non-profit economic development corporation which has served the citizens and business of Will County for 32 years. Our membership includes the major employers throughout the region, most of which are based here in Will County.

Our primary mission is to assist the retention, the expansion and the recruitment of new business into Will County, certainly focusing on keeping the businesses that are already here making payroll, keep them here and growing.

Additionally, we support critical

infrastructure, investments and re-investments such as what's been going on at the nuclear plant to make sure that we can support our rapidly growing area in the southern part of Will County.

Since 1990, Will County had more than doubled its population to just under 700,000 people. And we have become one of the fastest growing employment centers in the Chicago metropolitan area. Will County is also home to the largest inland container port in North America, supporting global freight movement.

Comment 8-1

The Will County Center for Economic Development is here today to support, in support of Braidwood generating station's license renewal application submitted to the U.S. Nuclear Regulatory Commission on May 29th, 2013. Since 1993, the Braidwood facility has been producing emission free energy to northeastern Illinois, which is a good thing. The CED believes by granting this renewal, the NRC will allow Exelon Generation to continue to provide over 3,360 megawatts of clean energy to the tens of thousands of businesses in the region.

Adequate, reliable, and affordable energy supply has become one of the most important factors when businesses are considering an

explanation or location or relocation. Without it, we cannot here in Will County, successfully compete for good jobs for our residents.

The Braidwood facility itself is an economic engine for the region. With over 850 good paying jobs and an annual payroll of \$82 million, Braidwood is one of the largest employers in Will County. In addition, the facility made \$20.7 million in tax payments in 2012, local tax payments. The significant contributions that Exelon Generation and its employees make to the local community cannot be overstated.

Comment 8-2

Support for the United Way, Fishing for a Cure, local business and specific associations and other very important events are critical to the fabric of the community here.

The CED recognizes that a good environmental steward Exelon is at their Braidwood facility. The radiological monitoring and the ground water protection programs in place today give the community a sense of safety and environmental protection that we expect from a world-class facility like Braidwood.

Comment 8-3

To reiterate, the Center for Economic Development supports the renewal application for the

Braidwood generating station. Thank you.

MS. RAY: Thank you. I'd like to invite Tom Wolf from the Illinois Chamber of Commerce.

MR. WOLF: I'm a short guy, there we go.

Good afternoon, I'm Tom Wolf, Executive Director of the Energy Council at the Illinois Chamber of Commerce, and I'm here today speaking on behalf of the chamber and its members from across the state from every corner of the state, big and small, to ask you to approve the renewal of the Braidwood generation facility operating license because we need to support the continued operation of this vital component of our energy infrastructure.

It's no secret that Illinois continues to face significant challenges to creating and attracting and retaining jobs. But in amid discussions of tax rates, regulation, pension reform and infrastructure improvement, there is one relatively constant asset that helps keep Illinois competitive in the global marketplace: a reliable, abundant, and cost competitive supply of electricity.

To maintain an abundant and diverse electricity supply and to be able to provide that supply at competitive rates, Illinois relies heavily

on its fleet of nuclear generation stations. Illinois has more nuclear power generation than any state in the country. Nearly 45 percent of Illinois' electricity is produced from nuclear power and 90 percent of Illinois' carbon-free electricity is produced from nuclear power. If you want to impress your friends at a cocktail party, test that trivia on the number one state for nuclear. They very rarely guess Illinois.

Whether or not you agree with President Obama's recent push on making America a leader in reducing carbon emissions, every kind of energy generation is looking to improve its cost, efficiency, reliability, and yes, its carbon footprint. While coal and gas remain viable, an important source of electricity and our renewable sector continues to grow, Illinois' nuclear industry combines capacity, reliability, and efficiency without carbon emissions.

At the same time, nuclear generation employs thousands of Illinoisians and ejects billions of dollars into our state's economy every year. In today's political world, it's hard to get any kind of serious energy policy going and it's hard to predict how new technologies will affect

Comment 9-1

future electricity generation opportunities, but it doesn't take a nuclear physicist, and I'm not a nuclear physicist, but it doesn't take one to figure out that a diverse reliable supply of electricity will create cost competitive power that our economy and our businesses need to thrive.

So, in that light, because Braidwood has been a key part of Illinois' nuclear fleet, which has in turn been a critical part of Illinois' electricity infrastructure, because Exelon has shown itself to be an excellent, responsible owner and operator of the Braidwood generation facility and its other nuclear plants in Illinois and across the country, and because Braidwood is such a benefit for the community in terms of employment, tax revenue, direct and indirect spending and community involvement, for all those reasons and more, the Illinois Chamber of Commerce strongly supports this application and hopes you see fit to grant Exelon the license renewal.

Comment 9-2

I want to end in a personal note that I took my fifth nuclear plant tour this week in LaSalle County. I've taken a tour of the Braidwood facility and I wish every American had a chance to walk through that facility. There are two reasons

that doesn't happen. One is they don't care that much, they just want their lights to turn on. And two, the security guards at Exelon's head would explode if I said all Americans were coming to the plant.

But it's too bad that kind of line doesn't happen because if people saw the plant up close and personal, they'd see what the people, what I've seen and what other people that are brought to the plant have seen, professional staff working hard to create electricity in a safe environment and they would even see the NRC working hard as an oversight committee to make sure it's done safely. So, thank you very much.

MS. RAY: Thank you. I'd like to invite Don Moran representing a number of entities.

MR. MORAN: Good afternoon. From 1985 to 1987, I worked at the Braidwood Station as a young construction worker, an apprentice sheet metal worker. Today, I'm employed as a business representative for sheet metal workers and I'll speak not only on behalf of my own local union, but also on behalf of the Will and Grundy building construction trades.

Beginning in the fall of 2007, a full

year before the rest of the country's economy was affected, the construction industry was decimated by the worst case of unemployment it had seen since the Great Depression. Literally thousands of our members lost their jobs, their homes, their families during the next five and-a-half years of economic plight.

One bright spot during all of those years has been the construction jobs provided during refueling and upgrading of Braidwood Station. Having been involved in the building and maintenance of the station over the past 30 years, I'm very confident in the continued safe operation of the plant into the future, and I'm thankful for their commitment to the local trades by providing good jobs and benefits to local people.

Comment 10-1

My frustration with high unemployment led me to run for office. And I was elected to the Will County Board last November. Will County Board recently passed a resolution supporting the license renewal for Braidwood Station as well, and I voted for that resolution.

As Illinois struggles in today's competitive business market, we cannot afford to ignore any of the things that help us put us on

better footing. One of the building blocks to economic development is affordable and reliable electricity. The Illinois's diverse network of electricity generation coming from coal, wind, and nuclear gives us an advantage in enticing new and retaining existing businesses to the area.

Comment 10-2

Unlike the rolling blackouts experienced in California during 2000 and 2001, our local electrical generation and transmission systems have provided consistent reliable electricity and have done so with diminishing cost to consumers as compared to the CPI.

I remember cooling my first home, a tiny 900 square foot house with summer monthly electric bills of over \$200 in the mid-80s. Today, I live in a modest town home about three times that large and pay about \$150 in summer months to cool it. Quite the bargain compared to nearly 30 years ago, especially when considered next to the cost associated with fueling your car or paying for health care.

As the president of the Illinois State Rifle Association, I represent the interest of many outdoors people including fishermen and water fowl hunters, many of whom have benefitted greatly from

the public access to the Braidwood station's cooling lake.

In addition of being a source of reliable electricity generation, Braidwood Station has been a benefit to local school districts, fire protection and other taxing bodies and community, not to mention its commitment to local charities and community events. They've been good stewards to our communities and I'd ask that the NRC renew the license for Braidwood Station. Thank you.

MS. RAY: Thank you. I'd like to invite James King, the Director of Operations at Custer CUSD.

MR. KING: Hi, I'm James King, Director of Operations for the school district. I'm probably the only one that can say that I am a lifelong member of this community. I grew up, I was born eight miles from here and except for a few years for college and a couple of years working out of state, I've been here ever since.

In 1978, I built a house in Custer Park, which is six miles from here. I grew up in Essex, so that's only about eight miles from here. I've been a former member of the Re-Custer Board of Education for 16 years. I spent 22 years at Joliet

Junior College and the last eight years I've spent as our business manager at the school district.

I'd like to address what a lot of people refer to, and that is that the school district benefitted from Exelon's presence. Our school district has educated approximately 2,000 three year olds through 18 year olds every year and I calculated approximately 60,000 students since Unit 1 went on board, went on-line.

We employ about 300 folks in various capacities, everything from bus drivers and custodians through teachers and administrators. Our current budget is just approaching \$25 million a year and 77 cents of every dollar comes from Exelon.

At one time, that was closer to 96 cents on the dollar.

Our district could not exist without Exelon's presence. Exelon provides our source of funding, the revenue that we need to educate these kids, and a lot of these children have grown up and they are now working at the nuclear plant. I know because I educated them at Joliet Junior College and they're maintenance and IM mechanics at Exelon.

In addition to those benefits to our school district, Exelon has also provided a lot of

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Comment 11-1

other ancillary benefits, such as providing grants for Gabby Green, environmental grants where our students get an opportunity to try to create something that is environmentally sound and gets funded from Exelon, some awards given for that.

School supplies that they've purchased over the years, the Bass Fishing Club that we have is a non-profit club that we do not fund in anyway.

Exelon has assisted with that. They've provided the cooling lake, they provide whatever assistance.

We have a good working relationship between the Bass Club and Exelon.

They've also sponsored proms and homecoming dances and a lot of various activities for the school. And I'm forgetting one that was already mentioned earlier, but I don't recall what it was right now but they have just been a great asset to our school district and the students of our community.

So, I don't think it's quite surprising if I tell you that we support the license renewal a hundred percent.

And I also would like to say on a personal note that the reason I mentioned that I grew up and was born eight miles from here is because I used to play on the spoils for the coal

mining that was done there. It's probably illegally but back then nobody said anything about it. We played in those lakes, we played on those spoils. And when I go back there to this day and visit my relatives, and I see all of the red lights flashing from all of the windmills, it kind of makes me sick to my stomach to see what has happened to some of the environmental, you talk about environmental impact, that to me, when you drive south of DeWitt and you see all of those windmills, and then you realize that the generation from those windmills is slight in comparison to the small footprint of this plant.

Comment 11-2

So, we are in support. Thank you for the opportunity.

MS. RAY: Thank you. I would like to invite Doug O'Brien of the Illinois Clean Energy Coalition.

MR. O'BRIEN: Thank you. I appreciate the opportunity to be here today. I'm Doug O'Brien, the Executive Director of the Illinois Clean Energy Coalition.

Are group is supported by business, labor, and policy leaders across the state and we promote the development and use of clean energy in a competitive

market that benefits both the environment and our economy.

And we've heard a lot today about the positive impacts that Braidwood has on the surrounding communities, the jobs, the economic activity, the millions of dollars that it pumps into the local economy. But the positive impacts reach much further than the areas that benefit directly from the plant operations.

Nuclear also brings broad benefits to Illinois by helping maintain a competitive marketplace for consumers. While there are many, many factors that play into the rates that are paid by residential and commercial consumers, the existence of a reliable and abundant base-line energy supply is a significant factor to Illinois' lower energy rates. More than 10 percent lower than the national average, 25 percent lower than Michigan and over 40 percent lower than in the State of New York, according to the U.S. Energy Information Administration.

And the benefits derived from Braidwood and the other nuclear plants in Illinois are not limited to the economy. It's an enormous benefit that the generation of 18 million megawatts of

electricity at Braidwood last year produced no carbon air admissions.

Earlier this year, NASA's Goddard Institute sought to quantify the real impact of nuclear power's carbon emissions free operations. The Goddard study found that replacing nuclear power with fossil fuel generation would lead to an estimated 76,000 deaths per year globally, primarily as a result of increased cardio and pulmonary disease.

And this is even more important here in Illinois. The Chicago metropolitan area is designated a non-attainment area by the EPA due to air pollution. And this situation would be greatly acerbated without the existence of the Braidwood generating station which produces enough electricity to power two million homes without adding to this environmental problem.

And I think it's also important to note we're talking a great deal about two parts of our environment. We're talking about ecosystem and the impacts that we traditionally think of as environmental. We talk about emissions and we talk about impacts on the air and the water.

But as was noted earlier in the

Comment 12-1

discussion of the EIS process, a big part of our environment is also our quality of life. So when it comes to jobs that are created, when it comes to benefits to the community, when it comes to tax revenues that are generated, those are very, very important parts of the assessment of environment impacts. It does not just go to impacts on eco systems. It's a comprehensive look and that's why everybody's voice here is relevant.

Comment 12-2

And for all these reasons, the Illinois Clean Energy Coalition urges the renewal of the operating license to the Braidwood generating station. Thank you.

MS. RAY: Thank you. I'd like to invite Irfan Khan of Exelon.

MR. KHAN: Good afternoon. My name is Irfan Khan. I'm an engineer at the Braidwood generating station. I work in the Design Engineering Organisation where we're responsible for making design changes to the plant and other plant activities.

And our job number one in our organisation, our organisation at Braidwood is safety. So, every task we perform, we perform it safely and we ensure that it is safely performed.

I'm also part of the North American

Young Generation in Nuclear, which is an organization that fosters professional development for employees under 30. And we also have many activities for community outreach and for volunteering. And I just wanted to convey my support for the continued operation of the Braidwood Station. Thank you.

Comment 13-1

MS. RAY: Thank you. I'd like to invite Dee deGroh, our resident at Braidwood and also a member of the Community Advisory Board.

MS. DEGROH: Thank you, Sheila, and thank you everybody. My name is Dee deGroh. And I moved to this community full time about eight years ago and moved into my grandparents' home. And my parents and grandparents and great-grandparents all grew up in Essex, Braidwood area. So I've, of course, known it all my life.

I remember back in about 1976 when they first started construction of the plant. There were committees formed at that time to meet with representatives because no one knew much of anything about the plant, the nuclear power. It was just new to everybody. And no one knew how to even react to it.

In '88 when they had their open house

for the community, various dates, I was fortunate enough to be able to go through the plant at that time. Currently, I am on many committees in town. I'm on the Library Board. I'm a member of the Community Advisory Panel for Exelon; president of the Historical Society in town; and Chamber of Commerce and many other community church groups and even on the school, what is that called? Citizens, no, Community, CIC. What is that called? Community Involvement Committee, that's what CIC is. Anyway, I am very much involved in the community and hope to continue to be.

But as a member of Community Advisory Panel, we were allowed to tour the plant a couple of years ago. And we were all amazed at how immense the plant is and all the security. My goodness. I realize it was increased after 9/11, but it's truly amazing and we were all just very impressed with everything we saw.

And some of you may have read the Braidwood Journal last week and Tana McKillop wrote an article about her experience having toured the plant a few weeks ago. And it's something that those who live in this area should experience at some time or another because it's absolutely

amazing.

But to tell you little more about the Community Advisory Panel, there are, I don't know, maybe 15 of us on the committee. And we meet quarterly and we bring questions to Exelon that we have ourselves about the plant and nuclear power, as well as questions that other people have stated to us after our experiences.

And all of those questions are answered either immediately at those meetings or someone comes and makes a presentation to us at their next meeting. So, we always get an explanation of what has happened, and an answer to our questions.

I know one of the things that was interesting to me and shocking to me was that NRC has 24/7 office right on the premises at the power station plant. I mean, their offices are right there. They shut the computers and the input and the output and the buttons and all the gadgets on a regular basis. And it was just comforting, I think, to me to know that.

Also, the plant, Exelon, has been a really good neighbor to our communities. Many people have told you about schools and the different organisations and they help keep our towns vibrant

and workable for all of us.

According to the meeting I attended August 8th, the NRC held at the city hall, the Braidwood Station had met and maybe exceeded the expected safety and security performances. And we welcome a license renewal by the NRC of our Braidwood Station because they really have been a good neighbor. And I thank all of you.

Comment 14-1

MS. RAY: Thank you. I'd like to invite Angie Hutton of the Braidwood Chamber.

MS. HUTTON: Hi, I'm Angie Hutton, President of the Braidwood Chamber and I too am a member of the CAP group.

Exelon has been here a long time and they've been a good neighbor. And with the exception of the tritium leak, they did take care of it, maybe not like some people want it, but it has been taken care of. It did open the communication up a lot.

Comment 15-1

With that, everyone has said how they've helped with the schools, all the events. They do the Fishing for the Cure. They've helped with the Red Carpet Corridor event. More than they know, they've helped with that.

With that being said, helping with all

the events, it has had to open the communication because you can't go to an event or talk to them without something coming up about the plant. So, they do have to answer everyone here in town frequently. They definitely made a big difference here in town.

I had not been, as the Chamber President, and I also have, you know, with what I do for work, with people I meet, I have not had anyone say to me that they should not have their license renewed. So, with that, the Chamber would like to see the Braidwood Station's license renewed.

Comment 15-2

MS. RAY: Thank you. I'd like to invite Chris Rosso of Exelon.

MR. ROSSO: Thank you. I am a former member of the NYGN, Nuclear Young Generation of Nuclear with Exelon and I work at the plants now about three-and-a-half years, so still a baby compared to everybody else on site. I work in the Project Management Department. And there's been a lot of statistics that have been thrown out, a lot of impressive statistics. Some of them I didn't know. Again, I'm relatively new to the industry.

But something that I've noticed being a new member of nuclear society is that it's really

the behaviors and the culture behind nuclear that's pretty striking. As a project manager, I see a lot of new workers come on site, as my projects begin flourish and then kind of dwindle back again and we lay people off, primarily labor workers.

But really the major piece is the shock that you see when folks come from the outside of the nuclear world and they come in and they work with us. And it's really a process of us bringing them up to speed to our culture. And it's the most self-critical culture that I've ever been a part of.

I went to school for construction engineering and most of the peers that I had, I talked to them about their jobs and the different issues that they have. And almost all of them are stories of other agencies coming in and criticizing them, finding all these issues. And my experience with many different aspects of nuclear is that the majority of our issues, since I've been at Braidwood, are self-identified. And it's really incredible how self-critical we are.

So, part of being a part of a nuclear and environmental safety orientated culture, it really starts with a safe work environment. One of the other roles I have the opportunity to be a part

of on site is I'm involved with the Safety Committee as well as the VPP Star Re-certification Committee.

So for those of you who don't know, OSHA runs a voluntary protection program to which members of the industry can join, be a part of really to go above and beyond the basic OSHA rules. And it's something that, as a Star member, is the highest possible certification that OSHA can offer.

And where that came from was not necessarily management. It was the workers at the plant drove that process through, brought OSHA on site. Again, we're extremely self-critical, analyzed everything that was going on from primarily and industrial safety aspect and convinced OSHA to give us the certification four years ago, and this year we've just re-certified it.

So, it's an industrial safety aspect that really bleeds over into every aspect through -- engineering department into the environmental side and really beyond. So, as a new member in nuclear, I'm extremely impressed, excuse me, impressed at the culture that's at Braidwood and it's something that even if I move on in nuclear, I'll always take with me. So, thank you.

Comment 16-1

MS. RAY: Thank you. I'd like to invite

David Kraft of NEIS in Chicago.

MR. KRAFT: Thank you for the opportunity to speak today. Good afternoon.

My name is Dave Kraft, K-r-a-f-t, and I direct a group called Nuclear Energy Information Service. We're a 32 year old nuclear watch dog group based in Chicago. So we've had considerable experience with formally Com Ed, formerly Unicon, and now Exelon as well.

I was at the Byron meeting last night and came today because the environmental portion of the license application's going to be split for the two facilities. So some of the remarks I had given yesterday will apply to the plant today.

But the two main pieces I want to get across are first of all, you know, we're not here to say for or against. We're here to find out information and to be a part of the licensing process and examine it.

So, our first comment actually goes towards the Nuclear Regulatory Commission itself.

And what we urge the Commission to do in the process of re-licensing this and other plants is to take a qualitatively different attitude towards their safety culture, which they are aggressively

Comment 17-1

promotion amongst those of you who work in the nuclear industry.

I was at a meeting last December at the Palisades plant in Michigan where then Region III Director Chuck Castro made some remarks about NRC safety culture. And he put up some view graphs and today I brought them with me. I didn't have them with my yesterday.

I just want to read it to you. The NRC believes that the definition of a nuclear safety culture is the core values and behaviors resulting from a collective commitment by leaders and individuals to emphasize safety over competing goals to ensure the protection of people and the environment. And that sounds great, but it's important to dig a little deeper into what that means so not only I but other people in the audience in Michigan were asking Mr. Castro what would be some of these competing goals? What does this actually mean with the rubber hits the road?

And what he ended up saying actually, I'm quoting him here is, we're trying to go beyond what's required. And that is the message I really want to leave with the NRC, is that these exercises in re-licensing need to be more than just a check

box exercise of got them, got them, don't got them.

It has to be an attitude that goes beyond what is merely required. Requirements have to be the floor, not the ceiling, of what goes on these processes. And our organization will be participating in the licensing process with that attitude in mind; that, yes, certain things may meet certain very legalistic requirements but in the broader scheme of things, will they actually afford safety over the 20 year extended operating period.

So, we urge NRC to take its own advice and approach the licensing process with that kind of attitude towards the safety culture in mind.

The second item surprised me last night.

It doesn't surprise me today anymore. It's not surprising and it's certainly totally consistent with human nature that people will respond to the positive things we're given and sometimes forget that there are rainy days. And I've heard last night at the Byron meeting and I'm hearing it today.

So I wanted to bring this up because I guess since you consider community inputs and some of the impacts of the local community as part of this process.

You need to not just look at the

benefits of having a nuclear power plant in your neighbor. But perhaps the re-licensing should remind you that it is inevitable that this facility will close some day. Now, I know you're all hoping that that someday will be 60 years in the future and everything's going to fine with the plant and you'll never lose six million gallons of tritium again. But reality doesn't always cooperate.

You know, there are unforeseen incidents that came up. I guess you could ask the Japanese about that and you can probably even ask some of your own people in terms of the tritium issue. That was not a planned release. You know, we could run the laundry list of disasters. You know, everything from Challenger and Columbia down to Chernobyl, Fukushima, Windscale, Fermi 1, Santa Susana, and on and on and on.

The point is, the world doesn't always cooperate and at some point in the future, if this plant is closed on an emergency basis, all of those benefits you described will cease with the tax base goes away. So, the message I left with the people in the Rockford and the Byron area yesterday was this may be an opportunity for you to sit down, you the financial planners, you the elected officials,

Comment 17-2

to sit down with Exelon and start examining what closure is going to look like.

We didn't have an exit plan for Iraq and it really didn't serve us well. I think now is the time is to begin looking at an exit plan for when a nuclear facility has to close. As I said, our organization, I'm sure everybody in this room wants it to be quietly, peacefully after a long life of production. But, again, reality doesn't always work out that way.

And I brought two examples last night that I think you need to pay attention to and perhaps those of you who are CFO's and elected officials here should talk to the officials in Lake County and down by the Clinton site in central Illinois because in 1997 when Exelon, excuse me, when Commonwealth Edison made the executive decision to close the Zion nuclear plant, that community lost \$8 million of its tax base overnight.

So, I ask you, what will you do when you come in on Wednesday morning and 70 percent of your school budget is gone? Unless there's a plan in place that softens the economic blow of the eventual closure of the nuclear facility, you leave your community open to the pitfalls of the company town.

When they pull out, all the benefits go with them.

If you don't plan today, it will be devastating for the community of the future. So, now is the time to really start making those plans.

And it kind of reminded me of the old Aesop's fable of the grasshoppers and the ants. As long as it's summertime and things are great, the grasshoppers are having a great time. But the ants are sweating it out and doing a little bit of drudge work in the advance knowing that things aren't always so great and winter comes along.

So, I would like for you in the community to consider making that part of your process of examination of whether this license should be renewed or not. And, you know, that's something you're going to have to sit down and talk to the Exelon people about.

Back in 1997, I mentioned to the then state public official, Adeline G. O'Karus in the Zion community that perhaps an escrow fund needs to be set up now for over a period of time some money is put into it. It's kept intact out of general revenues so that when the plant has to close, whether it's from an emergency of some kind, whether it's from government decree in Washington or whether

it's normal closure, you have some sort of a fund that the communities can draw on to soften the economic blow.

So, that's something I would leave you with to consider and eventually we'll write this up and make part of the official docket as well. So, thank you for listening. Enjoy the day.

MS. RAY: Thank you. I'd like to check, is Denise Forrest in the audience? At this time, I would like to ask, are there any other comments from members of the audience? We have extra time, so if you'd like to make other comments, please feel welcomed.

Okay, at this time I'd like to thank everyone for coming and for their participation. The comments provided here will be addressed in the scoping summary report and for openness and transparency, the scoping summary report will be publicly available on the NRC license renewal website and also the address is on the handouts provided. And if there are any further comments you'd like to make, you can provide them electronically or in writing or in person. And that contact information is provided in the handouts on this table.

before you leave[,] to fill out a card, and then add your address to it.

And that concludes my presentation.

MS. HAUSMAN: Thank you, Tam. Before we move into the public comment period, the NRC staff would like to offer the opportunity to answer any questions about the presentation you've just seen. Does anybody have any questions about the presentation or the material that was presented?

Okay. Then we'll go into the public comment period, and I'll be calling everybody up one at a time. When you get to the microphone, the podium, please state your name and spell your last name so the court reporter can get the correct spelling of your name for the transcript. First I would like to invite Sue Rezin, State Senator.

MS. REZIN: Thank you. Rezin, R-e-z-i-n. Since I won't be near Rockville, Maryland anytime soon, thank you for the opportunity to make the comments here tonight. It's much more convenient. Just briefly I'd like to say, my senate district is a high energy producing district, and with it we have three nuclear power plants in here. Exelon has been an excellent company for our communities in terms of, you know, reaching out to the communities, but also

Comment 18-1

NEAL R GROSS

providing good paying jobs in the area as well. So, we appreciate them. We also appreciate you being here as they're going through the re-licensing, and anytime that we've had any questions with them, they're very responsive to us and we appreciate that as well. Thank you.

MS. HAUSMAN: Thank you. Next I would like to invite Greg Ridenour from Representative Kissinger's office.

MR. RIDENOUR: It's R-i-d-e-n-o-u-r. The congressman couldn't make it here tonight, but he gave me a statement he would like me to read for him.

It's addressed to the U.S. Nuclear Regulatory Commission. I write to express my full support for the renewal of the operating license of the nuclear generating station at Braidwood, Illinois.

This facility provides lower energy costs for residents and businesses, and supports hundreds of high paying jobs in Illinois, while helping to ensure state compliance with federal clean air act regulations. It will undoubtedly play an important role in meeting the energy needs of Illinoisans well into the future.

Nuclear energy production plays a critical role in Illinois where nuclear energy

Comment 19-1

generates 48 percent of the state's electricity and employs nearly 5,000 skilled workers. Having visited the Braidwood Generating Facility, I can attest to the value it has to local residents and communities, which benefit through reduced energy costs, high quality jobs, and significant tax revenue.

While many areas of Illinois struggle to meet clear air standards, the generating station at Braidwood offers affordable, abundant energy with a fraction of the greenhouse gas admissions as other conventional energy sources. As Americans and Illinoisans' demand for energy rises, nuclear generating stations like Braidwood will be vital to meeting the energy needs for our citizens.

I fully support the operating license renewal for this generating station, and believe it will play a critical role in making America and the state of Illinois more energy secure. Signed, Adam Kissinger, member of Congress.

MS. HAUSMAN: Thank you. I'd like to invite Bill Rulien, Mayor of Braidwood.

MR. RULIEN: When I was about 10 years old I used to read my dad's newspaper, and the first commercial nuclear power plant in about 1960 came online, and it was an amazing thing to me. It

Comment 19-2

Comment 1-3

produced power with almost no fuel, no pollution. Commonwealth Edison, the parent company of Exelon, was the cutting edge of technology, the company that brought that to us.

When I was about 20, I built a solar collector, and I also experimented with a wind generator. It didn't take too long to realize when the breeze quit that it was great supplemental power but it wasn't something you could really rely on as a source of power. In the 43 years since then, there hasn't been anything much that's changed. If you want reliable, mass produced pollution free electric power, nuclear power is the proven technology and the way to go for now, and as far as we can see into the future.

In about 1980 I was doing a little construction work out by Goose Lake, and it seemed that folks were starting to build houses out by nuclear power plants, and I thought that was a pretty remarkable thing. Well, for 25 years we in the Braidwood area now have lived side by side with working nuclear power plant, and it's brought many benefits to our area. They include good jobs, contribution to our tax base has been enormous, for our library, our schools and our fire district.

Comment 1-4

They've been generous to our community. Kindly they've given millions of dollars to create a water system there in Braceville, millions of dollars in subsidy, food pantry, thousands of dollars in help to our food pantry, help our needy, and many other projects too numerous to mention. Last year they helped out the city when I asked them to help us buy the electronic sign outside of city hall, and to help us create a tourism spot that we hope will help us create tourism energy and economic benefit on Route 66.

So, they've been a really good neighbor, and I just wanted to say that a guy here earlier today, he mentioned that, you know, his whole thing was what's going to happen if the power plant was to close down. Well, you know, we think about those things, and my administration's planned on those things, and we're planning to use the money we get in this area from our nuclear power plant and the good jobs and everything to help prepare us for that future. We've set aside acreage for industry and things like that, and we intend to be ready for that date.

But I also, personally, believe that the infrastructure that's there on that power plant site

now, they will develop a way to use that, because they're going to have a major investment in that site, and they might build Braidwood three and four there, I don't know, it'll probably be after I'm long gone, but I look forward to that, and we look forward to you giving them a license to continue operations into the future. Thank you.

MS. HAUSMAN: Thank you. I'd like to invite Mark Kavanos, site VP for Braidwood.

MR. KANAVOS: Kanavos, K-a-n-a-v-o-s. Good evening, I'm Mark Kanavos, I'm the Site Vice President at Braidwood Generating Station. I have the overall responsibility for the safe and reliable operation of the facility, and the coordination and management of personnel, and overall station performance.

A little bit about my background. I have over 32 years of progressive nuclear power plant experience. Before I took my current role as Site Vice President, I was the Plant Manager at Braidwood.

Prior to that I was the Plant Manager at Clinton Nuclear Station in Clinton, Illinois, and at Comanche Peak Nuclear Station in Glen Rose, Texas. I've had experience in project management, maintenance and engineering.

Operating the station safely and reliably is a key responsibility of all of the employees at the Braidwood Generating Station, one that we take very seriously and as a personal commitment to ourselves, to the community and to our industry. Proud to say that we've been a key part of this community for over 25 years.

Braidwood Generating Station operates under the manner that preserves the environment. We maintain a comprehensive, radiological monitoring program that extensively monitors the air, water and food products around the facility to ensure that we did not adversely impact the environment.

Comment 6-5

We have a comprehensive on-site environmental groundwater protection program for monitoring and detecting the presence of radioactivity in the ground water before it has a chance to migrate off of our property. This program includes 19 on-site monitoring wells designed to protect, detect and alert us of any unusual events, levels of radiation in the groundwater, so that we can assess and address any changes quickly.

Comment 6-6

We have detailed procedures that outline how we test all the water leaving our station. Radiation monitors are staged at 40 locations within

a ten mile radius around the plant to monitor any radiation levels and dose to ensure the safety of the community.

We also have had great success in our tritium remediation efforts. In the last seven years Braidwood has made significant progress. Hydrogeologists have confirmed that remediation is having the intended effect. As of today the square footage of land affected by tritium has been reduced by 96 percent, and the highest concentrations of tritium in the groundwater have been reduced by 99 percent. We'll continue to monitor and retain the ability to remediate via pumping, should that become necessary.

Braidwood's environmental management systems are certified under the strictest criteria, the International Organization of Standardization, or ISO, specifically we have received the ISO 14001 certification, an industry standard recognition. This is an internationally recognized benchmark for environmental management. The ISO 14000 certification requires a commitment to excellence in meeting our regulatory requirements, and the prevention of pollution and continuous improvement in our environmental programs and systems.

Last year the Wildlife Habitat Counsel recognized Braidwood Generating Station's commitment to the environmental stewardship by awarding us the Wildlife award certification. This distinction was awarded to our commitment for ensuring that the continuance of the healthy wildlife around our planet, through our fish habitat restoration project.

Comment 6-7

This project places artificial habitats in the Braidwood Lake, and that greatly benefits the fish throughout their life, and greatly enhances the fishery.

To ensure that Braidwood continues to operate safely for years to come, Exelon continues to invest in Braidwood. We've spent millions of dollars each year to improve and modernize our equipment and enhance our plant operations and safety systems. Our investment in the future doesn't stop with the equipment. We've hired 152 new employees in the last two years, and we maintain a workforce of approximately 850 employees.

Comment 6-8

During our annual maintenance and refueling outage, that population grows by another 1,500 to 2,000 employees, bringing a boost to the local economy. We also take pride in our investments in the community. Last year employees contributed

over 240,000 to the United Way Crusade of Mercy, and our signature annual event, Fishing for a Cure, has generated over \$300,000 to charity over the years. We also support the Braidwood Summer Fest, the Braidwood Shootout, and numerous other community activities.

Our employees host blood drives, toy drives and fund drives for various community groups and agencies. They also volunteer, and in short, we do our very best to be a good neighbor.

For over 25 years Braidwood has performed reliably and safely, and has set numerous benchmarks in the nuclear power industry. We work towards license renewal every day through dedication to continuous improvement.

In conclusion, we look forward to working with the Nuclear Regulatory Commission in the review of our license renewal application. Thank you for this opportunity to address the public.

MS. HAUSMAN: Thank you. I would like to invite Mike Gallagher, the VP for License Renewal, Exelon.

MR. GALLAGHER: Okay, good evening. My name is Mike Gallagher, and that's G-a-l-l-a-g-h-e-r, and I'm the Vice President of License Renewal for

Exelon. I have overall responsibility for the Braidwood Generating Station license renewal application.

First of all I'd like to thank the NRC for this opportunity to speak on behalf of Exelon for this very important project for us. Exelon has a great deal of experience with license renewal, as we have already obtained the renewed licenses for our Dresden and Quad Cities plants here in Illinois, and for three of our other facilities in Pennsylvania and New Jersey. We've also, an application for our Limerick Plant in Pennsylvania under NRC review.

Just a little, briefly, about myself. I've been working in the nuclear industry for 32 years. I was a licensed senior reactor operator and plant manager at our Limerick Generating Station facility in Pennsylvania, and I worked at two other nuclear power plants and our corporate office.

Mr. Kanavos, the Site Vice-President for Braidwood spoke to us all here about how rigorously we safely operate Braidwood, and about the reasons for renewing the license. I'd like to speak briefly about the process for preparing this license renewal application, and the amount of the work and engineering analysis that was put into preparing the

application.

Because the Braidwood Station can operate safely and reliably, Exelon decided to pursue license renewal. Braidwood's safe, efficient operation promotes a critical supply of carbon free electricity for Illinois and beyond. Braidwood produces enough clean power to supply more than two million homes.

So in 2011 we announced our intention to seek license renewal for Braidwood and a similar plant, or Byron Generating Station up in Ogle County.

Later that year we started the work necessary to prepare the application, and after over two years of work we submitted the application to the Nuclear Regulatory Commission on May 29th, 2013.

So safe and reliable operations has been hallmark at Braidwood Station since it came online, and our goal during the license renewal process is to demonstrate to the NRC and to our neighbors that we will continue that legacy throughout the 20 year extended operating period.

The application is a very large application. When you print it out it's about 3,500 pages, and when you put it in binders, it's in four large binders about this thick. It's a huge amount of information. But that only represents a small

part of the work that was done for the engineering analysis. The total amount of engineering analysis if we printed it all out would be about 400 binders of information. We invested over 90,000 man hours of engineering work. Once we completed the engineering work to prepare the application, we brought in experts from outside Exelon to review the application, to ensure that it was complete, thorough and accurate. Our total cost to prepare this application and to get it reviewed by the Nuclear Regulatory Commission for both Byron and Braidwood will be approximately \$45 million.

There are two different parts of the application, the safety review and the environmental review. For the safety review we took an in-depth look at the history and the condition of the safety equipment in the plant. We did that to determine whether the necessary maintenance was being performed on that equipment, to make sure that the equipment will be able to operate when it's needed, not only for today, but for the additional 20 year period.

When you look back at Braidwood, when it was built, it was brand new, it was all thoroughly tested to make sure it would work properly, but like anything else the equipment does age, and therefore

we have to do certain activities to it. Preventative maintenance is performed, sometimes equipment is refurbished, some equipment may be replaced, there may be modifications done to the plant to upgrade equipment. In fact, Exelon has invested over \$230 million in the last four years alone at Braidwood, to improve and modernize the equipment, to enhance plant operations and safety.

We also reviewed the calculations that were performed as part of the design of the plant, that were originally done to, for the plant to operate for the original 40 year period. We analyzed all those calculations and were able to confirm that the plant was able to operate safely for an additional 20 years, up to 60 years. So overall our conclusion from an engineering review was that Braidwood could operate safely for 60 years.

We also took a look at the environmental aspects, and the impacts to continue to operate Braidwood. We looked at all the aspects of the, well, the impact of the plant on the environment, and our conclusion is that these impacts on the environment are small, and I use the term small in the sense of the regulation. The regulation defines small as the environmental effects are not detectable

or minor.

We've also reviewed the alternatives if Braidwood would not have its license renewed and another source of electric generation would have to be installed, either here on site or someplace else to generate the replacement electricity. We concluded that any other means of generating the replacement electricity would have more an impact to the environment than the continued operation of Braidwood.

Comment 7-2

So in conclusion, we operate Braidwood safely, and we can continue to operate safely for an additional 20 years. Braidwood will provide approximately 2,340 megawatts of baseload generation that's not only safe, but it's clean, it's reliable, and it's economical. Continued operation of Braidwood will benefit this community, the state of Illinois and our nation. Thanks again for the opportunity to make my statement.

MS. HAUSMAN: Thank you. Next I would like to invite John Greuling, Will County Center for Economic Development.

MR. GREULING: Thank you, and that's Greuling, G-r-e-u-l-i-n-g. The Will County Center for Economic Development is a private, not for profit

economic development corporation that's served Will County for 32 years. Our membership includes representatives from the largest corporations in Will County, along with other private sector leaders as well as governmental leaders. Our mission is to assist in the retention, the expansion and the recruitment of business to Will County.

We support critical infrastructure investments as well, such as energy infrastructure, to make sure that the investments and reinvestments are being made appropriately to serve our rapidly growing area. Since 1990 Will County has more than doubled in population to where today we're just under 700,000 people, and we've become one of the fastest growing job generators in the metro Chicago area. We're also home to the largest Inland Container Port in North America, supporting global freight movement.

Comment 8-4

The Will County Center for Economic Development is here today in support of Braidwood Generating Station's license renewal application submitted to the U.S. Nuclear Regulatory Commission on May 29th of this year. Since 1987 the Braidwood facility has been producing emissions-free energies in Northeastern Illinois. The Center for Economic

Development believes by granting this renewal the NRC will allow Exelon Generation to continue to provide thousands of megawatts of clean energy to the tens of thousands of businesses in the region. Adequate, reliable and affordable energy supply has become one of the most important factors when businesses are considering an expansion or relocation today. Without it we cannot successfully compete for good jobs for our residents.

The Braidwood facility itself is an economic engine for the region. With over 850 good paying jobs and an annual payroll of \$82 million, Braidwood is one of the largest employers in Will County, and certainly one of its most significant. In addition, the facility made \$20.7 million in tax payments in 2012. The significant contributions that Exelon generation and its employees made to the local economy cannot be overstated. Support for groups like the United Way, Fishing for a Cure, and other local and business, local business and civic associations are critical to the fabric of our community in this part of Will County.

The CED recognizes what a good environmental steward Exelon has been and will continue to be at their Braidwood facility. The

Comment 8-5

radiological monitoring and the groundwater protection programs in place today give the community a sense of safety and environmental protection we expect from a world class facility like Braidwood.

Comment 8-6

To close, the CHD again supports the renewal application for the Braidwood Generating Station, and I think you for your time.

MS. HAUSMAN: Thank you. I would like to next invite Don Moran.

MR. MORAN: Good evening. Don Moran, M-o-r-a-n. From 1984 until 1987 I worked at the Braidwood Station as a young construction worker, or sheet metal worker. Today I'm employed as a business representative for sheet metal workers, but I'll speak on behalf of not only my own local union, but the Will and Grundy building and construction trades as well.

Beginning in the fall of 2007, a full year before the rest of the country's economy was effected, the construction industry was decimated by the worse case of unemployment it had seen since the great depression. Literally thousands of our members lost their jobs, their homes, their families, during the next five and a half years of economic blight.

One bright spot during all those years

has been the construction jobs provided during the refueling and upgrading of the Braidwood Station. Having been involved in the building and maintenance of the station over the past 30 years, I'm very confident in the continued safe operation of this plant into the future, and I'm thankful for their commitment to local trades by providing good jobs and benefits to people.

Comment 10-3

My frustration with the high unemployment led me to run for office. Earlier today the Will County Executive, Larry Walsh, and the Will County Board Speaker were both here, and spoke on behalf of our county board, where we passed a unanimous resolution supporting the re-licensing at our July board meeting. I voted in favor of that resolution.

As Illinois struggles in today's competitive business market, we cannot afford to ignore any of the things that helped put us on a better footing. One of the building blocks to economic development is affordable and reliable electricity. Illinois' diverse network of electricity generation coming from coal, wind and nuclear gives us an advantage in enticing new and retaining existing businesses to the area.

Comment 10-4

Unlike the rolling blackouts experienced

in California during 2000 and 2001, our local electric generation and transmission systems have provided consistent, reliable electricity and have done so with a diminishing cost to consumers, as compared to the CPI.

I remember cooling my first home, a tiny, 900 square foot house, with summer monthly electric bills of over \$200 in the mid 80's. Today I live in a modest town home about three times that large and I pay about \$150 in the summer months to cool it, quite the bargain compared to nearly 30 years ago, especially if considered next to the costs associated with fuel in your car or paying for healthcare.

As President of the Illinois State Rifle Association, I represent the interest of many outdoors people, including fisherman and water fowl hunters, many of whom have benefitted greatly from the public access to Braidwood Station's cooling lake. In addition to being a source of reliable electricity generation, Braidwood Station has been a benefit to local school districts, fire protection and other taxing bodies in the community, not to mention its commitment to local charities and community events. They've been a good steward to our communities, and I'd ask that the NRC renew the

license for Braidwood Station. Thank you.

MS. HAUSMAN: Thank you. Next I would like to invite Dee deGroh, who's a member of the Community Advisory Board.

MS. DEGROH: Good evening, and thank you, Sheila. My name is Dee deGroh, and that is spelled d-e-g-r-o-h. I, my family's from the Braidwood/Essex area, my parents and my grandparents and my great grandparents were from Essex and Braidwood. I moved here about eight years ago, and was just concerned that I wanted to be involved in the community, so I became quite involved, as a matter of fact I'm President of the Historical Society, Secretary of the Library Board, a member of CAP, the Community Advisor Panel, and the Chamber of Commerce. School district has a group called the Community Involvement Committee, to get the students involved in our communities and vice versa, and of course I'm involved in church groups. So, I'm an involved person.

I recall there was excitement when it was announced that there was going to be a power plant built in the Braidwood area in 1976. They started construction then, and my mother and my sister and many others were on committees to talk to

Commonwealth Edison at the time about how is this going to effect us, what is it? People didn't even know what it was and how it was going to effect our community. And they did form various committees to talk to ComEd, and they felt somewhat, I'm sure, very relieved, because not only was it going to improve the economics of the area, but they were also taking over some of the spoiled lands left by the coal companies, and it was considered spoiled land at that time. Now they're wonderful recreation clubs for many people, but at that time there weren't a lot.

At any rate, the concerns about the safety and health issues were alleviated during those, that time, and it took 12 years to build the plant and open it, it opened in '88, and at that time the community was allowed to go in and see the plant.

I was fortunate enough to be one of them, and very, very impressed with all of the security concerns and health issues and just getting in and out at that time.

And then I joined this Community Advisory Panel a few years ago when it was started, and we got to tour the plant, and with the changes and additions due to 911, it's unbelievable what security one goes through, on a daily basis if you're an employee and

Comment 14-2

have to get into the plant everyday. It took us, well of course there was about 15 of us, 12 of us maybe going on that tour, but it took us a good 20 minutes or more. You may have read in the Braidwood Journal last week the reporter had just taken a tour and she was just in awe of what she saw and all the security she went through.

At any rate, this advisory panel helps the community because anyone who asks us a question about an issue that they're concerned with, we can take that concern to the CAP meeting, and Exelon either addresses it right then and there or our next meeting they'll have someone who is knowledgeable about that issue, such as tritium, and bring it to the committee, and we'll spend the entire evening maybe discussing that issue. It's wonderful that they're so concerned about our safety and acceptance of Exelon.

We're all interested in public health and safety. We all want it. I know I want it for myself. I would not have moved here if I didn't feel comfortable doing so eight years ago, and I have never felt uncomfortable being in the area. The station, the Braidwood Station has been really a wonderful neighbor, because they're not only

employing people in the area and helping to feed tax money into our schools and fire department and police and library, et cetera. They are interested in community organizations and help all of us, including the Historical Society and the Lions Club and Park District and many such groups, Chamber of Commerce and so on. So, they're really wonderful neighbors and they support all of these groups, and when they do that it makes our town more viable, more lively, more full of life because they're helping us to continue in day to day issues.

Comment 14-3

And, I went to the presentation August 8th at City Hall by NRC, and at that meeting they made it very clear that Exelon has met, if not exceeded, all their expectations regarding safety. And because of that, I just welcome the approval of the renewal license for our good neighbor, Exelon. Thank you very much.

Comment 14-4

MS. HAUSMAN: Thank you. I would like to invite Doug O'Brien from the Illinois Clean Energy Coalition.

MR. O'BRIEN: Thank you very much, it's O-B-r-i-e-n. And I'm the Executive Director of the Illinois Clean Energy Coalition. Our group that is supported by business, labor and policy leaders

across the state promotes the development and use of clean energy in a competitive market that benefits both the environment and our economy. And regardless of where people are individually on what various policy courses they favor, I think everybody across the country wants to see our country move towards cleaner, a cleaner environment, and the cleaner generation of energy.

Now, we've heard a lot about the positive impacts that Braidwood has on the surrounding communities, the jobs, the economic impact, the millions of dollars that are invested in the community, but the positive impacts reach much further than the areas that benefit directly from the plant operations. Nuclear has also brought a broad benefit to the energy market in Illinois. It has impacted, had a positive impact on rates, and certainly on reliability, and as we've heard that is oftentimes a key factor in attracting and retaining good jobs.

And the benefits derived at Braidwood and other nuclear plants are not limited to the economy.

It's an enormous benefit that the generation of 18 million megawatts of electricity at Braidwood last year produced no carbon air emissions. And that's an

objective, that's a goal we all want to strive to in our country.

Earlier this year NASA's Goddard Institute, which is a leading research organization studying the impacts of climate change, sought to quantify the impact of nuclear power's carbon free emissions. Goddard's study found that replacing nuclear power with fossil fuel generation, would lead to approximately 76,000 deaths globally every year, primarily as a result of increased cardio and pulmonary disease.

Comment 12-3

This is even more important here in Illinois, as we all know the Chicago metropolitan area is designated as a non-attainment area by the EPA due to air pollution, and this situation would be greatly exacerbated without the existence of the Braidwood Generating Station, which produces energy to power up to two million homes, without adding to our existing environmental problems.

And I think it's also important to note that while we care tremendously about the local impacts, the environmental impact statement that we're talking about primarily here looks at a broad range of issues. In addition to local environmental issues, it looks at quality of life issues, revenues

that are created, job creation and economic impact are all part of the environmental impacts of the Braidwood Generating Station.

Comment 12-4

And for these reasons the Illinois Clean Energy Coalition strongly urges the renewal of the operating license for the Braidwood station. Thank you.

MS. HAUSMAN: Thank you. I would like to invite Angie Hutton from the Braidwood Chamber.

MS. HUTTON: It's Angie Hutton, H-u-t-t-o-n, and on behalf of the Chamber, and I sent a blast e-mail out before I left the house, I got nothing derogatory from any of them again, Exelon supports our schools, all of our businesses, and not only with what they do for us but the people that work there, which is, definitely helps our businesses in town, and our schools couldn't do without them. I mean, they're just, they've been wonderful. Anything we've asked for, they've helped us as the chamber, and for that we say thank you.

Comment 15-3

And there was an issue with the tritium, and as being a good neighbor, which they promised when they started, they did remediate the area, they bought the property that was impacted, and with that they took aggressive action so that it doesn't happen

again. And with that they also opened up great communications.

And as Dee said, the CAP, we go in there and they have no idea what questions we're bringing.

Anything that the public wants to know, anything that we want to know, and they do answer it right away, and if not, it's at the next meeting, but they have no idea. And with all that they do for support, they're meeting people everyday with no idea what people on the street are going to ask, and they do answer it. And that, in this day and age, is a big deal, there's no, well, I'll get back to you or let me see what I can find out, they do answer it.

So, with that and the support that they've given us, and Exelon will be speaking at our next chamber meeting, so, and they'll have no idea what those people are going to ask that morning. With that, we would like the license for the station to be renewed.

Comment 15-4

MS. HAUSMAN: Thank you. I would like to invite K. Denise Forrest from the community and Exelon.

MS. FORREST: Hello. Last name's Forrest, F-o-r-r-e-s-t. So first I'll talk to you as a community member. So my dad grew up in Braidwood

and attended the one-room schoolhouse on Center Street, and I didn't venture far from home because I bought a house in Braidwood five years ago. My future son-in-law just bought a house in Braidwood in January. We're both employees of Braidwood Station and grateful to be employees of Braidwood Station.

We do all of our shopping in Braidwood, we see the physicians in Braidwood, even the people who don't live in Braidwood still use all the services that Braidwood offers. When I hear the truck go by spraying for mosquitoes at night I think, Braidwood may have impacted that by their tax money, so.

How, the impact, so I live on Bodeen Drive. My neighbors on both sides of my house are directly impacted by Braidwood Station, either as a contractor or as an employee. My neighbor on the back side of me is an operator. A block away from me, two employees from Braidwood Station. My son-in-law lives on Third Street, his neighbor is a contractor. So Exelon and Braidwood Station has a direct impact on the economy, just from a personal perspective.

Whenever I go to the grocery store or I'm at the mine, I'm always running into people that I

Comment 20-1

work with, even the people who don't live locally, just out of convenience they'll stop at the grocery store, our gas is cheaper here, we gas our cars here.

Our taxes are cheaper here, so purchases are sometimes cheaper.

So, not only for the Exelon employees but also family-owned contractors. We support a lot of contractors by bidding out business at the plant, so a lot of them are also impacted directly.

As an employee, I'm a maintenance analyst at Braidwood. I'm proud to say that I was part of the start-up team from the 1980's, so I've been there quite a while. Not only is the equipment updated, but the people are updated as well, we are developed, so thank you to Exelon, they've developed me as well.

As I get new employees into the site, I'm so proud of our plant and the way that it looks and the perception when you see it, that I take my people for tours out in the plant so that they can talk to their neighbors and say, wow, that is just a great operation. It's not scary when you actually see it.

It's all the talk behind the scenes, when you don't actually get to witness it and see how clean and how professional it is.

Safety, so I am a community, I am

community, Mark knows I say that all the time. So when we tied into the septic, or the sewer, selfishly I was worried about how that would, how my toilet would handle that at home. Pleased to announce no problems at all. So I'm always worried about the community aspect.

They are an excellent neighbor. The plant doesn't stink, it's not loud. When we do night activities we notify the community. It's just a respectful company to work for.

Lastly, industrial safety, radiation safety, I have no fears at all being, living in the community and living my entire life in the community.

We have so many systems, so many controls and so many monitors in place, and even with all that, you still, you have to have a culture. If you have the people and the equipment in place but you have a culture that doesn't support that questioning attitude of being your brother's keeper and looking out for everything, then you're not going to have a, you're not going to succeed in this business.

The expectation at Braidwood, and at any Exelon plant, is that if you see something that doesn't look right, you bring it up. We don't hide anything, we put it out there in the open and then we

Comment 20-2

address it. And that's everybody's, everybody's responsibility, it's not just for Mark, it's not just for the manager, it's for the clerical person all the way up, the contractor, anybody to bring it up.

So knowing that culture, and that is the expectation, I'm grateful to be at Braidwood and I would like to be extended as well.

MS. HAUSMAN: Thank you. I would like to invite Philip O'Connor from Proactive Strategies, Inc.

MR. O'CONNOR: My name is Philip R. O'Connor, that's O-'-C-o-n-n-o-r. And first of all, thank you to the NRC for holding this meeting. In the early 1980's, during the peak construction period at both Braidwood and Byron, I was serving as Chairman of the Illinois Commerce Commission, which is the utility regulatory body for our state. At that time I was also serving as the representative of all of the other state utility regulators on the board of, the Advisory Board of the Institute for Nuclear Power Operations. And one of the things that we came to an appreciation of during that period, and even more so since, is the connection between the safe practices in a nuclear plant and economic performance.

That peak period of construction in the early 80's was one of substantial controversy about both the economics of the projects and the long run impact on electricity prices in northern Illinois, I know, because my home used to be regularly picketed, and I would be yelled at on the bus.

But let me tell you, and we all know it, things have worked out extraordinarily well, far better than most expected. Just three quick points.

First, both Braidwood and Byron have proven to be stellar performers with capacity factors well over 90

percent. Second, in an era in which there's been both great uncertainty about the economics as well as the environmental aspects of fossil fuels, these two stations have had the advantage of a low cost, non-fossil fuel supply and all of the intended consequences of that.

Third, and this is particularly dear to my heart, Illinois was a pioneer in moving away from traditional electricity price regulation and toward customer choice and competition in the generation and supply sectors. The high performance and the low production costs at both Braidwood and Byron have been important factors in a successful transition from traditional regulation and competition.

Comment 21-1

Let me just illustrate this. In the decade prior to Illinois' 1997 restructuring law, the average Illinois electricity price was consistently about 10 percent above the national average. In the more than a decade since the full implementation of choice, average Illinois electricity prices have been seven to eight percent below the national average. That 18 point swing has been worth about 35 billion dollars so far, and is growing every day.

As of the end of May, Illinois had the 11th lowest electricity prices in the United States.

I mean, the only ones who have lower prices are those with, in the west, with a lot of hydroelectric power and so forth. And I think that just, you know, Mr. Moran's comment about his bill now compared to what it was, I think helps to illustrate the point.

So Byron and Braidwood are no longer owned by a utility, it's true they're affiliated with ComEd, but they are not part of the utility rate base, and they have been operating successfully as fully competitive assets in a highly competitive generation market. So the bottom line here is that Braidwood and Byron, if they are allowed to operate well into the future by being re-licensed, are likely to continue to play a positive role in maintaining

Illinois' advantageous electricity price position, and that, of course, is a big plus for job creation and prosperity in Illinois.

Comment 21-2

So let me end where I began, and that is simply noting that Exelon's ongoing adherence to best practices for nuclear safety will be an important underpinning of ongoing strong economic performance of both those plants and of the Illinois electricity market. Thank you.

MS. HAUSMAN: Thank you. Next I would like to invite Steve Quigley from the Will County Governmental League.

MR. QUIGLEY: Quigley, Q-u-i-g-l-e-y. Hi, I'm Steve Quigley, Will County Governmental League on behalf of the 32 communities that the Will County Governmental League represents. We would endorse the licenser to be renewed. On a personal note, in 1992 I became the Public Information Director for the Illinois Emergency Management Office, and, or agency actually, and as a public information director I had the opportunity and chance to view all the nuclear power stations in Illinois, and I learned a lot.

Number one, I didn't know that we had more active nuclear sites, or reactors in Illinois

than any other state in the nation. Upon doing that, that was back in the ComEd days, I saw how safety was an important aspect to what goes on in any nuclear power station, and I also learned subsequently when I took this position how the Exelon/ComEd, it was ComEd when I started, now Exelon, took their community outreach. Community outreach to individuals in the communities I represent is paramount to having a utility such as a nuclear safety or nuclear production site like this, to what the mayors that I represent, they want to know, they want information, it's not just Braidwood, it's the communities throughout Will County. And one of the

things, Mr. Greuling took about half my speech so I just left my notes on the thing, but we do represent almost 700,000 residents. Economic development is a very important aspect of what mayors do in their communities. John does it in a bigger picture, our mayor's do it, you know, for their own communities. Having clean, efficient service and reliability is a great economic benefit when mayors are going out and trying to do outreach to bring businesses into their communities, and the Will County community as a whole.

But I cannot commend the staff at this

Comment 22-1

local station more for the outreach. They get in touch with me two or three times a year, ask if there's any meetings that they can attend, we have monthly meetings with our mayors and our city administrators, are there things they can come, is there anything they can do on the behalf to enlighten. They offer opportunities for the community leaders to come and tour the plant. I had the privilege of going right before they did the last generator turnover, which I think was a couple years ago.

I've had the opportunity to go since then but they were gearing up and the safety on the inside of the plant and the security on the outside of the plant in my humble opinion, as somebody who's seen this over the last 15 years, can't be matched. And we would endorse fully the NRC's extension for the next 20 years of this licensor. Thank you.

MS. HAUSMAN: Thank you. Mr. Frank Antos from the Community Advisory Panel.

MR. ANTOS: That's A-n-t-o-s. As a long time resident of the area, I don't see any problem with them getting renewed on their license. They've been excellent, good neighbors. All I can tell you, that's, go for it.

Comment 23-1

MS. HAUSMAN: Thank you. Nancy Ammer from the Grundy Economic Development.

MS. AMMER: Good evening, last name Ammer, A-m-m-e-r. Like Mr. Quigley I'm tempted to say ditto and sit back down as I know you're all anxious to get home, but I just want to make a few quick comments. I'm with the Grundy Economic Development Counsel in Grundy County, the adjacent County over. And so we find ourselves really in an enviable position in that we are sandwiched by nuclear stations with LaSalle Station on our western border in the next county over, Braidwood here in Will County and then we're home to Dresden Station, all operated by Exelon and all excellently operated.

I also have the opportunity then from looking at them as existing businesses in our area, but then also what they bring to the table as we're trying to track new business to Illinois and to Grundy County.

The robust energy market has been good for consumers, and it has also been good for existing businesses as well as in the attraction efforts of new businesses, especially as we're seeing some reemergence of manufacturing in our area, that have very energy-intensive types of businesses so that we are now, have statistically, the employment,

the lowest in the country. It just gives more validation to what we've been working on.

The quality jobs that we see at Braidwood, that we see at Dresden, that we see at Exelon cannot be understated, especially in this environment of high unemployment. When you take those 800 plus jobs with excellent payroll, excellent benefits, multiple it by three, by all three of the stations, and all of a sudden you start to see significant impacts of payrolls in excess of \$80 million here, multiply that by three with the three stations, employment of over 2,500.

Comment 24-1

And then also to not forget the multipliers that we see when there are the refueling outages. I can assure you as an economic development person, I can't speak on behalf of Mr. Greuling, but there's not a lot of people knocking on our doors to bring in \$80 million payroll to our community. We are thankful that they are here, we are thankful the commitment that they make to our taxing bodies, and on behalf of the Grundy Economic Development Counsel I would encourage the renewal of the license. Thank you.

MS. HAUSMAN: Thank you everyone for your comments. I'd like to open it up to the floor, and

if there's anybody who has not made a comment yet that would like to speak, please step up to the podium. Everybody wants to go home.

Okay, and I've got a few closing comments here. Thank you everyone again for your participation, for the comments, for attending the meeting this evening. And the comments provided will be addressed in the Scoping Summary Report for openness and transparency the Scoping Summary Report will be available publicly on the NRC license renewal website, and the address is in the handout.

And if there are any further comments you can provide them either in writing or electronically.

Please do so by September 27th. And the NRC is always looking for ways to improve our public meeting process, so there are feedback forms on the table, if you would like to fill one of those out. They're postage paid and you can send them in, and any improvements would be welcome.

Does anybody have any comments before we close the meeting? Then this meeting is adjourned. Thank you very much.

(Whereupon at 8:20 p.m. the meeting was adjourned.)



RESOLUTION OF THE COUNTY BOARD  
WILL COUNTY, ILLINOIS

IN SUPPORT OF THE RENEWAL OF THE OPERATING LICENSE OF THE  
EXELON GENERATION BRAIDWOOD NUCLEAR GENERATING STATION

WHEREAS, energy generation is a vital component of the economy of Will County and the State of Illinois, and a key input in our manufacturing, technology and service sectors, and

WHEREAS, maintaining a reliable and cost-competitive energy supply benefits consumers and helps retain and attract jobs, and

WHEREAS, a strong, diverse and competitive energy generation industry not only brings direct economic benefit in the form of high-paying, skilled jobs, it also supports thousands of additional jobs across the economic spectrum, and

Comment 2-3

WHEREAS, since 1988, the Braidwood Nuclear Generating Station has made significant contributions to the local and regional economy, and

Comment 2-5

WHEREAS, the Braidwood Generating Station produces electricity to power two million homes without generating any carbon emissions into the environment, and

Comment 2-4

WHEREAS, the Braidwood Generating Station employs nearly 900 full-time staff and supports thousands of additional jobs through vendors and maintenance contracts benefiting area building trades and small companies, and

WHEREAS, the Braidwood Generating Station creates additional community benefits through tax payments, charitable involvement and sponsorships and maintaining wildlife habitat available to area sportsmen, and

WHEREAS, the Braidwood Generating Station has shown a strong commitment to environmental stewardship and responsiveness to community concerns and has collaborated closely with area emergency responders to enhance safety and security for area residents, and

WHEREAS, the Braidwood Generating Station and its owners are committed to continued collaboration with local government regarding equitable property assessments and diligent response and attention to environmental issues.

NOW, THEREFORE, BE IT RESOLVED, that the Braidwood Generating Station has applied to the federal Nuclear Regulatory Commission for the renewal of its operating license, and the Will County Board expresses its support for the renewal of the operating license of the Braidwood Nuclear Generating Station and urges the Nuclear Regulatory Commission to expeditiously approve the pending license renewal application.

BE IT FURTHER RESOLVED, that the Preamble of this Resolution is hereby adopted as if fully set forth herein. This Resolution shall be in full force and effect upon its passage and approval as provided by law.

Adopted by the Will County Board this 18<sup>th</sup> day of July, 2013.

Vote: Yes 25 No 0 Pass      (SEAL)

Approved this 24<sup>th</sup> day of July, 2013.

Nancy Scholtz Voots  
Will County Clerk  
  
Lawrence M. Walsh  
Will County Executive



# ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217)782-2829

PAT QUINN, GOVERNOR

LISA BONNETT, DIRECTOR

217/782-3362

MAY 22 2013

6/10/2013  
78FR 35646

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2013 JUL 25 AM 11:57

RULES AND DIRECTIVES  
BRANCH  
LIS/PC

U.S. Nuclear Regulatory Commission  
Division of License Renewal – Office of Nuclear Reactor Regulation  
One White Flint North  
11555 Rockville Pike  
Rockville, MD 20852

①

Re: Exelon Generation Company (Will County)  
Renewal of Nuclear Regulatory Commission Operating Licenses for Exelon Braidwood Generating Station Units 1 and 2 (NPF-72 and NPF-77)  
Log # C-0262-12 [NPF-72 and NPF-77]

Gentlemen:

This Agency received a request on May 22, 2012 from Exelon Generating Company requesting necessary comments concerning the renewal of the Nuclear Regulatory Commission operating licenses for the Braidwood Generating Stations Units 1 and 2 in Will County. We offer the following comments.

This Agency hereby issues certification under Section 401 of the Clean Water Act (PL 95-217), subject to the applicant's compliance with the following conditions:

1. The applicant shall be responsible for obtaining NPDES permits required for wastewater or stormwater discharges to waters of the State from the proposed activity.
2. This certification does not cover future activities that require a federal authorization under Section 404 of the Clean Water Act.

This certification becomes effective when the Nuclear Regulatory Commission includes the above conditions # 1 through # 2 as conditions of the requested license issued under the Atomic Energy Act of 1954.

This certification does not grant immunity from any enforcement action found necessary by this Agency to meet its responsibilities in prevention, abatement, and control of water pollution.

Sincerely,

  
Alan Keller, P.E.  
Manager, Permit Section  
Division of Water Pollution Control

SAK:TJF:0262-12.docx

- cc: IEPA, Records Unit  
IEPA, DWPC, FOS, Des Plaines  
IDNR, OWR, Bartlett  
USEPA, Region 5  
U.S. NRC Region III, 2443 Warrenville Road, Suite 210, Lisle, IL 60532-4352  
Mr. Ron Abrant, Chicago Corps of Engineers  
Ms. Nancy Ranek, Exelon Generation Company

SUNSI Review Complete  
Template = ADM - 013  
E-RIDS = ADM-03  
Add = J. Daity (Jxd17)  
T. Tran (TJT1)

Comment 25-1

DISTRICT OFFICE:  
103 FIFTH STREET  
PO BOX 260  
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SUE REZIN

STATE SENATOR · 38TH DISTRICT

August 21, 2013

7/31/2013  
78 FR 46379

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RULES AND DIRECTIVES  
BRANCH  
USNRD

3

Cindy Bladey: Chief of RADB  
Office of Administration  
Mail Stop: 3WFN, 06A44M, U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

RE: Docket ID NRC-2013-0169

Dear US Nuclear Regulatory Commission:

I am writing to you regarding the extension of the Braidwood Nuclear Generation Station license. I strongly support the extension of the license. The Station is a crucial anchor for both economic development and employment in my Senate District area.

The Braidwood station employs over 800 people in high paying-skilled jobs. The Station contributes hundreds of millions directly into our local economy, supporting local vendors and employing scores of trade union members on regular maintenance projects.

Furthermore, Braidwood is the backbone of our electricity generation in Illinois and in the Midwest. It produces large amounts of energy safely, consistently and cost-effectively. This helps keep Illinois' manufacturing, technology and service industries competitive in global markets and also helps attract new businesses to our area. The plant is also an important component to ensure better air quality in Northern Illinois.

Comment 18-2

Therefore, I strongly urge your Commission to extend the license under Docket ID NRC-2013-0169.

Sincerely,

Sue Rezin  
State Senator

CC:  
Scott Hubbard, Exelon Director of State & Governmental Affairs  
Mark Kavanos, Braidwood Generating Station Site Vice President

## Tran, Tam

---

**From:** Tran, Tam  
**Sent:** Tuesday, September 17, 2013 5:07 PM  
**To:** 'Judybraid@yahoo.com'  
**Cc:** Gallagher, Carol; Duncan, Eric  
**Subject:** RE: BRAIDWOOD NUCLEAR

Hello,

Consistent w/ the previous e-mail, this is to keep you informed that your comment for the Braidwood license renewal environmental review has been docketed.

---

**From:** Mendiola, Doris  
**Sent:** Tuesday, September 17, 2013 4:09 PM  
**To:** Tran, Tam; Gallagher, Carol  
**Cc:** Wrona, David  
**Subject:** RE: BRAIDWOOD NUCLEAR

I docketed it and sent to the DCD for processing.

---

**From:** Judy Braid [<mailto:judybraid@yahoo.com>]  
**Sent:** Wednesday, August 28, 2013 4:12 PM  
**To:** Tran, Tam  
**Subject:** BRAIDWOOD NUCLEAR

WE LIVE APPROXIMATELY 1800 FT FROM BRAIDWOOD NUCLEAR REMEDIATION POND. WHEN THEY PUMP DOWN THEIR POND OUR POND LEVELS ALSO DROP. WE HAVE TALKED TO OTHER NEIGHBORS WHO HAVE THE SAME PROBLEM ONE WAS PAID AND TOLD NOT TO SAY ANYTHING BY EXELON. ALSO WHEN THEY 1ST BEGAN PUMPING THEY WERE SUED BY FOREST PRESERVE DISTRICT FOR DRAINING THEIR WET LANDS KILLING WILDLIFE. FOREST PRESERVE WON LAWSUIT ALSO THE PROPERTY EXELON PURCHASED NEXT TO MY HOME IS NOT MAINTAINED. I HAVE TALKED TO THEM ABOUT IT AND THEY SAID THEY WOULD ONLY CUT VEGETATION ONCE A YEAR. I FEEL ALL THE ABOVE IS AN ENVIRONMENTAL AND HEALTH ISSUE. ALSO I FEEL THAT ALL THE PREVIOUS TRITIUM SPILLS OF THOUSANDS OF GALLONS AND STEAM RELEASES OF TRITIUM SHOULD BE TAKEN INTO CONSIDERATION BEFORE THE 20 YEAR LICENSE EXTENSION IS GIVEN.

Comment 26-1

PLEASE KEEP ME INFORMED

THANK YOU

TOM ZIMMER CONCERNED BRAIDWOOD RESIDENT  
34714 CEMETERY ROAD  
BRAIDWOOD, ILL 60408 '1 815 458 6321



## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Chicago Ecological Services Field Office  
1250 South Grove Avenue, Suite 103  
Barrington, Illinois 60010  
Phone: (847) 381-2253 Fax: (847) 381-2285

IN REPLY REFER TO:  
FWS/AES-CIFO/2013-CPA-0057

September 24, 2013

Cindy Bladey  
Chief, Rules, Announcements, and Directives Branch  
U.S. Nuclear Regulatory Commission  
Mail Stop: 3WFN, 06A44M  
Washington, DC 20555-0001

Dear Ms. Bladey:

This responds to your Notice of Intent, found in the July 31, 2013, Federal Register, to prepare an environmental impact statement (EIS) and to initiate the scoping process for the proposed Braidwood Station relicensing. This letter also responds to your September 11, 2013, request for concurrence regarding the list of Federally listed species and habitats that may be affected by the proposed action. The applicant, Exelon Generation Company, LLC, submitted an application to the U.S. Nuclear Regulatory Commission for renewal of facility operating licenses for an additional 20 years of operation for Braidwood Station, Units 1 and 2. Braidwood Station is located near Braidwood, Will County, Illinois.

In the past, we have reviewed actions associated with operations at the Braidwood Station. Those reviews were related to impacts to the Kankakee River, which is the source of the Braidwood Station's cooling pond makeup water and the receiving body for the cooling pond's blowdown discharge. During those reviews, our primary concerns were for impacts to fish and mussels, particularly the then candidate designated sheepsnose (*Plethobasus cyphus*) and snuffbox (*Epioblasma triquetra*) mussels. Both mussel species are now Federally listed as endangered under the Endangered Species Act of 1973, as amended (Act). Additionally, a pair of bald eagles (*Haliaeetus leucocephalus*) nested on an island at the cooling pond in the past. The bald eagle is still protected under the Bald and Golden Eagle Protection Act (BGEPA) and the Migratory Bird Protection Act, and our office provided technical assistance to ensure that the eagles were protected and the BGEPA was followed.

The proposed relicensing and its associated activities should be evaluated for potential impacts to the Federally listed species and other wildlife resources in the project vicinity. The EIS should fully disclose all of the activities that could be associated with the future operation of the Braidwood Station in order to determine the potential impacts to fish and wildlife resources and their habitats. Given the presence of endangered mussel species, particular attention

Comment 27-1

should be given to potential impacts from water quality (including temperature) and water quantity that may result from proposed operations.

In response to your request for concurrence regarding the species list provided for Braidwood Station, the species list for Kankakee and Will Counties should be updated to include the rattlesnake-master borer moth (*Papaipema eryngii*) and Hine's emerald dragonfly (*Somatochlora hineana*) critical habitat (Will County only). The rattlesnake-master borer moth is a recently designated candidate species. Additional information about the rattlesnake-master borer moth and critical habitat for the Hine's emerald dragonfly can be found at: <http://www.fws.gov/midwest/endangered/lists/illinois-cty.html>

Please also note that the northern long-eared bat (*Myotis septentrionalis*) is found in the project vicinity. The Service will be publishing an announcement of a 12-month finding on a petition to list the species as endangered or threatened under the Act and to designate critical habitat in early October of this year. If the northern long-eared bat is found to be warranted for listing, the Service will concurrently announce a proposal to list the species under the Act.

This letter provides comment under the authority of, and in accordance with, the provisions of the National Environmental Policy Act of 1969 (83 Stat. 852, as amended P.L. 91-190, 42 U.S.C. 4321 *et seq.*), the Fish and Wildlife Coordination Act of 1956 (48 Stat. 401, as amended; 16 U.S.C. 661 *et seq.*), the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*), the Migratory Bird Treaty Act (40 Stat. 755, as amended; 16 U.S.C. 703 *et seq.*), and the Bald and Golden Eagle Protection Act (54 Stat. 250, as amended; 16 U.S.C. 668-668d).

If you have any questions, please contact Mr. Shawn Cirton at 847/381-2253, ext. 19.

Sincerely,



Acting

Louise Clemency  
Field Supervisor

Cc: DOI, Lisa Treichel  
USFWS, Stephanie Nash  
USFWS, David Larson  
NRC, Dennis Logan  
USEPA, Kathleen Kowal



**Illinois Historic  
Preservation Agency**

1 Old State Capitol Plaza • Springfield, Illinois 62701-1512 • www.illinois-history.gov

FAX (217) 782-8161

7/31/2013  
78 FR 46379  
4

Will County  
Braidwood

License Renewal, Exelon Generation Company, LLC  
Braidwood Station, Units 1 & 2  
NRC-2013-0169  
IHPA Log #006081913

September 4, 2013

Cindy Bladey, Chief  
U.S. Nuclear Regulatory Commission  
Office of Admin./Div. of Administrative Services  
Rules, Announcements, and Directives Branch  
Mailstop 3WPN 06A44M  
Washington, DC 20555

RECEIVED  
2013 SEP 18 PM 2: 03  
RULES AND DIRECTIVES  
BRANCH  
USNRC

Dear Ms. Bladey:

We have reviewed the documentation submitted for the referenced project in accordance with 36 CFR Part 800.4. Based upon the information provided, no historic properties are affected. We, therefore, have no objection to the undertaking proceeding as planned.

Comment 28-1

Please retain this letter in your files as evidence of compliance with section 106 of the National Historic Preservation Act of 1966, as amended. This clearance remains in effect for two years from date of issuance. It does not pertain to any discovery during construction, nor is it a clearance for purposes of the Illinois Human Skeletal Remains Protection Act (20 ILCS 3440).

If you have any further questions, please contact me at 217/785-5027.

Sincerely,

*Anne E. Haaker*

Anne E. Haaker  
Deputy State Historic  
Preservation Officer

SIINCI Review Complete

# Kickapoo Tribe of Oklahoma

P.O. Box 70  
407 N. Hwy 102  
McLoud, Oklahoma 74851

Administration Department  
Phone: 405-964-7053; Fax: 405-964-7065  
Email: kwilson@kickapootribeofoklahoma.com

September 16, 2013

7/31/2013  
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2013 SEP 26 PM 1:49

BRANCH  
USNRC

Chief, Rules, Announcements, and Directives Branch  
Division of Administrative Services  
Office of Administration  
Mailstop 3WFN, 06a44M  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

*RE: The Braidwood Station, Units 1 and 2, License  
Renewal Application, Will County, IL*

Dear Ms. Wong:

Thank you for consulting with the Kickapoo Tribe of Oklahoma in regard to the above referenced license renewal. At this time, the Kickapoo Tribe of Oklahoma has no objections to the license renewal application upon full completion of reaching the scope of license renewal according to the Federal Regulations.

Should I be of any further assistance, please contact me at (405) 964-4227.

Comment 29-1

Sincerely,



Kent Collier  
NAGPRA Contact  
Kickapoo Tribe of Oklahoma

Cc: NAGPRA Consulting File

**SUNSI Review Complete**

Comments on the Supplement to the NRC's "Generic Environmental Impact Statement (GEIS)  
for License Renewal for the Braidwood Nuclear Power Station  
Docket number NRC-2013-0169

September 27, 2013

Nuclear Energy Information Service is a 32 year old Illinois environmental organization based in Chicago. We wish to make the following comments on the above Docket, to be entered into the official record.

**Prefacing Remarks: a "Nuclear Safety Culture"**

In oral comments made at the public meeting held by NRC at the Braidwood Station on August 20, 2013, we made the following observation about NRC's expected role in the license renewal process.

For the better part of a year now, NRC has been admonishing utilities in Region III on their "lack of a safety culture." In September, 2012, at the Palisades reactor in Michigan, NRC presented a slide show, instructing utilities what it expects and illustrating the characteristics of an acceptable "nuclear safety culture":

"Nuclear Safety Culture is the core values and behaviors resulting from a collective commitment by leaders and individuals to emphasize safety over competing goals to ensure protection of people and the environment." [NRC slide show, Palisades reactor presentation, 9/12/12]

In a Q&A session with then Region III director Chuck Casto, we asked what such "competing goals" might be, and suggested things like: schedules, procedures, how management and regulators listen to and act upon worker complaints. Mr. Casto stated,

"We're trying to go beyond what's required." (emphasis ours)

A REAL, AUTHENTIC nuclear safety culture will evidence behaviors that go beyond the mere letter of the requirements. Evaluations of all kinds will therefore be more than mere check-box exercises in compliance to the letter of the regulations. If NRC expects utilities to operate with that mindset, then NRC needs to lead by example, and regulate with that mindset as well.

If NRC is serious about establishing a nuclear safety culture, then we will be forced to evaluate NRC's role in this relicensing proceeding with those same standards: going beyond what's required, what's perfunctory. This will mean entertaining notions and requiring lines of investigation into matters that are "outside the box" of existing regulations in some cases. The regulations serve as the floor, not the ceiling, of compliance that will "ensure protection of people and the environment."

It is with this attitude that we will evaluate NRC's performance in this license renewal proceeding.

**Comment 1: The ER submitted by Exelon is incomplete in not providing evidence that it has examined the projected effects of predicted Illinois climate disruption on future operations. NRC regulations are inadequate for not requiring this examination.**

Consideration of climate disruption projections is not an extraordinary request. Many other sections of Exelon's applications require them to project into the future their analysis of how Braidwood will be operating at some future date. An issue that could well determine whether Braidwood has sufficient water to either operate or sufficiently cool safety-related functions at the plant should not be cavalierly dismissed; it should be at the top of the list for evaluation.

Current climate models suggest that Illinois will gradually assume a climate resembling that of East Texas or Mississippi by mid-Century (within the period of operational life extension of Braidwood), depending on whether one is running a low- or high- emissions model. Summer temperatures are expected to increase on average from 3.3° to 8.6° F. While total precipitation is expected to remain about the same, seasonal variation will increase, and frequency of heavy precipitation events—measured in terms of number of days per year with more than 2 inches of rain, and annual maximum 24-hr, 5-day and 7-day rainfall totals—is likely to continue to increase, particularly closer to the Great Lakes, a factor which will have implications in the Comments below.

The implications of these projections do not seem to be incorporated into the ER analysis provided by Exelon, which invariably result in the conclusion of "small" impact. The ER clearly states that the Kankakee River is a "small river" by definition. It is essential for the adequate functioning of the ultimate heat sink for the reactors – the cooling pond. Increased evaporation and less recharge in a climate disrupted Illinois will add stress to the pond, which according to the Exelon ER experienced 5 fish kills from 2001 to 2007. [Sec. 2.2.4.4., p. 2-15], as a result of high water temperatures and low dissolved oxygen levels in summer. These conditions are expected to worsen over time in stressed waterways.

Make-up water for the mechanical draft cooling tower system relies on the Kankakee River. Decreased volume and flow rates expected under projected climate disruption models for Illinois could have an adverse effect on cooling functions at Braidwood.

Exelon's historic penchant to request license variances on water use and thermal discharge from IEPA suggests the possibility for greater effect than is characterized in the Exelon ER document. The alternative would be curtailment of operation, which also does not appear factored into the Exelon ER in any manner.

**Recommendation:** *NRC should require a more thorough projection of water use at Braidwood, based on the best possible climate modeling for Illinois between now and mid-century. Because this variation in climate disruption and its effects are local/regional, it falls outside the scope of a generic analysis or regulation.*

Comment 30-1

**Comment 2: Analysis of socio-economic impacts are incomplete. No analysis of impacts of early or unexpected closure are considered or provided.**

The Exelon ER documents a significant local tax impact for the presence of the Braidwood Nuclear Station, yet only addresses the positive impacts. No mention or analysis of negative impacts resulting from abrupt, planned, or unexpected early closure of Braidwood is presented. This is a significant omission.

According to the Exelon ER Braidwood represents less than 2% of the Will County total tax base, roughly \$20 million annually for the years 2008 through 2010. However, it accounts for upwards of 78% of the Reed-Custer School District 255U's adjusted property tax levy. These are not insignificant amounts for the local communities around Braidwood, as opposed to the county as a whole. Their abrupt disappearance would wreak local economic havoc on the affected governmental and essential service entities' ability to operate; while leaving Will County as a whole largely unaffected.

The ER either fails to recognize or mention at all some of the possible events that could result in such a situation:

- Unexpected major accident, resulting in immediate and presumably premature closure
- NRC ordered shut down
- Exelon's unilateral decision to close the plant on economic or other grounds, as it did at Zion, resulting in an immediate loss of about 55% of Zion's tax base
- Devaluation through sale, as occurred at the Clinton station, resulting in enormous loss of tax base
- Eventual old-age, license expiration closure (the outcome most hoped for)

Exelon even provides a possible indication of the kinds of circumstances that would lead it to close Braidwood on economic grounds. Section 3.2 on Refurbishment indicates that Exelon is well aware that Braidwood Unit 2 may need a steam generator replacement during the extended operational lifetime. It is also tracking the potential for reactor vessel head replacements at its operating PWRs at both Byron and Braidwood. Should either or both of these conditions emerge at a time of deflated energy prices, or at a time Exelon acknowledges might occur as early as 2024 when renewables are much more cost competitive and approaching base load capabilities (Sec. 7.2, page 7-9), or as the result of multi-season drought curtailing water availability – Exelon being a business will certainly make the calculations it made when it closed Zion, and decide if Braidwood should continue to operate.

In this omission the ER makes the same mistake the U.S. Government made when it invaded Iraq – *it had no exit strategy*. To simply assume that the only socio-economic effects of Braidwood's presence will be positive ones is simply irrational.

Finally, the Exelon ER is somewhat dismissive of the effects that Braidwood seems to have on local property values. Exelon seems to focus primarily on "property value," as opposed to salability, which anecdotally seems to be of much greater concern in the communities directly surrounding the reactor site. It matters little what your property is "worth" if you are trying to sell it to move out of the area and can't. Such figures should be easy to obtain from local realtors, and should be included in the ER.

**Recommendation:** *Planning for some kind of eventual closure must be made long before it happens to minimize economic and service disruptions to the entities whose tax base will be affected. Debate about the license extension serves as a good reminder of this fact, and an opportunity to take action. We recommend that dependent governmental and taxing entities begin formal negotiations with Exelon to establish an escrowed "closure mitigation fund," based on some mutually agreeable assessment and payment structure, so that dependent entities will have some kind of temporary funds available to soften the economic blow of closure, and not radically disrupt essential services. Salability of property should be investigated and reported more directly, especially in the communities adjacent to the plant.*

Comment 30-2

**Comment 3: Incomplete and faulty analysis in Section 7.0 - Alternatives to the Proposed Action**

In reviewing the scenarios Exelon examined to come up with its evaluations concerning the viability of options replacing the power output of Braidwood, we find that Exelon uses information that is perhaps not current, and leaves out significant other real world options for consideration and analysis:

- *Role of renewables too narrow, inaccurate, inappropriate:* Exelon tends to treat the renewable energy resources as if they are just some variant of traditional fossil and nuclear plants. They are not. As a result they analyze these renewables solely in ways amenable to their own narrow view of functioning, which is not necessarily the best or optimal use of the particular renewable energy resource. For example only centralized energy station use of both wind and solar are considered, with no consideration of "distributed generation" in any meaningful way. Pairing up one renewable with natural gas is the only permutation analyzed, when pairing up of solar with wind to compliment the strengths of both is ignored. Further, it is not clear the degree to which the operational efficiencies of these renewables either in the present or the future is accurately analyzed.

Improvements in technology, higher wind towers, increased solar panel efficiencies, etc. are all very real prospects even before the 2024/26 license expirations of the two Braidwood nuclear reactors. We believe that this section needs a serious revision, perhaps from an outside independent consultant to more accurately reflect both the real, and the realistically anticipated world of renewable energy contributions.

- *Anachronistic business model used exclusively:* The Exelon ER examines the contributions of all competitors to the Braidwood nuclear plant – not just the renewables – on the assumption that Braidwood can only be replaced by “baseload” power. While indeed that is the way things are structured at present, current trends and real world energy discussions are starting to envision the end of this business model and approach. The notion of “distributed power” has been around for over a decade. Recently FERC officials have seriously talked about “baseload” being a concept of the past, which technological developments in both generation and grid dispatching will render increasingly meaningless. Some major US utilities are even setting up exploration of a non-baseload oriented system in trial increments within their existing systems.

The purpose of the license extension proceeding for Braidwood is NOT to analyze its past performance and compare it to the present; it is to look at its present performance and extrapolate that out an additional 20 years (31 and 33 years from now), attempting to envision the energy world at that time to see if the “present” can compete or even function in that world. Insufficient attention has been paid to this analysis in the Exelon ER. Section 7 reads like a convenient cherry-picked self-fulfilling prophecy.

Even Exelon itself cannot think that the business model it uses today will be the one that Braidwood will operate in from 2024 to 2044. A way to prove that is to ask: does Exelon TODAY operate with the business model it had in 2002 (11 years AGO)? This was just a handful of years out from utility deregulation and unbundling of utilities here in Illinois. Exelon did not even exist. Its predecessor’s predecessor was just in the process of selling off its coal plants.

Before these critiques are summarily dismissed by NRC as out of the scope of this docket, we would remind you that a “nuclear safety culture” demands that kind of “out of the box” thinking and analysis to “...ensure protection of people and the environment.” You said so yourselves. Analyzing the functioning of Braidwood in the energy world of the future will have serious implications for Exelon’s analysis of socio-economic impacts. Until that analysis is done, their “small” conclusions must be held in serious doubt.

**Recommendation:** Order Exelon to re-examine its Section 7 comparisons, incorporating: 1.) distributed generation and decline of the “baseload power” business model; 2.) better data on the capabilities of wind and solar, based on expected improvements in technology, or better and more optimal use decisions; 3.) expected upgrades, improvements and additions of grid and dispatching systems in the MISO and PJM Interconnection areas.

Comment 30-3

**Comment 4: Sec. 5.0 - Assessment of New and Significant Information**

Since, “...The environmental report must contain any new and significant information regarding the environmental impacts of license renewal of which the applicant is aware.” [10 CFR 51.53(c)(3)(iv)], and Exelon and NRC have now been made of new information not previously analyzed, the law requires that this information be researched, and reported in a revised ER.

Since the climate disruption issues raised above are uniquely local in their manifestation and effects, a generic ruling on them is both inappropriate and would be inaccurate.

Since no apparent investigation has been done concerning either the effects of climate disruption, or the effects of abrupt closure on socio-economic factors, results would certainly “...lead to an impact finding that

Comment 30-4

presents a seriously different picture of the environmental impact of the proposed project in comparison with what was previously envisioned." [Sec. 5.1, page 5-3]

We appreciate the opportunity to offer these observations. We look forward to NRC incorporating these recommendations in future license extension proceedings.