UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

January 29, 2019

Mr. Bryan C. Hanson
Senior Vice President
Exelon Generation Company, LLC
President and Chief Nuclear Officer (CNO)
Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: BYRON STATION, UNIT NO. 2 - INDIVIDUAL RE-NOTICE OF CONSIDERATION OF ISSUANCE OF AMENDMENTS TO RENEWED FACILITY OPERATING LICENSE, PROPOSED NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION, AND OPPORTUNITY FOR A HEARING (EPID L-2018-LLA-0064)

Dear Mr. Hanson:

The U.S. Nuclear Regulatory Commission has forwarded the enclosed notice of consideration of issuance of amendments to renewed facility operating licenses proposed no significant hazards consideration determination and opportunity for a hearing to the Office of the Federal Register for publication.

This notice relates to your application dated March 8, 2018 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML18067A431), as supplemented on July 2, 2018 (ADAMS Accession No. ML18184A270), December 18, 2018 (ADAMS Accession No. ML18352B117), and January 16, 2019 (ADAMS Accession No. ML19016A491), in which you request approval to use two lead test assemblies containing a limited number of accident tolerant fuel lead test rods during Byron, Unit No. 2, refueling cycles 22, 23, and 24.

If you have any questions, please contact me at 301-415-6606.

Sincerely,

For

Joel S. Wiebe, Senior Project Manager
Plant Licensing Branch III
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. STN 50-455

Enclosure:
Notice of Consideration

cc: Listserv

ENCLOSURE

FEDERAL REGISTER NOTICE

[7590-01-P]

NUCLEAR REGULATORY COMMISSION

[Docket No. STN 50-455; NRC-2018-0246]

Exelon Generation Company, LLC,

Byron Station, Unit No. 2

AGENCY: Nuclear Regulatory Commission.

ACTION: License amendment application; opportunity to comment, request a hearing, and petition for leave to intervene.

SUMMARY: The license amendment request was originally noticed in the *Federal Register* on November 6, 2018. The notice is being reissued in its entirety to include the revised scope, description of the amendment request, and proposed no significant hazards consideration determination. The U.S. Nuclear Regulatory Commission (NRC) is considering issuance of an amendment to Facility Operating License No. NPF-66, issued to Exelon Generation Company, LLC, for operation of the Byron Station, Unit No. 2. The proposed amendment would revise technical specification 4.2.1 to authorize use of two lead test assemblies (LTAs) containing a limited number of accident tolerant fuel (ATF) lead test rods (LTRs) during Byron Station, Unit No. 2, refueling cycles 22, 23, and 24. The LTAs would be nonlimiting under steady state reactor conditions and will comply with fuel limits specified in the core operating limits report and technical specifications under all operational conditions.

DATES: Submit comments by **[INSERT DATE 30 DAYS FROM DATE OF PUBLICATION]**. Requests for a hearing or petition for leave to intervene must be filed by **[INSERT DATE 60 DAYS FROM DATE OF PUBLICATION]**.

ADDRESSES: You may submit comments by any of the following methods:

- **Federal Rulemaking Web Site:** Go to http://www.regulations.gov and search for Docket ID NRC-2018-0246. Address questions about Docket IDs in Regulations.gov to Krupskaya Castellon; telephone: 301-287-9221; e-mail: Krupskaya.Castellon@nrc.gov. For technical questions, contact the individual listed in the FOR FURTHER INFORMATION CONTACT section of this document.

- **Mail comments to:** Office of Administration, Mail Stop: TWFN-7-A60M, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, ATTN: Program Management, Announcements and Editing Staff.

For additional direction on obtaining information and submitting comments, see "Obtaining Information and Submitting Comments" in the SUPPLEMENTARY INFORMATION section of this document.

FOR FURTHER INFORMATION CONTACT: Joel S. Wiebe, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington DC 20555-0001; telephone: 301-415-6606 or e-mail: Joel.Wiebe@nrc.gov.

SUPPLEMENTARY INFORMATION:

I. Obtaining Information and Submitting Comments

A. Obtaining Information

Please refer to Docket ID NRC-2018-0246 and NRC Docket No. STN 50-455, when contacting the NRC about the availability of information for this action. You may obtain publicly-available information related to this action by any of the following methods:

- **Federal Rulemaking Web Site:** Go to http://www.regulations.gov and search for Docket ID NRC-2018-0246.

- **NRC's Agencywide Documents Access and Management System (ADAMS):** You may obtain publicly-available documents online in the ADAMS Public Documents collection at http://www.nrc.gov/reading-rm/adams.html. To begin the search, select "Begin Web-based ADAMS Search." For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to pdr.resource@nrc.gov. The ADAMS accession number for each document referenced (if it is available in ADAMS) is provided the first time that it is mentioned in this document.

- **NRC's PDR:** You may examine and purchase copies of public documents at the NRC's PDR, Room O1-F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

B. Submitting Comments

Please include Docket ID NRC-2018-0246, facility name, unit number, plant docket number, application date, and subject in your comment submission.

The NRC cautions you not to include identifying or contact information that you do not want to be publicly disclosed in your comment submission. The NRC will post all comment submissions at http://www.regulations.gov as well as enter the comment submissions into ADAMS. The NRC does not routinely edit comment submissions to remove identifying or contact information.

If you are requesting or aggregating comments from other persons for submission to the NRC, then you should inform those persons not to include identifying or contact information that they do not want to be publicly disclosed in their comment submission. Your request should state that the NRC does not routinely edit comment submissions to remove such information before making the comment submissions available to the public or entering the comment into ADAMS.

II. Introduction

The NRC is considering issuance of an amendment to Facility Operating License No. NPF-66, issued to Exelon Generation Company, LLC (EGC), for operation of the Byron Station, Unit No. 2, located in Ogle County, Illinois. The license amendment request, dated March 8, 2018 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML18067A431), was originally noticed in the *Federal Register* on November 6, 2018 (83 FR 55573). Subsequently, EGC supplemented the request on July 2, 2018 (ADAMS Accession No. ML18184A270), December 18, 2018 (ADAMS Accession No. ML18352B117), and January 16, 2019 (ADAMS Accession No. ML19016A491). The January 16, 2019, supplement revised the scope of the request to eliminate the license condition and to include a revision to technical specification 4.2.1. The notice is being reissued in its entirety to include the revised scope, description of the amendment request, and proposed no significant hazards consideration determination. The proposed amendment would revise technical specification 4.2.1 to authorize use of two LTAs containing a limited number of ATF LTRs during Byron, Unit No. 2, refueling cycles 22, 23, and 24. The LTAs would be nonlimiting under steady state reactor conditions and will comply with fuel limits specified in the core operating limits report and technical specifications under all operational conditions.

Before any issuance of the proposed license amendment, the NRC will need to make the findings required by the Atomic Energy Act of 1954, as amended (the Act), and NRC's regulations.

The NRC has made a proposed determination that the license amendment request involves no significant hazards consideration. Under the NRC's regulations in § 50.92 of title 10 of the *Code of Federal Regulations* (10 CFR), this means that operation of the facility in accordance with the proposed amendment would not

(1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety. As required by 10 CFR 50.91(a), the licensee has provided its analysis of the issue of no significant hazards consideration, which is presented below:

1. Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

   Response: No.

   The proposed change involves only a very small number of LTRs, which will be conservatively designed from a neutronic standpoint, and are thermal-hydraulically and mechanically compatible with all plant Systems, Structures and Components (SSCs). The fuel pellets and fuel rods themselves will have no impact on accident initiators or precursors. There will not be a significant impact on the operation of any plant SSC or on the progression of any operational transient or design basis accident. There will be no impact on any procedure or administrative control designed to prevent or mitigate any accident.

   The Westinghouse ADOPT™ and EnCore® (with and without chromium-coated cladding, respectively) LTAs are of the same design as the co-resident fuel in the core, with the exception of containing a limited number of LTRs in place of the standard fuel rods. The LTAs will be placed in core locations that assure that the LTRs containing uranium silicide fuel pellets and standard UO2 fuel pellets with coated Optimized ZIRLO™ cladding are nonlimiting. The rods containing ADOPT™ pellets meet the fuel licensing limits under all conditions but are only nonlimiting in steady-state conditions. The Byron Station, Unit 2, Cycle, 22, 23 and 24 reload designs will meet all applicable design criteria. Evaluations of the LTAs will be performed as part of the cycle specific reload safety analysis to confirm that the acceptance criteria of the existing safety analyses will continue to be met. Operation of the Westinghouse EnCore® and ADOPT™ fuel will not significantly increase the predicted radiological consequences of accidents currently postulated in the Updated Final Safety Analysis Report.

   Based on the above discussion, the proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The proposed change involves the use of a very small number of LTRs in two LTAs which are very similar in all aspects to the co-resident fuel, as noted in Question 1. The proposed change does not change the design function or operation of any SSC, and does not introduce any new failure mechanism, malfunction, or accident initiator not considered in the current design and licensing bases.

The Byron Station, Unit 2 reactor cores will be designed to meet all applicable design and licensing basis criteria. Demonstrated adherence to these standards and criteria precludes new challenges to components and systems that could introduce a new type of accident. The reload core designs for the cycles in which the Westinghouse LTAs will operate (i.e., Cycles 22, 23 and 24) will demonstrate that the use of the LTAs in the core is acceptable. The relevant design and performance criteria will continue to be met and no new single failure mechanisms will be created. The use of Westinghouse LTAs does not involve any alteration to plant equipment or procedures that would introduce any new or unique operational modes or accident precursors.

Therefore, the proposed change will not create the possibility of a new or different kind of accident than those previously evaluated.

3. Does the proposed change involve a significant reduction in a margin of safety?

Response: No.

Operation of Byron Station Unit 2 with two Westinghouse LTAs containing a limited number of LTRs does not change the performance requirements on any system or component such that any design criteria will be exceeded. The current limits on core operation defined in the Byron Station Technical Specifications will remain applicable to the subject LTAs during Cycles 22, 23, and 24. Westinghouse analytical codes and methods will be used, and supplemented as necessary using conservative assumptions, to confirm that all applicable limits associated with the LTAs (e.g., fuel thermal mechanical limits, core thermal hydraulic limits, Emergency Core Cooling Systems limits, nuclear limits such as Shutdown Margin, transient analysis limits, and accident analysis limits) remain bounded by the current analysis of record. With respect to non-fuel SSCs, there is no reduction in the margin of safety for any safety limit, limiting safety system setting, limiting condition of operation, instrument setpoint, or any other design parameter.

Based on this evaluation, the proposed change does not involve a significant reduction in a margin of safety.

The NRC staff has reviewed the licensee's analysis and, based on this review, it appears that the three standards of 10 CFR 50.92(c) are satisfied. Therefore, the NRC staff proposes to determine that the license amendment request involves no significant hazards consideration.

The NRC is seeking public comments on this proposed determination that the license amendment request involves no significant hazards consideration. Any comments received within 30 days after the date of publication of this notice will be considered in making any final determination.

Normally, the Commission will not issue the amendment until the expiration of 60 days after the date of publication of this notice. The Commission may issue the license amendment before expiration of the 60-day notice period if the Commission concludes the amendment involves no significant hazards consideration. In addition, the Commission may issue the amendment prior to the expiration of the 30-day comment period if circumstances change during the 30-day comment period such that failure to act in a timely way would result, for example, in prevention of either resumption of operation or of increase in power output up to the plant's licensed power level. If the Commission takes action prior to the expiration of either the comment period or the notice period, it will publish in the *Federal Register* a notice of issuance. If the Commission makes a final no significant hazards consideration determination, any hearing will take place after issuance. The Commission expects that the need to take this action will occur very infrequently.

III. **Opportunity to Request a Hearing and Petition for Leave to Intervene**

Within 60 days after the date of publication of this notice, any persons (petitioner) whose interest may be affected by this action may file a request for a hearing and petition for leave to intervene (petition) with respect to the action. Petitions shall be filed

in accordance with the Commission's "Agency Rules of Practice and Procedure" in 10 CFR part 2. Interested persons should consult a current copy of 10 CFR 2.309. The NRC's regulations are accessible electronically from the NRC Library on the NRC's Web site at http://www.nrc.gov/reading-rm/doc-collections/cfr/. Alternatively, a copy of the regulations is available at the NRC's Public Document Room, located at One White Flint North, Room O1-F21, 11555 Rockville Pike (first floor), Rockville, Maryland 20852. If a petition is filed, the Commission or a presiding officer will rule on the petition and, if appropriate, a notice of a hearing will be issued.

As required by 10 CFR 2.309(d) the petition should specifically explain the reasons why intervention should be permitted with particular reference to the following general requirements for standing: (1) the name, address, and telephone number of the petitioner; (2) the nature of the petitioner's right under the Act to be made a party to the proceeding; (3) the nature and extent of the petitioner's property, financial, or other interest in the proceeding; and (4) the possible effect of any decision or order which may be entered in the proceeding on the petitioner's interest.

In accordance with 10 CFR 2.309(f), the petition must also set forth the specific contentions which the petitioner seeks to have litigated in the proceeding. Each contention must consist of a specific statement of the issue of law or fact to be raised or controverted. In addition, the petitioner must provide a brief explanation of the bases for the contention and a concise statement of the alleged facts or expert opinion which support the contention and on which the petitioner intends to rely in proving the contention at the hearing. The petitioner must also provide references to the specific sources and documents on which the petitioner intends to rely to support its position on the issue. The petition must include sufficient information to show that a genuine dispute exists with the applicant or licensee on a material issue of law or fact. Contentions must

be limited to matters within the scope of the proceeding. The contention must be one which, if proven, would entitle the petitioner to relief. A petitioner who fails to satisfy the requirements at 10 CFR 2.309(f) with respect to at least one contention will not be permitted to participate as a party.

Those permitted to intervene become parties to the proceeding, subject to any limitations in the order granting leave to intervene. Parties have the opportunity to participate fully in the conduct of the hearing with respect to resolution of that party's admitted contentions, including the opportunity to present evidence, consistent with the NRC's regulations, policies, and procedures.

Petitions must be filed no later than 60 days from the date of publication of this notice. Petitions and motions for leave to file new or amended contentions that are filed after the deadline will not be entertained absent a determination by the presiding officer that the filing demonstrates good cause by satisfying the three factors in 10 CFR 2.309(c)(1)(i) through (iii). The petition must be filed in accordance with the filing instructions in the "Electronic Submissions (E-Filing)" section of this document.

If a hearing is requested, and the Commission has not made a final determination on the issue of no significant hazards consideration, the Commission will make a final determination on the issue of no significant hazards consideration. The final determination will serve to establish when the hearing is held. If the final determination is that the amendment request involves no significant hazards consideration, the Commission may issue the amendment and make it immediately effective, notwithstanding the request for a hearing. Any hearing would take place after issuance of the amendment. If the final determination is that the amendment request involves a significant hazards consideration, then any hearing held would take place before the issuance of the amendment unless the Commission finds an imminent danger

to the health or safety of the public, in which case it will issue an appropriate order or rule under 10 CFR part 2.

A State, local governmental body, Federally-recognized Indian Tribe, or agency thereof, may submit a petition to the Commission to participate as a party under 10 CFR 2.309(h)(1). The petition should state the nature and extent of the petitioner's interest in the proceeding. The petition should be submitted to the Commission no later than 60 days from the date of publication of this notice. The petition must be filed in accordance with the filing instructions in the "Electronic Submissions (E-Filing)" section of this document, and should meet the requirements for petitions set forth in this section, except that under 10 CFR 2.309(h)(2) a State, local governmental body, or Federally-recognized Indian Tribe, or agency thereof does not need to address the standing requirements in 10 CFR 2.309(d) if the facility is located within its boundaries. Alternatively, a State, local governmental body, Federally-recognized Indian Tribe, or agency thereof may participate as a non-party under 10 CFR 2.315(c).

If a hearing is granted, any person who is not a party to the proceeding and is not affiliated with or represented by a party may, at the discretion of the presiding officer, be permitted to make a limited appearance pursuant to the provisions of 10 CFR 2.315(a). A person making a limited appearance may make an oral or written statement of his or her position on the issues but may not otherwise participate in the proceeding. A limited appearance may be made at any session of the hearing or at any prehearing conference, subject to the limits and conditions as may be imposed by the presiding officer. Details regarding the opportunity to make a limited appearance will be provided by the presiding officer if such sessions are scheduled.

IV. Electronic Submissions (E-Filing)

All documents filed in NRC adjudicatory proceedings, including a request for hearing and petition for leave to intervene (petition), any motion or other document filed in the proceeding prior to the submission of a request for hearing or petition to intervene, and documents filed by interested governmental entities that request to participate under 10 CFR 2.315(c), must be filed in accordance with the NRC's E-Filing rule (72 FR 49139; August 28, 2007, as amended at 77 FR 46562; August 3, 2012). The E-Filing process requires participants to submit and serve all adjudicatory documents over the internet, or in some cases to mail copies on electronic storage media. Detailed guidance on making electronic submissions may be found in the Guidance for Electronic Submissions to the NRC and on the NRC Web site at *http://www.nrc.gov/site-help/e-submittals.html*. Participants may not submit paper copies of their filings unless they seek an exemption in accordance with the procedures described below.

To comply with the procedural requirements of E-Filing, at least 10 days prior to the filing deadline, the participant should contact the Office of the Secretary by e-mail at *hearing.docket@nrc.gov*, or by telephone at 301-415-1677, to (1) request a digital identification (ID) certificate, which allows the participant (or its counsel or representative) to digitally sign submissions and access the E-Filing system for any proceeding in which it is participating; and (2) advise the Secretary that the participant will be submitting a petition or other adjudicatory document (even in instances in which the participant, or its counsel or representative, already holds an NRC-issued digital ID certificate). Based upon this information, the Secretary will establish an electronic docket for the hearing in this proceeding if the Secretary has not already established an electronic docket.

Information about applying for a digital ID certificate is available on the NRC's public Web site at *http://www.nrc.gov/site-help/e-submittals/getting-started.html*. Once a participant has obtained a digital ID certificate and a docket has been created, the participant can then submit adjudicatory documents. Submissions must be in Portable Document Format (PDF). Additional guidance on PDF submissions is available on the NRC's public Web site at *http://www.nrc.gov/site-help/electronic-sub-ref-mat.html*. A filing is considered complete at the time the document is submitted through the NRC's E-Filing system. To be timely, an electronic filing must be submitted to the E-Filing system no later than 11:59 p.m. Eastern Time on the due date. Upon receipt of a transmission, the E-Filing system time-stamps the document and sends the submitter an e-mail notice confirming receipt of the document. The E-Filing system also distributes an e-mail notice that provides access to the document to the NRC's Office of the General Counsel and any others who have advised the Office of the Secretary that they wish to participate in the proceeding, so that the filer need not serve the document on those participants separately. Therefore, applicants and other participants (or their counsel or representative) must apply for and receive a digital ID certificate before adjudicatory documents are filed so that they can obtain access to the documents via the E-Filing system.

A person filing electronically using the NRC's adjudicatory E-Filing system may seek assistance by contacting the NRC's Electronic Filing Help Desk through the "Contact Us" link located on the NRC's public Web site at *http://www.nrc.gov/site-help/e-submittals.html*, by e-mail to *MSHD.Resource@nrc.gov*, or by a toll-free call at 1-866-672-7640. The NRC Electronic Filing Help Desk is available between 9 a.m. and 6 p.m., Eastern Time, Monday through Friday, excluding government holidays.

Participants who believe that they have a good cause for not submitting documents electronically must file an exemption request, in accordance with 10 CFR 2.302(g), with their initial paper filing stating why there is good cause for not filing electronically and requesting authorization to continue to submit documents in paper format. Such filings must be submitted by: (1) first class mail addressed to the Office of the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, Attention: Rulemaking and Adjudications Staff; or (2) courier, express mail, or expedited delivery service to the Office of the Secretary, 11555 Rockville Pike, Rockville, Maryland 20852, Attention: Rulemaking and Adjudications Staff. Participants filing adjudicatory documents in this manner are responsible for serving the document on all other participants. Filing is considered complete by first-class mail as of the time of deposit in the mail, or by courier, express mail, or expedited delivery service upon depositing the document with the provider of the service. A presiding officer, having granted an exemption request from using E-Filing, may require a participant or party to use E-Filing if the presiding officer subsequently determines that the reason for granting the exemption from use of E-Filing no longer exists.

Documents submitted in adjudicatory proceedings will appear in the NRC's electronic hearing docket which is available to the public at *https://adams.nrc.gov/ehd*, unless excluded pursuant to an order of the Commission or the presiding officer. If you do not have an NRC-issued digital ID certificate as described above, click cancel when the link requests certificates and you will be automatically directed to the NRC's electronic hearing dockets where you will be able to access any publicly available documents in a particular hearing docket. Participants are requested not to include personal privacy information, such as social security numbers, home addresses, or personal phone numbers in their filings, unless an NRC regulation or other law requires

submission of such information. For example, in some instances, individuals provide home addresses in order to demonstrate proximity to a facility or site. With respect to copyrighted works, except for limited excerpts that serve the purpose of the adjudicatory filings and would constitute a Fair Use application, participants are requested not to include copyrighted materials in their submission.

For further details with respect to this action, see the application for license amendment dated March 8, 2018, as supplemented on July 2, 2018, December 18, 2018, and January 16, 2019.

Dated at Rockville, Maryland, this 29th day of January 2019.

For the Nuclear Regulatory Commission.

/RA/

David J. Wrona, Branch Chief
Plant Licensing Branch III,
Division of Operating Reactors,
Office of Nuclear Reactor Regulation.

SUBJECT: BYRON STATION, UNIT NO. 2 - INDIVIDUAL NOTICE OF CONSIDERATION OF ISSUANCE OF AMENDMENTS TO RENEWED FACILITY OPERATING LICENSES, PROPOSED NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION, AND OPPORTUNITY FOR A HEARING (EPID L-2018-LLA-0064) DATED JANUARY 29, 2019

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ADAMS Accession Nos.: LTR: ML19022A004 FRN: ML19022A006 *via-email

OFFICE	NRR/DORL/LPL3/PM	NRR/DORL/LPL3/LA	OGC (NLO) *	NRR/DORL/LPL3/BC	NRR/DORL/LPL3/PM
NAME	JWiebe	SRohrer	KGamin	DWrona	JWiebe (DWrona for)
DATE	1/22/19	1/23/19	1/28/19	1/29/19	1/29/19

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