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Serial: RA-15-0025
June 10, 2015

10 CFR 50.80
10 CFR 50.90

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

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 AND 2
DOCKET NOS. 50-325 AND 50-324 / RENEWED LICENSE NOS. DPR-71 AND DPR-62

SHEARON HARRIS NUCLEAR POWER PLANT, UNIT NO. 1
DOCKET NO. 50-400 / RENEWED LICENSE NO. NPF-63

SUBJECT: Supplement to Application for Order Approving Transfer of Control of License and for Conforming License Amendment Pursuant to 10 CFR 50.80 and 10 CFR 50.90

REFERENCES:

1. Duke Energy letter, *Application for Order Approving Transfer of Control of License and for Conforming License Amendment Pursuant to 10 CFR 50.80 and 10 CFR 50.90*, dated December 22, 2014 (ADAMS Accession No. ML14358A253)
2. Duke Energy letter, *Supplement to Application for Order Approving Transfer of Control of License and for Conforming License Amendment Pursuant to 10 CFR 50.80 and 10 CFR 50.90*, dated March 4, 2015 (ADAMS Accession No. ML15075A102)
3. Duke Energy letter, *Supplement to Application for Order Approving Transfer of Control of License and for Conforming License Amendment Pursuant to 10 CFR 50.80 and 10 CFR 50.90*, dated June 1, 2015 (ADAMS Accession No. ML15152A205)

On December 22, 2014, Duke Energy submitted to the Nuclear Regulatory Commission (NRC), an Application for Order Approving Transfer of Control of License and for Conforming License Amendment Pursuant to 10 CFR 50.80 and 10 CFR 50.90 (Reference 1). Supplements to the Application were submitted to the NRC on March 4, 2015 (Reference 2), and June 1, 2015 (Reference 3).

In a telephone conversation on June 8, 2015, the NRC staff requested updates to the Facility Operating License (FOL) page markups that were originally included in Reference 1 and revised in Reference 2. These markups are included in Attachments 1 and 2 for Brunswick Steam Electric Plant, Unit Nos. 1 and 2 (BSEP) and Shearon Harris Nuclear Power Plant, Unit No. 1 (HNP), respectively. Re-typed FOL pages are also provided in Attachments 3 and 4 for BSEP and HNP, respectively.

As also identified by the NRC staff, there are locations in the HNP FOL that use the plural form when referring to licensees. If the proposed license amendment is approved, there will only be one licensee, and it would be appropriate to use the singular form. Attachments 2 and 4 include the necessary editorial corrections.

Duke Energy considers that this supplement has no effect on the regulatory considerations discussed in the original LAR, including the "No Significant Hazards Consideration" and the "Environmental Consideration".

As discussed in Reference 3, the closing date of the acquisition and transfer is scheduled to occur on June 30, 2015. Duke Energy is respectfully requesting an NRC approval date of June 24, 2015, in order to support this closing date.

This letter does not include any new or revised regulatory commitments.

Should you have any questions concerning this letter, or require additional information, please contact Art Zaremba, Manager – Nuclear Fleet Licensing, at 980-373-2062.

I declare under penalty of perjury that the foregoing is true and correct. Executed on June 10, 2015.

Sincerely,

A handwritten signature in black ink, appearing to read "Regis T. Repko", with a long horizontal flourish extending to the right.

Regis T. Repko

Senior Vice President – Governance, Projects and Engineering

MKL

Attachments:

1. Brunswick Steam Electric Plant, Marked Changes to Current FOL DPR-71 and DPR-62
2. Shearon Harris Nuclear Power Plant, Marked Changes to Current FOL NPF-63
3. Brunswick Steam Electric Plant, Re-typed FOL Pages DPR-71 and DPR-62
4. Shearon Harris Nuclear Power Plant, Re-typed FOL Pages NPF-63

cc: USNRC Region II
J. D. Austin, USNRC Resident Inspector – SHNPP
M. P. Catts, USNRC Resident Inspector – BSEP
Andrew L. Hon, NRR Project Manager – BSEP
Martha C. Barillas, NRR Project Manager – SHNPP
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Randy Gideon
Lee Grzeck
Bill Murray (For BSEP Licensing/Nuclear Records Files)

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John Caves
Duncan Brewer
John Dufner
Vijay D'Souza
Donald Griffith
Sean O'Connor
Terry Toler
HNP NSRB
Paula Hamilton
Cindy Hereford (For HNP Licensing/Nuclear Records Files)

U.S. Nuclear Regulatory Commission
RA-15-0025
Attachment 1

Brunswick Steam Electric Plant
Marked Changes to Current FOL DPR-71 and DPR-62

- F. The licensee is technically and financially qualified to engage in the activities authorized by this renewed operating license in accordance with the rules and regulations of the Commission;
 - G. The licensee has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;
 - H. The issuance of this renewed operating license will not be inimical to the common defense and security or to the health and safety of the public;
 - I. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs, and considering available alternatives, the adverse environmental impacts of license renewal are not so great that preserving the option of license renewal would be unreasonable and the issuance of Renewed Facility Operating License No. DPR-71, subject to the conditions for protection of the environment set forth herein, is in accordance with 10 CFR Part 51 (formerly Appendix D to Part 50), of the Commission's regulations and all applicable requirements have been satisfied; and
 - J. The receipt, possession, and use of source, byproduct, and special nuclear material as authorized by this renewed license will be in accordance with the Commission's regulations in 10 CFR Part 30, 40, and 70, including 10 CFR Section 30.33, 40.32, 70.23 and 70.31.
2. Renewed Facility Operating License No. DPR-71 is hereby issued to Duke Energy Progress, Inc. to read as follows:
- A. This license applies to the Brunswick Steam Electric Plant, Unit 1, a boiling water reactor and associated equipment (the facility), ~~owned by the Duke Energy Progress, Inc. and North Carolina Eastern Municipal Power Agency~~ and operated by Duke Energy Progress, Inc. The facility is located on the Cape Fear River, near Southport in Brunswick County, North Carolina, and is described in the "Final Safety Analysis Report" as supplemented and amended (Amendments 1 through 31) and the "Environmental Report" as supplemented and amended.
 - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses Duke Energy Progress, Inc.:
 - (1) Pursuant to Section 104b of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities," to possess, use, and operate the facility at the designated location in Brunswick County, North Carolina, in accordance with the procedures and limitations set forth in this renewed license;

(c) Transition License Conditions

1. Before achieving full compliance with 10 CFR 50.48(c), as specified by 2. below, risk-informed changes to the licensee's fire protection program may not be made without prior NRC review and approval unless the change has been demonstrated to have no more than a minimal risk impact, as described in 2. above.
2. The licensee shall implement the modifications to its facility, as described in Table S-1, "Plant Modifications Committed," of Duke letter BSEP 14-0122, dated November 20, 2014, to complete the transition to full compliance with 10 CFR 50.48(c) by the startup of the second refueling outage for each unit after issuance of the safety evaluation. The licensee shall maintain appropriate compensatory measures in place until completion of these modifications.
3. The licensee shall complete all implementation items, except item 9, listed in LAR Attachment S, Table S-2, "Implementation Items," of Duke letter BSEP 14-0122, dated November 20, 2014, within 180 days after NRC approval unless the 180th day falls within an outage window; then, in that case, completion of the implementation items, except item 9, shall occur no later than 60 days after startup from that particular outage. The licensee shall complete implementation of LAR Attachment S, Table S-2, Item 9, within 180 days after the startup of the second refueling outage for each unit after issuance of the safety evaluation.

C. This renewed license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter 1: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; and it subject to all applicable provisions hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

The licensee is authorized to operate the facility at steady state reactor core power levels not in excess of 2923 megawatts thermal.

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. ~~266~~, are hereby incorporated in the license. Duke Energy Progress, Inc. shall operate the facility in accordance with the Technical Specifications.

For Surveillance Requirements (SRs) that are new in Amendment 203 to Renewed Facility Operating License DPR-71, the first performance is due at the end of the first surveillance interval that begins at implementation of Amendment 203. For SRs that existed prior to Amendment 203 including SRs with modified acceptance criteria and SRs whose frequency of

- F. The licensee is technically and financially qualified to engage in the activities authorized by this renewed operating license in accordance with the rules and regulations of the Commission;
 - G. The licensee has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;
 - H. The issuance of this renewed operating license will not be inimical to the common defense and security or to the health and safety of the public;
 - I. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of Renewed Facility Operating License No. DPR-62 subject to the conditions for protection of the environment set forth herein is in accordance with 10 CFR Part 51 (formerly Appendix D to 10 CFR Part 50), of the Commission's regulations and all applicable requirements have been satisfied; and
 - J. The receipt, possession, and use of source, byproduct, and special nuclear material as authorized by this renewed license will be in accordance with the Commission's regulations in 10 CFR Part 30, 40, and 70, including 10 CFR Section 30.33, 40.32, and 70.23 and 70.31.
2. Renewed Facility Operating License No. DPR-62 is hereby issued to Duke Energy Progress, Inc. to read as follows:
- A. This license applies to Brunswick Steam Electric Plant Unit 2, a boiling water reactor and associated equipment (the facility), ~~owned by Duke Energy Progress, Inc. and North Carolina Eastern Municipal Power Agency~~ and operated by Duke Energy Progress, Inc. The facility is located on the Cape Fear River, near Southport in Brunswick County, North Carolina, and is described in the "Final Safety Analysis Report" as supplemented and amended (Amendments 1 through 29) and the "Environmental Report" as supplemented and amended (Supplements 1 through 7).
 - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses Duke Energy Progress, Inc.:
 - (1) Pursuant to Section 104b of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities," to possess, use, and operate the facility at the designated location in Brunswick County, North Carolina, in accordance with the procedures and limitations set forth in this renewed license;
 - (2) Pursuant to the Act and 10 CFR Part 70, to receive, possess and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, as supplemented and amended;

(c) Transition License Conditions

1. Before achieving full compliance with 10 CFR 50.48(c), as specified by 2. below, risk-informed changes to the licensee's fire protection program may not be made without prior NRC review and approval unless the change has been demonstrated to have no more than a minimal risk impact, as described in 2. above.
2. The licensee shall implement the modifications to its facility, as described in Table S-1, "Plant Modifications Committed," of Duke letter BSEP 14-0122, dated November 20, 2014, to complete the transition to full compliance with 10 CFR 50.48(c) by the startup of the second refueling outage for each unit after issuance of the safety evaluation. The licensee shall maintain appropriate compensatory measures in place until completion of these modifications
3. The licensee shall complete all implementation items, except Item 9, listed in LAR Attachment S, Table S-2, "Implementation Items," of Duke letter BSEP 14-0122, dated November 20, 2014, within 180 days after NRC approval unless the 180th day falls within an outage window, then in that case completion of the implementation items, except Item 9, shall occur no later than 60 days after startup from that particular outage. The licensee shall complete implementation LAR Attachment S, Table S-2, Item 9 within 180 days after the startup of the second refueling outage for each unit after issuance of the safety evaluation.

C. This renewed license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

The licensee is authorized to operate the facility at steady state reactor core power levels not in excess of 2923 megawatts (thermal).

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. ~~234~~, are hereby incorporated in the license. Duke Energy Progress, Inc. shall operate the facility in accordance with the Technical Specifications.

For Surveillance Requirements (SRs) that are new in Amendment 233 to Renewed Facility Operating License DPR-62, the first performance is due at the end of the first surveillance interval that begins at implementation of Amendment 233. For SRs that existed prior to Amendment 233,

Shearon Harris Nuclear Power Plant
Marked Changes to Current FOL NPF-63

DUKE ENERGY PROGRESS, INC.

~~NORTH CAROLINA EASTERN MUNICIPAL POWER AGENCY~~

DOCKET NO. 50-400

SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1

RENEWED FACILITY OPERATING LICENSE

Renewed License No. NPF-63

1. The Nuclear Regulatory Commission (the Commission or the NRC) has found that:
 - A. The application for renewal of the license filed by the Carolina Power & Light Company (CP&L) for itself, ~~and the North Carolina Eastern Municipal Power Agency (the licensee)~~, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I, and all required notifications to other agencies or bodies have been duly made;
 - B. Construction of the Shearon Harris Nuclear Power Plant, Unit 1, (the facility) has been substantially completed in conformity with Construction Permit No. CPPR-158 and the application, as amended, the provisions of the Act, and the regulations of the Commission;
 - C. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1); and (2) time-limited aging analysis that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by the renewed operating license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for the facility, and that any changes made to the facility's current licensing basis in order to comply with 10 CFR 54.29(a) are in accordance with the Act and the Commission's regulations;
 - D. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission (except as exempted from compliance in Section 2.D. below);
 - E. There is reasonable assurance: (i) that the activities authorized by this operating license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I (except as exempted from compliance in Section 2.D. below);

On April 29, 2013, the name "Carolina Power & Light Company" (CP&L) was changed to "Duke Energy Progress, Inc."

- F. Duke Energy Progress, Inc.* is technically qualified to engage in the activities authorized by this license in accordance with the Commission's regulations set forth in 10 CFR Chapter I;
 - G. The licensee^{has} satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;
 - H. The issuance of this license will not be inimical to the common defense and security or to the health and safety of the public;
 - I. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of this Renewed Facility Operating License No. NPF-63, subject to the conditions for protection of the environment set forth in the Environmental Protection Plan attached as Appendix B, is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied;
 - J. The receipt, possession and use of source, byproduct and special nuclear material as authorized by this license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40, and 70.
2. Based on the foregoing findings and the Partial Initial Decisions issued by the Atomic Safety and Licensing Board dated February 20, 1985, August 20, 1985, December 11, 1985, and April 28, 1986, regarding this facility and pursuant to approval by the Nuclear Regulatory Commission at a meeting on January 8, 1987, Facility Operating License No. NPF-63, which supersedes the license for fuel loading and low power testing, License No. NPF-53 issued on October 24, 1986, is hereby issued to Duke Energy Progress, Inc. ~~and the North Carolina Eastern Municipal Power Agency~~ (the licensee^s) as follows:
- A. This license applies to the Shearon Harris Nuclear Power Plant, Unit 1, a pressurized water reactor and associated equipment (the facility) ~~owned by the North Carolina Eastern Municipal Power Agency and Duke Energy Progress, Inc.,~~ and operated by Duke Energy Progress, Inc. The facility is located on the ~~licensees'~~ site in Wake and Chatham Counties, North Carolina, approximately 16 miles southwest of the nearest boundary of Raleigh, and is described in its Final Safety Analysis Report, as supplemented and amended, and in its Environmental Report, as supplemented and amended;

*Duke Energy Progress, Inc. ~~is authorized to act for the North Carolina Eastern Municipal Power Agency, and~~ has exclusive responsibility and control over the physical construction, operation, and maintenance of the facility.

B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:

- (1) Pursuant to Section 103 of the Act and 10 CFR Part 50, Duke Energy Progress, Inc. to possess, use, and operate the facility at the designated location in Wake and Chatham Counties, North Carolina, in accordance with the procedures and limitations set forth in this license; |e
- (2) ~~Pursuant to the Act and 10 CFR Part 50, North Carolina-Eastern Municipal Power Agency to possess the facility at the designated location in Wake and Chatham Counties, North Carolina, in accordance with the procedures and limitations set forth in the license;~~ Deleted |
- (3) Pursuant to the Act and 10 CFR Part 70, Duke Energy Progress, Inc. to receive, possess, and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, as supplemented and amended; |e
- (4) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, Duke Energy Progress, Inc. to receive, possess, and use at any time any byproduct, source and special nuclear material such as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required; |e
- (5) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, Duke Energy Progress, Inc. receive, possess, and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; |e
- (6) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, Duke Energy Progress, Inc. to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility authorized herein; |e
- (7) Pursuant to the Act and 10 CFR Parts 30 and 40, Duke Energy Progress, Inc. to receive, possess and process for release or transfer to the Shearon Harris site such byproduct material as may be produced by the Shearon Harris Energy and Environmental Center; |e
- (8) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, Duke Energy Progress, Inc. to receive and possess but not separate, such byproduct and special nuclear materials as may be produced by the operation of the Brunswick Steam Electric Plant, Units 1 and 2, and H. B. Robinson Steam Electric Plant, Unit 2. |e

- C. This license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect, and is subject to the additional conditions specified or incorporated below.

(1) Maximum Power Level

Duke Energy Progress, Inc. is authorized to operate the facility at reactor core power levels not in excess of 2948 megawatts thermal (100 percent rated core power) in accordance with the conditions specified herein.

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, as revised through Amendment No. ~~445~~, are hereby incorporated into this license. Duke Energy Progress, Inc. shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

(3) Antitrust Conditions

Duke Energy Progress, Inc. shall comply with the antitrust conditions delineated in Appendix C to this license.

(4) Initial Startup Test Program (Section 14)¹

Any changes to the Initial Test Program described in Section 14 of the FSAR made in accordance with the provisions of 10 CFR 50.59 shall be reported in accordance with 50.59(b) within one month of such change.

¹ The parenthetical notation following the title of many license conditions denotes the section of the Safety Evaluation Report and/or its supplements wherein the license condition is discussed.

- (c) The licensee shall maintain appropriate compensatory measures in place until completion of the modifications delineated above.

G. Reporting to the Commission

Except as otherwise provided in the Technical Specifications or Environmental Protection Plan, Duke Energy Progress, Inc. shall report any violations of the requirements contained in Section 2.C of this license in the following manner: initial notification shall be made within twenty-four (24) hours to the NRC Operations Center via the Emergency Notification System with written follow-up within 30 days in accordance with the procedures described in 10 CFR 50.73 (b), (c) and (e).

- H. The licensee~~s~~ shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.
- I. The Updated Safety Analysis Report supplement, as revised, submitted pursuant to 10 CFR 54.21(d), shall be included in the next scheduled update to the Updated Safety Analysis Report required by 10 CFR 50.71(e)(4) following the issuance of this renewed operating license. Until that update is complete, CP&L^{*} may make changes to the programs and activities described in the supplement without prior Commission approval, provided that CP&L^{*} evaluates such changes pursuant to the criteria set forth in 10 CFR 50.59 and otherwise complies with the requirements in that section.
- J. The Updated Safety Analysis Report supplement, as revised, describes certain future activities to be completed prior to the period of extended operation. Duke Energy Progress, Inc. shall complete these activities no later than October 24, 2026, and shall notify the NRC in writing when implementation of these activities is complete and can be verified by NRC inspection.
- K. All capsules in the reactor vessel that are removed and tested must meet the test procedures and reporting requirements of American Society for Testing and Materials E 185-82 to the extent practicable for the configuration of the specimens in the capsule. Any changes to the capsule withdrawal schedule, including spare capsules, must be approved by the NRC prior to implementation. All capsules placed in storage must be maintained for future inspection. Any changes to storage requirements must be approved by the NRC, as required by 10 CFR Part 50, Appendix H.

^{*}On April 29, 2013, the name "Carolina Power & Light Company" (CP&L) was changed to "Duke Energy Progress, Inc."

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RA-15-0025
Attachment 3

Brunswick Steam Electric Plant

Re-typed FOL Pages DPR-71 and DPR-62

- F. The licensee is technically and financially qualified to engage in the activities authorized by this renewed operating license in accordance with the rules and regulations of the Commission;
 - G. The licensee has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;
 - H. The issuance of this renewed operating license will not be inimical to the common defense and security or to the health and safety of the public;
 - I. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs, and considering available alternatives, the adverse environmental impacts of license renewal are not so great that preserving the option of license renewal would be unreasonable and the issuance of Renewed Facility Operating License No. DPR-71, subject to the conditions for protection of the environment set forth herein, is in accordance with 10 CFR Part 51 (formerly Appendix D to Part 50), of the Commission's regulations and all applicable requirements have been satisfied; and
 - J. The receipt, possession, and use of source, byproduct, and special nuclear material as authorized by this renewed license will be in accordance with the Commission's regulations in 10 CFR Part 30, 40, and 70, including 10 CFR Section 30.33, 40.32, 70.23 and 70.31.
2. Renewed Facility Operating License No. DPR-71 is hereby issued to Duke Energy Progress, Inc. to read as follows:
- A. This license applies to the Brunswick Steam Electric Plant, Unit 1, a boiling water reactor and associated equipment (the facility), owned and operated by Duke Energy Progress, Inc. The facility is located on the Cape Fear River, near Southport in Brunswick County, North Carolina, and is described in the "Final Safety Analysis Report" as supplemented and amended (Amendments 1 through 31) and the "Environmental Report" as supplemented and amended.
 - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses Duke Energy Progress, Inc.:
 - (1) Pursuant to Section 104b of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities," to possess, use, and operate the facility at the designated location in Brunswick County, North Carolina, in accordance with the procedures and limitations set forth in this renewed license;

(c) Transition License Conditions

1. Before achieving full compliance with 10 CFR 50.48(c), as specified by 2. below, risk-informed changes to the licensee's fire protection program may not be made without prior NRC review and approval unless the change has been demonstrated to have no more than a minimal risk impact, as described in 2. above.
2. The licensee shall implement the modifications to its facility, as described in Table S-1, "Plant Modifications Committed," of Duke letter BSEP 14-0122, dated November 20, 2014, to complete the transition to full compliance with 10 CFR 50.48(c) by the startup of the second refueling outage for each unit after issuance of the safety evaluation. The licensee shall maintain appropriate compensatory measures in place until completion of these modifications.
3. The licensee shall complete all implementation items, except item 9, listed in LAR Attachment S, Table S-2, "Implementation Items," of Duke letter BSEP 14-0122, dated November 20, 2014, within 180 days after NRC approval unless the 180th day falls within an outage window; then, in that case, completion of the implementation items, except item 9, shall occur no later than 60 days after startup from that particular outage. The licensee shall complete implementation of LAR Attachment S, Table S-2, Item 9, within 180 days after the startup of the second refueling outage for each unit after issuance of the safety evaluation.

C. This renewed license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; and is subject to all applicable provisions hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

The licensee is authorized to operate the facility at steady state reactor core power levels not in excess of 2923 megawatts thermal.

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. , are hereby incorporated in the license. Duke Energy Progress, Inc. shall operate the facility in accordance with the Technical Specifications.

For Surveillance Requirements (SRs) that are new in Amendment 203 to Renewed Facility Operating License DPR-71, the first performance is due at the end of the first surveillance interval that begins at implementation of Amendment 203. For SRs that existed prior to Amendment 203, including SRs with modified acceptance criteria and SRs whose frequency of

- F. The licensee is technically and financially qualified to engage in the activities authorized by this renewed operating license in accordance with the rules and regulations of the Commission;
 - G. The licensee has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;
 - H. The issuance of this renewed operating license will not be inimical to the common defense and security or to the health and safety of the public;
 - I. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of Renewed Facility Operating License No. DPR-62 subject to the conditions for protection of the environment set forth herein is in accordance with 10 CFR Part 51 (formerly Appendix D to 10 CFR Part 50), of the Commission's regulations and all applicable requirements have been satisfied; and
 - J. The receipt, possession, and use of source, byproduct, and special nuclear material as authorized by this renewed license will be in accordance with the Commission's regulations in 10 CFR Part 30, 40, and 70, including 10 CFR Section 30.33, 40.32, and 70.23 and 70.31.
2. Renewed Facility Operating License No. DPR-62 is hereby issued to Duke Energy Progress, Inc. to read as follows:
- A. This license applies to Brunswick Steam Electric Plant Unit 2, a boiling water reactor and associated equipment (the facility), owned and operated by Duke Energy Progress, Inc. The facility is located on the Cape Fear River, near Southport in Brunswick County, North Carolina, and is described in the "Final Safety Analysis Report" as supplemented and amended (Amendments 1 through 29) and the "Environmental Report" as supplemented and amended (Supplements 1 through 7).
 - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses Duke Energy Progress, Inc.:
 - (1) Pursuant to Section 104b of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities," to possess, use, and operate the facility at the designated location in Brunswick County, North Carolina, in accordance with the procedures and limitations set forth in this renewed license;
 - (2) Pursuant to the Act and 10 CFR Part 70, to receive, possess and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, as supplemented and amended;

(c) Transition License Conditions

1. Before achieving full compliance with 10 CFR 50.48(c), as specified by 2. below, risk-informed changes to the licensee's fire protection program may not be made without prior NRC review and approval unless the change has been demonstrated to have no more than a minimal risk impact, as described in 2. above.
2. The licensee shall implement the modifications to its facility, as described in Table S-1, "Plant Modifications Committed," of Duke letter BSEP 14-0122, dated November 20, 2014, to complete the transition to full compliance with 10 CFR 50.48(c) by the startup of the second refueling outage for each unit after issuance of the safety evaluation. The licensee shall maintain appropriate compensatory measures in place until completion of these modifications.
3. The licensee shall complete all implementation items, except Item 9, listed in LAR Attachment S, Table S-2, "Implementation Items," of Duke letter BSEP 14-0122, dated November 20, 2014, within 180 days after NRC approval unless the 180th day falls within an outage window; then, in that case, completion of the implementation items, except item 9, shall occur no later than 60 days after startup from that particular outage. The licensee shall complete implementation of LAR Attachment S, Table S-2, Item 9, within 180 days after the startup of the second refueling outage for each unit after issuance of the safety evaluation.

C. This renewed license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

The licensee is authorized to operate the facility at steady state reactor core power levels not in excess of 2923 megawatts (thermal).

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. , are hereby incorporated in the license. Duke Energy Progress, Inc. shall operate the facility in accordance with the Technical Specifications.

For Surveillance Requirements (SRs) that are new in Amendment 233 to Renewed Facility Operating License DPR-62, the first performance is due at the end of the first surveillance interval that begins at implementation of Amendment 233. For SRs that existed prior to Amendment 233,

U.S. Nuclear Regulatory Commission
RA-15-0025
Attachment 4

Shearon Harris Nuclear Power Plant

Re-typed FOL Pages NPF-63

DUKE ENERGY PROGRESS, INC.

DOCKET NO. 50-400

SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1

RENEWED FACILITY OPERATING LICENSE

Renewed License No. NPF-63

1. The Nuclear Regulatory Commission (the Commission or the NRC) has found that:
 - A. The application for renewal of the license filed by the Carolina Power & Light Company (CP&L) for itself complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I, and all required notifications to other agencies or bodies have been duly made;
 - B. Construction of the Shearon Harris Nuclear Power Plant, Unit 1, (the facility) has been substantially completed in conformity with Construction Permit No. CPPR-158 and the application, as amended, the provisions of the Act, and the regulations of the Commission;
 - C. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1); and (2) time-limited aging analysis that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by the renewed operating license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for the facility, and that any changes made to the facility's current licensing basis in order to comply with 10 CFR 54.29(a) are in accordance with the Act and the Commission's regulations;
 - D. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission (except as exempted from compliance in Section 2.D. below);
 - E. There is reasonable assurance: (i) that the activities authorized by this operating license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I (except as exempted from compliance in Section 2.D. below);

*On April 29, 2013, the name "Carolina Power & Light Company" (CP&L) was changed to "Duke Energy Progress, Inc."

- F. Duke Energy Progress, Inc.^{*} is technically qualified to engage in the activities authorized by this license in accordance with the Commission's regulations set forth in 10 CFR Chapter I;
 - G. The licensee has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;
 - H. The issuance of this license will not be inimical to the common defense and security or to the health and safety of the public;
 - I. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of this Renewed Facility Operating License No. NPF-63, subject to the conditions for protection of the environment set forth in the Environmental Protection Plan attached as Appendix B, is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied;
 - J. The receipt, possession and use of source, byproduct and special nuclear material as authorized by this license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40, and 70.
2. Based on the foregoing findings and the Partial Initial Decisions issued by the Atomic Safety and Licensing Board dated February 20, 1985, August 20, 1985, December 11, 1985, and April 28, 1986, regarding this facility and pursuant to approval by the Nuclear Regulatory Commission at a meeting on January 8, 1987, Facility Operating License No. NPF-63, which supersedes the license for fuel loading and low power testing, License No. NPF-53 issued on October 24, 1986, is hereby issued to Duke Energy Progress, Inc. (the licensee) as follows:
- A. This license applies to the Shearon Harris Nuclear Power Plant, Unit 1, a pressurized water reactor and associated equipment (the facility) owned and operated by Duke Energy Progress, Inc. The facility is located on the licensee's site in Wake and Chatham Counties, North Carolina, approximately 16 miles southwest of the nearest boundary of Raleigh, and is described in its Final Safety Analysis Report, as supplemented and amended, and in its Environmental Report, as supplemented and amended;

^{*}Duke Energy Progress, Inc. has exclusive responsibility and control over the physical construction, operation, and maintenance of the facility.

B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:

- (1) Pursuant to Section 103 of the Act and 10 CFR Part 50, Duke Energy Progress, Inc. to possess, use, and operate the facility at the designated location in Wake and Chatham Counties, North Carolina, in accordance with the procedures and limitations set forth in this license;
- (2) Deleted.
- (3) Pursuant to the Act and 10 CFR Part 70, Duke Energy Progress, Inc. to receive, possess, and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, as supplemented and amended;
- (4) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, Duke Energy Progress, Inc. to receive, possess, and use at any time any byproduct, source and special nuclear material such as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
- (5) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, Duke Energy Progress, Inc. receive, possess, and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components;
- (6) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, Duke Energy Progress, Inc. to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility authorized herein;
- (7) Pursuant to the Act and 10 CFR Parts 30 and 40, Duke Energy Progress, Inc. to receive, possess and process for release or transfer to the Shearon Harris site such byproduct material as may be produced by the Shearon Harris Energy and Environmental Center;
- (8) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, Duke Energy Progress, Inc. to receive and possess but not separate, such byproduct and special nuclear materials as may be produced by the operation of the Brunswick Steam Electric Plant, Units 1 and 2, and H. B. Robinson Steam Electric Plant, Unit 2.

- C. This license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect, and is subject to the additional conditions specified or incorporated below.

(1) Maximum Power Level

Duke Energy Progress, Inc. is authorized to operate the facility at reactor core power levels not in excess of 2948 megawatts thermal (100 percent rated core power) in accordance with the conditions specified herein.

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, as revised through Amendment No. _____, are hereby incorporated into this license. Duke Energy Progress, Inc. shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

(3) Antitrust Conditions

Duke Energy Progress, Inc. shall comply with the antitrust conditions delineated in Appendix C to this license.

(4) Initial Startup Test Program (Section 14)¹

Any changes to the Initial Test Program described in Section 14 of the FSAR made in accordance with the provisions of 10 CFR 50.59 shall be reported in accordance with 50.59(b) within one month of such change.

¹ The parenthetical notation following the title of many license conditions denotes the section of the Safety Evaluation Report and/or its supplements wherein the license condition is discussed.

- (c) The licensee shall maintain appropriate compensatory measures in place until completion of the modifications delineated above.

G. Reporting to the Commission

Except as otherwise provided in the Technical Specifications or Environmental Protection Plan, Duke Energy Progress, Inc. shall report any violations of the requirements contained in Section 2.C of this license in the following manner: initial notification shall be made within twenty-four (24) hours to the NRC Operations Center via the Emergency Notification System with written follow-up within 30 days in accordance with the procedures described in 10 CFR 50.73 (b), (c) and (e).

- H. The licensee shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.
- I. The Updated Safety Analysis Report supplement, as revised, submitted pursuant to 10 CFR 54.21(d), shall be included in the next scheduled update to the Updated Safety Analysis Report required by 10 CFR 50.71(e)(4) following the issuance of this renewed operating license. Until that update is complete, CP&L^{*} may make changes to the programs and activities described in the supplement without prior Commission approval, provided that CP&L^{*} evaluates such changes pursuant to the criteria set forth in 10 CFR 50.59 and otherwise complies with the requirements in that section.
- J. The Updated Safety Analysis Report supplement, as revised, describes certain future activities to be completed prior to the period of extended operation. Duke Energy Progress, Inc. shall complete these activities no later than October 24, 2026, and shall notify the NRC in writing when implementation of these activities is complete and can be verified by NRC inspection.
- K. All capsules in the reactor vessel that are removed and tested must meet the test procedures and reporting requirements of American Society for Testing and Materials E 185-82 to the extent practicable for the configuration of the specimens in the capsule. Any changes to the capsule withdrawal schedule, including spare capsules, must be approved by the NRC prior to implementation. All capsules placed in storage must be maintained for future inspection. Any changes to storage requirements must be approved by the NRC, as required by 10 CFR Part 50, Appendix H.

^{*}On April 29, 2013, the name "Carolina Power & Light Company" (CP&L) was changed to "Duke Energy Progress, Inc."