



**Michael P. Gallagher**  
Vice President, License Renewal  
Exelon Nuclear

200 Exelon Way  
Kennett Square, PA 19348

610 765 5958 Office  
610 765 5956 Fax  
www.exeloncorp.com

michaelp.gallagher@exeloncorp.com

10 CFR 50  
10 CFR 51  
10 CFR 54

RS-15-143

May 12, 2015

U. S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, DC 20555-0001

Braidwood Station, Units 1 and 2  
Facility Operating License Nos. NPF-72 and NPF-77  
NRC Docket Nos. STN 50-456 and STN 50-457

**Subject:** Exelon Generation Company, LLC Comments on the Draft Generic Environmental Impact Statement for License Renewal of Nuclear Plants Supplement 55 Regarding Braidwood Station, Units 1 and 2 [Docket ID NRC-2013-0169]

**Reference:**

- 1) Exelon Generation Company, LLC letter from Michael P. Gallagher to NRC Document Control Desk, "Application for Renewed Operating Licenses", dated May 29, 2013
- 2) Letter from Brian D. Wittick (NRC) to Michael P. Gallagher (Exelon), "Notice of Availability of the Draft Plant-Specific Supplement 55 to the Generic Environmental Impact Statement for License Renewal of Nuclear Plants Regarding Braidwood Station, Units 1 and 2", dated March 18, 2015

In the Reference 1 letter, Exelon Generation Company, LLC (Exelon) submitted the License Renewal Application (LRA) for the Byron and Braidwood Stations, Units 1 and 2, which contained combined technical information required by 10 CFR 54.21 for both stations and separate site-specific environmental information required by 10 CFR 54.23 for each station.

In the Reference 2 letter, the U.S. Nuclear Regulatory Commission informed Exelon of the availability of the Draft Supplement 55 to the Generic Environmental Impact Statement for License Renewal of Nuclear Plants (GEIS) Regarding Braidwood Station, Units 1 and 2 and requested that comments be provided to the staff by May 12, 2015. A separate plant-specific supplement to the GEIS regarding Byron Station, Units 1 and 2 was issued previously.

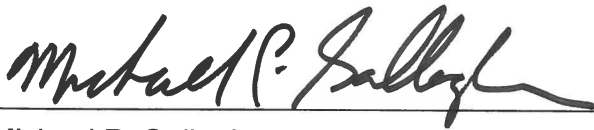
Exelon is submitting, as an enclosure to this letter, written comments on two specific aspects of Draft Supplement 55 to the GEIS Regarding Braidwood Station, Units 1 and 2. Additional comments will be filed by May 15, 2015.

U.S. Nuclear Regulatory Commission  
May 12, 2015  
Page 2

There are no new or revised regulatory commitments contained in this letter.

If you have any questions, please contact Mr. Al Fulvio, Manager, Exelon License Renewal, at 610-765-5936.

Respectfully,

A handwritten signature in black ink, reading "Michael P. Gallagher", is written over a horizontal line.

Michael P. Gallagher  
Vice President - License Renewal Projects  
Exelon Generation Company, LLC

Enclosure: Exelon Generation Company, LLC Comments on Supplement 55 to the Draft  
Generic Environmental Impact Statement for License Renewal of Nuclear  
Plants Regarding Braidwood Station, Units 1 and 2

cc: Regional Administrator – NRC Region III  
NRC Project Manager (Environmental Review), NRR-DLR  
NRC Project Manager (Safety Review), NRR-DLR  
NRC Project Manager, NRR-DORL Braidwood Station  
NRC Senior Resident Inspector, Braidwood Station  
Illinois Emergency Management Agency – Division of Nuclear Safety

**Exelon Generation Company, LLC Comments on Supplement 55 to the Draft Generic Environmental Impact Statement for License Renewal of Nuclear Plants Regarding Braidwood Station, Units 1 and 2**

**Comments on Assessments of Impacts on Cooling Pond Aquatic Ecology and Cumulative Impacts on Climate Change of Greenhouse Gas Emissions**

In the following table, Exelon Generation Company, LLC (Exelon Generation) is submitting comments on two specific aspects of Draft Supplement 55 to the Generic Environmental Impact Statement Regarding Braidwood Station Units 1 and 2 (DSEIS). Additional comments on the DSEIS will be filed by May 15, 2015.

Item #	Section #	Page #	Line #	Comment
1	3.1.3	3-5	24-26	The DSEIS states that “the IDNR regulates Exelon’s operation and maintenance of the cooling pond through Permit No. NE2000125 (IDNR 2000).” This is not correct. The IDNR permit referenced in this text is a permit for Cooling Pond <i>dam</i> operation and maintenance only, not for operation and maintenance of the Cooling Pond more generally.
2	4.7.1.2	4-64	7 - 14	<p>The DSEIS states that in the FES-O in 1984, the:</p> <p style="padding-left: 40px;">NRC determined that the effects of thermal additions to the cooling pond were discountable because the State had not identified the pond as a <u>fishery resource</u> and because the applicant had indicated that the pond would only be used for cooling purposes [emphasis added]. However, since that time, the IDNR has regularly stocked the lake with game fish and the pond is managed as part of the Mazonia-Braidwood State Fish and Wildlife Area. The pond also provides quality habitat, food, and water to waterfowl and migrating birds. The NRC, therefore, no longer considers effects to the cooling pond to be discountable.</p> <p>Thus, the DSEIS concludes that a material change in circumstances has occurred since the Braidwood Operating License Final Environmental Statement was issued that now, at the License Renewal stage, compels a NEPA assessment by NRC of the effects of thermal additions to</p>

Item #	Section #	Page #	Line #	Comment
				<p>the cooling pond, whereas one was not needed at the Operating License Stage. Exelon Generation objects to this conclusion for the following reasons:</p> <ol style="list-style-type: none"> <li data-bbox="695 436 1414 667">1. The Braidwood Cooling Pond is a “wastewater treatment system” and, therefore, is not a “water of the United States” under the Clean Water Act. Because it is not a water of the United States, the NRC should not be evaluating impacts on the Cooling Pond from Braidwood’s thermal additions to the cooling pond water.</li> <li data-bbox="695 701 1414 1129">2. Section 316(a) of the CWA, as its title states, provides “Effluent limits that will assure protection and propagation of balanced, indigenous population of shellfish, fish, and wildlife.” The CWA, however, does not apply to influents into the Braidwood Cooling Pond. Accordingly, there is no need to ensure protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife in the Braidwood Cooling Pond. To suggest otherwise through a NEPA analysis, would be to impermissibly impose an environmental standard on a wastewater treatment system that is itself exempt from that standard.</li> <li data-bbox="695 1163 1414 1633">3. The NRC acknowledges, in its “Summary of Thermal Impacts Conclusion” on DSEIS page 4-67, that Illinois considers the Braidwood Cooling Pond to be a “wastewater treatment facility” that “is not subject to the limitations of the CWA.” As a wastewater treatment facility, there are no limits on thermal additions to the Cooling Pond from the Braidwood circulating water system; whereas if the Cooling Pond was subject to the CWA, thermal additions might be regulated differently. As a result, there is no federal or state requirement to protect the fish that might be present in the Cooling Pond. Even being part of a “Fish and Wildlife Area” does not change that result.</li> <li data-bbox="695 1667 1414 1898">4. The lease between Exelon and the State of Illinois Department of Natural Resources recognizes that the Cooling Pond’s primary purpose is to provide cooling water to Braidwood, and that all other purposes identified in the lease may be overridden to meet that need. Recital B of the lease states: “The Leased Premises is a part of Braidwood Generating</li> </ol>

Item #	Section #	Page #	Line #	Comment
				<p>Station owned by [Exelon] (“Braidwood Generating Station”).” Recital C states: “It is essential that [Exelon] continue to have the use of the waters of the Leased Premises for cooling water and other purposes for the Braidwood Generating Station, and that its continued operation of the Braidwood Generating Station be without interference from [Illinois] or anyone using the Leased Premises.” Finally, Recital D states: “The parties recognize that public use of the Leased Premises must be restricted and regulated in order that such public use hereunder shall not conflict or interfere with the present and future operation and use of the Braidwood Generating Station.” Inherent in these recitals is Illinois’ acknowledgement that plant operations must take precedence over the viability of fish that Illinois artificially stocks in the Cooling Pond. Indeed, by signing the lease, Illinois agreed that it “shall not pursue . . . any action or proceeding which might result in claims, fines, judgments or damages against [Exelon] arising from or related to fish or other aquatic life being killed during the term of this Lease.” Similarly, recreation is permitted in designated areas only; access by the public since the Cooling Pond was created has not been allowed to approximately 760 acres. If the parties to the lease understand that any fish stocked in the Cooling Pond are for limited recreational purposes, and that significant fish kills or unnatural fish population trends are anticipated due to water discharges at elevated temperatures, then the NRC should not skew its environmental impacts analysis by considering the “effects” to the Cooling Pond by Braidwood’s extended operation.</p> <p>5. The NRC also should not assess the impact of plant operations on fish that are manually placed in the Cooling Pond because there is no current mechanism for Illinois to stock fish in the Cooling Pond during the period of extended operation (PEO). The current lease between Exelon and Illinois is dated December 16, 2002, and it expires October 26, 2026. This is essentially coincident with the expiration of the existing Braidwood licenses on October 17, 2026 and December 18, 2027. Accordingly, there is no current mechanism for</p>

Item #	Section #	Page #	Line #	Comment
				<p>Illinois to stock the Cooling Pond during the PEO.</p> <p>6. Because the lease expires in October 2026, for purposes of assessing the aquatic impacts of license renewal, the NRC should consider that under the No-Action Alternative, Illinois may not stock the Cooling Pond, thereby eliminating the fishing resource and eliminating its benefits. Thus, the NRC should consider the overall aquatic impacts from this baseline, not from the assumption that the Cooling Pond will be fully stocked by the State of Illinois during the proposed PEO.</p> <p>7. The fish species that are stocked in the Cooling Pond are skewed towards those that will thrive in elevated temperatures. As such, failure to renew the plant's license would result in a cessation of the thermal discharge and likely the death of these fish.</p> <p>8. The suggestion that "the pond is managed as part of the Mazonia-Braidwood State Fish and Wildlife Area" is misleading without further context. Access by the public since the Cooling Pond was created has not been allowed to approximately 760 acres which comprise the intake and discharge channels in the immediate vicinity of Braidwood Station. Furthermore, the lease agreement allows Exelon, upon reasonable notice to IDNR, to restrict public access to the entire leased area at any time to accommodate operation and security of the plant.</p>
3	4.7.1.3	4-66	25 to 28	<p>Lines 25 to 28 on page 4- 66 contain the following text:        "Information on fish kills in the cooling pond indicates noticeable effects that are likely to persist while Braidwood is operational. This LOE does not provide enough information to determine if fish kills have destabilized any important attribute of the resource. Therefore, this LOE indicates that the effects of the thermal discharge on cooling pond aquatic biota are MODERATE.</p> <p>Exelon Generation submits that the above-quoted conclusion fails to take account of the actual baseline aquatic environment in the Cooling Pond. If thermal impacts in the Cooling Pond are to be assessed, then the analysis should take account of the nature of the existing fish population, which is not naturally occurring. Because of</p>

Item #	Section #	Page #	Line #	Comment
				<p>IDNR's goal for the fishery in the Cooling Pond to provide a desirable recreational fishing experience for anglers and Exelon's desire to maximize the tolerance of fish to the thermal environment in the Cooling Pond, the fish populations in the Cooling Pond are artificially adjusted each year through stocking. Therefore, even if a fish kill occurs during a particular year, effects on the fish populations may only be observable at the time of the event because stocking can replace the losses. It should be recognized that in a closed system, such as the Cooling Pond, with a heavily managed fish population and the expectation of occasional fish kills, the impacts of thermally induced fish kills are essentially unnoticeable except at the time of the event, and hence, the impacts should be characterized as SMALL.</p>
4	4.16.11	4-149 to 50	N/A	<p>The evaluation of cumulative impacts of greenhouse gas (GHG) emissions from continued operation of Braidwood on Global Climate Change could leave the reader with the mistaken impression that Braidwood's GHG emissions would have some measurable impact on global climate change, when they could not.</p> <p>To start, the only table in the Executive Summary (Table ES-1) declares through its title that the "Site-Specific Impacts of [Braidwood's] License Renewal" include MODERATE cumulative impacts to Global Climate Change. This is an unsupportable conclusion for a proposed action involving renewal of a nuclear power plant operating license, because nuclear power plants have virtually no GHG emissions, and nuclear power is one of the solutions that can decrease GHG emissions.</p> <p>Under <i>draft</i> guidance recently published by the Council on Environmental Quality (CEQ), federal agencies are asked to consider the cumulative impacts "of a proposed action's reasonably foreseeable emissions and effects," with cumulative impacts defined as the "<i>incremental impact[s] of the action when added to other past, present, and reasonably foreseeable future actions . . .</i>" CEQ, Revised Draft Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in NEPA Reviews, 79 Fed. Reg. 77,802, 77,802, 77,826 (Dec. 24, 2014) (emphasis added). Thus, the cumulative impacts assessment should not be an assessment of the general impacts of all projects, but an assessment of the incremental contributions of the proposed project under consideration.</p>

Item #	Section #	Page #	Line #	Comment
				<p>As shown in Table 4-29 of the DSEIS, the incremental addition of CO<sub>2</sub> emissions from the continued operation of Braidwood would be extraordinarily small in comparison to global, U.S., and Illinois state emissions. According to that table, Braidwood would emit nearly 30 times <i>less</i> CO<sub>2</sub> than the next lowest emitter on the table. Thus, the conclusion that “the cumulative impact of GHG emissions on climate change is noticeable but not destabilizing” and therefore MODERATE, is misleading in that it fails to clearly distinguish between Braidwood’s impact and the impact of all other sources. The conclusion does not lead to more informed decisionmaking, which is the purpose of NEPA and the draft CEQ Guidance, because it fails to focus on Braidwood’s incremental contribution and to acknowledge that continued operation would in fact be <i>beneficial</i> for Global Climate Change. Indeed, all of the alternatives to license renewal considered in depth in the DSEIS involve significantly greater levels of CO<sub>2</sub> emissions from fossil fuel generation.</p> <p>NRC should revise Table ES-1 to indicate that the effects from the plant are SMALL, and to make conforming changes in the cumulative impacts section that discusses GHG emissions and Global Climate Change.</p>