

VIRGINIA ELECTRIC AND POWER COMPANY  
RICHMOND, VIRGINIA 23261

10 CFR 50  
10 CFR 51  
10 CFR 54

August 24, 2020

United States Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, D.C. 20555-0001

Serial No.: 20-115  
NRA/DEA: R0  
Docket Nos.: 50-338/339  
License Nos.: NPF-4/7

**VIRGINIA ELECTRIC AND POWER COMPANY**  
**NORTH ANNA POWER STATION UNITS 1 AND 2**  
**APPLICATION FOR SUBSEQUENT RENEWED OPERATING LICENSES**

Pursuant to 10 CFR Parts 50, 51, and 54, Virginia Electric and Power Company (Dominion Virginia Power or Dominion) is submitting this Application for Subsequent Renewed Operating Licenses for North Anna Power Station (NAPS) Units 1 and 2. The existing Renewed Facility Operating Licenses, Nos. NPF-4 and NPF-7 for NAPS Units 1 and 2, respectively, currently expire as follows:

- At midnight on April 1, 2038 for Unit 1
- At midnight on August 21, 2040 for Unit 2

Virginia Electric and Power Company seeks to extend the respective operating terms by 20 years beyond the current renewed license expiration dates.

The enclosed Subsequent License Renewal Application (SLRA) contains the information required by 10 CFR Parts 54 and 51 and meets the submittal timeliness requirements of 10 CFR 54.17(c) and 10 CFR 2.109(b).

As required by 10 CFR 54.21(b), current licensing basis changes which have a material effect on the content of this application will be submitted at least annually while the application is under NRC review and at least three months prior to the scheduled completion of the NRC review.

Appendix A, Table A4.0-1, of the enclosed NAPS SLRA provides a list of commitments made in this application. This list will be updated as required throughout the SLRA review process.

The Application for Subsequent Renewed Operating Licenses for NAPS Units 1 and 2 consists of the following five Enclosures:

Enclosure 1: North Anna Power Station Subsequent License Renewal  
Application Enclosure Summary

Enclosure 2: Application for Withholding Proprietary Information from Public  
Disclosure Pursuant to 10 CFR 2.390

A035  
NRR

Enclosure 5 contains information that is being withheld from public disclosure under 10 CFR 2.390.  
Upon separation from Enclosure 5, this letter is decontrolled.

Enclosure 3: North Anna Power Station Subsequent License Renewal  
Application  
(CD-ROM titled, "NAPS\_SLRA")

Enclosure 4: Non-proprietary Reference Documents and a Redacted Version of  
a Proprietary Reference Document (Public Version)

Enclosure 5: 10 CFR 2.390 Withheld Proprietary Document

The NAPS SLRA (Enclosure 3), which includes the Environmental Report, is being submitted on CD-ROM. The CD-ROM labeled, "NAPS\_SLRA," contains the following two files (file size specified in parenthesis):

001 NAPS\_SLRA\_(Public).pdf (9,099,909 bytes)

002 NAPS\_Environmental\_Report\_(Public).pdf (35,809,495 bytes)

Since Enclosure 5 contains proprietary information, it is supported by an affidavit signed by the owner of the information (Enclosure 2). The affidavit sets forth the basis on which the information may be withheld from public disclosure by the Commission and addresses with specificity the considerations listed in paragraph (b)(4) of 10 CFR 2.390.

Accordingly, it is respectfully requested that the proprietary information be withheld from public disclosure in accordance with 10 CFR 2.390. A redacted, non-proprietary version is provided in Enclosure 4 as noted above.

During a telecom on June 2, 2020, the NRC informed Dominion of the delay in the issuance of a forthcoming Interim Staff Guidance (ISG) document related to aging management review and inspection requirements of Reactor Vessel Internals for the subsequent license renewal period. The NRC staff also communicated to Dominion that the technical basis for the ISG, using updated industry guidance documents during the presentation by industry members of the Nuclear Energy Institute at public meetings conducted on February 20, 2020 and April 7, 2020 [Agencywide Document Access and Management System (ADAMS) Accession Nos. ML20036E364 and ML20098D185, respectively], was found to be acceptable by the NRC staff. Based on the discussion, the NRC informed Dominion that a detailed "Gap Analysis" was not required to be incorporated into Appendix C of the SLRA, but necessary supporting information should be made available for NRC review during the Safety review phase. At the end of the telecom, Dominion affirmed that following issuance of the ISG, a separate review would be performed to ensure the various elements of the ISG were evaluated. If information presented in the NAPS SLRA required a change, then a supplement would be provided later, at a mutually agreed upon date.



Enclosures:

Enclosure 1 – North Anna Power Station Subsequent License Renewal Application  
Enclosure Summary

Enclosure 2 – Application for Withholding Proprietary Information from Public  
Disclosure Pursuant to 10 CFR 2.390

**Attachment 1** – CAW-20-4998, Affidavit for WCAP-11163-P,  
Revision 2

Enclosure 3 – North Anna Power Station Subsequent License Renewal Application  
(CD-ROM titled: "NAPS\_SLRA")

Enclosure 4 – Non-proprietary Reference Documents and a Redacted Version of a  
Proprietary Reference Document (Public Version)

**Attachment 1** – PWROG-18005-NP, Revision 2

**Attachment 2** – WCAP -18353-NP, Revision 0

**Attachment 3** – WCAP -18364-NP, Revision 1

**Attachment 4** – WCAP-11164-NP, Revision 2  
(Redacted version of WCAP-11163-P)

Enclosure 5 – 10 CFR 2.390 Withheld Proprietary Document

**Attachment 1** – WCAP-11163-P, Revision 2

cc: (Enclosure 3 CD-ROM copy only)

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Tidewater Regional Office  
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Virginia Department of Agriculture & Consumer Services  
102 Governor Street  
Richmond, Virginia 23219

Mr. Jason Bulluck, Director  
Virginia Department of Conservation & Recreation  
Virginia Natural Heritage Program  
600 East Main Street, 24th Floor  
Richmond, Virginia 23219

Mr. Robert W. Duncan, Director  
Virginia Department of Wildlife Resources  
P.O. Box 90778  
Henrico, Virginia 23228

Mr. Allen Knapp, Director  
Virginia Department of Health  
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Ms. Julie Lagan, Director  
Virginia Department of Historic Resources  
State Historic Preservation Office  
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Richmond, Virginia 23221  
Mr. Steven G. Bowman, Commissioner  
Virginia Marine Resources Commission  
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Newport News, Virginia 23607

Dr. Mary Fabrizio, Professor  
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Mr. Stephen Moret, President  
Virginia Economic Development Partnership  
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Richmond, Virginia 23219

Mr. William F. Stephens, Director  
Virginia State Corporation Commission  
Division of Public Utility Regulation  
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Richmond, Virginia 23219

Mr. Jeff Caldwell, Director  
Virginia Department of Emergency Management  
10501 Trade Road  
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Mr. Bruce Sterling, Chief Regional Coordinator  
Virginia Department of Emergency Management  
1070 University Boulevard  
Portsmouth, Virginia 23703



**Enclosure 1**

**NORTH ANNA POWER STATION**  
**SUBSEQUENT LICENSE RENEWAL APPLICATION**  
**ENCLOSURE SUMMARY**

**Virginia Electric and Power Company**  
**(Dominion Energy Virginia)**  
**North Anna Power Station Units 1 and 2**

## **ENCLOSURE SUMMARY**

**Enclosure 1** – North Anna Power Station Subsequent License Renewal Application  
Enclosure Summary

**Enclosure 2** – Application for Withholding Proprietary Information from Public  
Disclosure Pursuant to 10 CFR 2.390

**Attachment:** CAW-20-4998 – Westinghouse Affidavit for WCAP-11163-P, Revision 2, “Technical Justification for Eliminating Large Primary Loop Pipe Rupture as the Structural Design Basis for North Anna Units 1 and 2 Nuclear Power Plants for the Subsequent License Renewal Program (80 Years) Leak-Before- Break Evaluation,” January 2020 (Proprietary)

**Enclosure 3** – North Anna Power Station Subsequent License Renewal Application  
(CD-ROM titled: “NAPS\_SLRA”)

**Enclosure 4** – Non-proprietary Reference Documents and a Redacted Version of a  
Proprietary Reference Document-(Public-Version)

**Attachment 1:** PWROG-18005-NP, Revision 2, “Determination of Unirradiated RT<sub>NDT</sub> and Upper-Shelf Energy Values of the North Anna Units 1 and 2 Reactor Vessel Materials,” September 2019

**Attachment 2:** WCAP-18353-NP, Revision 0, “Reactor Internals Fluence Evaluation for a Westinghouse 3-Loop Plant with Two Units – Subsequent License Renewal,” October 2018

**Attachment 3:** WCAP-18364-NP, Revision 1, “North Anna Units 1 and 2 Time-Limited Aging Analysis on Reactor Vessel Integrity for Subsequent License Renewal (SLR),” March 2020

**Attachment 4:** WCAP-11164-NP, Revision 2, “Technical Justification for Eliminating Large Primary Loop Pipe Rupture as the Structural Design Basis for North Anna Units 1 and 2 Nuclear Power Plants for the Subsequent License Renewal Program (80 Years) Leak-Before- Break Evaluation,” January 2020 (Redacted version of WCAP-11163-P)

**Enclosure 5** – 10 CFR 2.390 Withheld Proprietary Document

**Attachment:** WCAP-11163-P, Revision 2, “Technical Justification for Eliminating Large Primary Loop Pipe Rupture as the Structural Design Basis for North Anna Units 1 and 2 Nuclear Power Plants for the Subsequent License Renewal Program (80 Years) Leak-Before- Break Evaluation,” January 2020

**Enclosure 2**

**APPLICATION FOR WITHHOLDING PROPRIETARY INFORMATION FROM PUBLIC  
DISCLOSURE PURSUANT TO 10 CFR 2.390**

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**Virginia Electric and Power Company  
(Dominion Energy Virginia)  
North Anna Power Station Units 1 and 2**

**Enclosure 2  
Attachment**

**CAW-20-4998**  
**WESTINGHOUSE AFFIDAVIT FOR WCAP-11163-P, REVISION 2**

**Virginia Electric and Power Company  
(Dominion Energy Virginia)  
North Anna Power Station Units 1 and 2**

AFFIDAVIT

COMMONWEALTH OF PENNSYLVANIA:

COUNTY OF BUTLER:

- (1) I, Camille T. Zozula, have been specifically delegated and authorized to apply for withholding and execute this Affidavit on behalf of Westinghouse Electric Company LLC (Westinghouse).
- (2) I am requesting the proprietary portions of WCAP-11163-P, Revision 2 be withheld from public disclosure under 10 CFR 2.390.
- (3) I have personal knowledge of the criteria and procedures utilized by Westinghouse in designating information as a trade secret, privileged, or as confidential commercial or financial information.
- (4) Pursuant to 10 CFR 2.390, the following is furnished for consideration by the Commission in determining whether the information sought to be withheld from public disclosure should be withheld.
  - (i) The information sought to be withheld from public disclosure is owned and has been held in confidence by Westinghouse and is not customarily disclosed to the public.
  - (ii) Public disclosure of this proprietary information is likely to cause substantial harm to the competitive position of Westinghouse because it would enhance the ability of competitors to provide similar technical evaluation justifications and licensing defense services for commercial power reactors without commensurate expenses. Also, public disclosure of the information would enable others to use the information to meet NRC requirements for licensing documentation without purchasing the right to use the information.

AFFIDAVIT

- (5) Westinghouse has policies in place to identify proprietary information. Under that system, information is held in confidence if it falls in one or more of several types, the release of which might result in the loss of an existing or potential competitive advantage, as follows:
- (a) The information reveals the distinguishing aspects of a process (or component, structure, tool, method, etc.) where prevention of its use by any of Westinghouse's competitors without license from Westinghouse constitutes a competitive economic advantage over other companies.
  - (b) It consists of supporting data, including test data, relative to a process (or component, structure, tool, method, etc.), the application of which data secures a competitive economic advantage (e.g., by optimization or improved marketability).
  - (c) Its use by a competitor would reduce his expenditure of resources or improve his competitive position in the design, manufacture, shipment, installation, assurance of quality, or licensing a similar product.
  - (d) It reveals cost or price information, production capacities, budget levels, or commercial strategies of Westinghouse, its customers or suppliers.
  - (e) It reveals aspects of past, present, or future Westinghouse or customer funded development plans and programs of potential commercial value to Westinghouse.
  - (f) It contains patentable ideas, for which patent protection may be desirable.
- (6) The attached documents are bracketed and marked to indicate the bases for withholding. The justification for withholding is indicated in both versions by means of lower case letters (a) through (f) located as a superscript immediately following the brackets enclosing each item of information being identified as proprietary or in the margin opposite such information. These

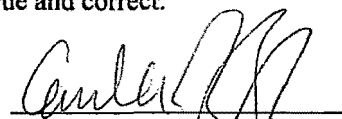
AFFIDAVIT

lower case letters refer to the types of information Westinghouse customarily holds in confidence identified in Sections (5)(a) through (f) of this Affidavit.

I declare that the averments of fact set forth in this Affidavit are true and correct to the best of my knowledge, information, and belief.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on: 17 JAN 2020



Camille T. Zozula, Manager  
Infrastructure & Facilities Licensing

## **Utility Customer Instructions**

**Include the following information in the TRANSMITTAL LETTER to NRC. This is not part of the affidavit.**

Enclosed is:

- (1) CAW-20-4998
- (2) WCAP-11163-P, Revision 2, "Technical Justification for Eliminating Large Primary Loop Pipe Rupture as the Structural Design Basis for North Anna Units 1 and 2 Nuclear Power Plants for the Subsequent License Renewal Program (80 Years) Leak-Before-Break Evaluation," January 2020 (Proprietary).
- (3) WCAP-11164-NP, Revision 2, "Technical Justification for Eliminating Large Primary Loop Pipe Rupture as the Structural Design Basis for North Anna Units 1 and 2 Nuclear Power Plants for the Subsequent License Renewal Program (80 Years) Leak-Before-Break Evaluation," January 2020 (Non-Proprietary).

The enclosure contains information proprietary to Westinghouse Electric Company LLC ("Westinghouse"), it is supported by an Affidavit signed by Westinghouse, the owner of the information. The Affidavit sets forth the basis on which the information may be withheld from public disclosure by the Nuclear Regulatory Commission ("Commission") and addresses with specificity the considerations listed in paragraph (b)(4) of Section 2.390 of the Commission's regulations.

Accordingly, it is respectfully requested that the information which is proprietary to Westinghouse be withheld from public disclosure in accordance with 10 CFR Section 2.390 of the Commission's regulations.

Correspondence with respect to the copyright or proprietary aspects of the items listed above or the supporting Westinghouse Affidavit should reference CAW-20-4998 and should be addressed to Camille T. Zozula, Manager, Infrastructure & Facilities Licensing, Westinghouse Electric Company, 1000 Westinghouse Drive, Suite 165, Cranberry Township, Pennsylvania 16066.