



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

VISTRA OPERATIONS COMPANY LLC  
ENERGY HARBOR NUCLEAR GENERATION LLC  
DOCKET NO. 50-440  
PERRY NUCLEAR POWER PLANT, UNIT NO. 1  
RENEWED FACILITY OPERATING LICENSE

Renewed License No. NPF-58

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for renewed license 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 Perry Nuclear Power Plant, Unit No. 1 (the facility), has been substantially completed in conformity with Construction Permit No. CPPR-148 and the application, as amended, the provisions of the Act, and the regulations of the Commission;
  - C. 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);
  - D. There is reasonable assurance: (i) that the activities authorized by this renewed 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);
  - E. Vistra Operations Company LLC is technically qualified to engage in the activities authorized by this renewed license in accordance with the Commission's regulations set forth in 10 CFR Chapter I;

- F. The licensees<sup>1</sup> have satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;
  - G. The issuance of this renewed license will not be inimical to the common defense and security or to the health and safety of the public;
  - H. 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-58, 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; and
  - I. 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 Parts 30, 40, and 70.
2. Based on the foregoing findings regarding this facility, the Partial-Initial Decisions issued December 2, 1983, and September 3, 1985, by the Atomic Safety and Licensing Board in regard to this facility (affirmed by ALAB-841, dated July 25, 1986) and pursuant to approval by the Nuclear Regulatory Commission at a meeting on November 7, 1986, Renewed Facility Operating License No. NPF-58, which supersedes the license for fuel loading and low power testing, License No. NPF-45, issued on March 18, 1986, is hereby issued to Vistra Operations Company LLC and Energy Harbor Nuclear Generation LLC (the licensees) to read as follows:
- A. The renewed license applies to the Perry Nuclear Power Plant, Unit No. 1, a boiling water nuclear reactor and associated equipment (the facility), owned by Energy Harbor Nuclear Generation LLC (owner).
- The facility is located on the shore of Lake Erie in Lake County, Ohio, approximately 35 miles northeast of Cleveland, Ohio, and is described in the licensees' Final Safety Analysis Report, as supplemented and amended, and in the licensees' Environmental Report, as supplemented and amended.
- B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:
- (1) Vistra Operations Company LLC, pursuant to Section 103 of the Act and 10 CFR Part 50, to possess, use, and operate the facility at the designated location in Lake County, Ohio, in accordance with the procedures and limitations set forth in this renewed license.
  - (2) Energy Harbor Nuclear Generation LLC to possess the facility at the designated location in Lake County, Ohio, in accordance with the procedures and limitations set forth in this renewed license;

---

<sup>1</sup> Vistra Operations Company LLC is authorized to act as agent for Energy Harbor Nuclear Generation LLC (collectively, the licensees).

- (3) Vistra Operations Company LLC, 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;
  - (4) Vistra Operations Company LLC, pursuant to the Act and 10 CFR Parts 30, 40, and 70, 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 fission detectors in amounts as required;
  - (5) Vistra Operations Company LLC, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use in amounts as required any byproduct, source or special nuclear material without restriction as to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and
  - (6) Vistra Operations Company LLC, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.
  - (7) Deleted
- C. This renewed 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

Vistra Operations Company LLC is authorized to operate the facility at reactor core power levels not in excess of 3758 megawatts thermal (100% power) in accordance with the conditions specified herein.
  - (2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 204, are hereby incorporated into the renewed license. Vistra Operations Company LLC shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.
  - (3) Antitrust Conditions
    - a. Energy Harbor Nuclear Generation LLC shall comply with the antitrust conditions delineated in Appendix C to this renewed license; Appendix C is hereby incorporated into this renewed license.

- b. Vistra Operations Company LLC shall comply with the antitrust conditions delineated in Appendix C to this renewed license as if named therein. Vistra Operations Company LLC shall not market or broker power or energy from the Perry Nuclear Power Plant, Unit No. 1. The Owner is responsible and accountable for the actions of Vistra Operations Company LLC to the extent that said actions affect the marketing or brokering of power or energy from the Perry Nuclear Power Plant, Unit No. 1, and in any way, contravene the antitrust condition contained in the renewed license.

(4) Deleted

(5) Deleted

(6) Fire Protection (Section 9.5, SER, SSER #1, 2, 3, 4, 7, and 8)

Vistra Operations Company LLC shall comply with the following requirements of the fire protection program: Vistra Operations Company LLC shall implement and maintain in effect all provisions of the approved fire protection program as described in the Final Safety Analysis Report, as amended, for the Perry Nuclear Power Plant and as approved in the Safety Evaluation Report (NUREG-0887) dated May 1982 and Supplement Nos. 1 through 10 thereto, subject to the following provisions:

- a. Vistra Operations Company LLC may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

(7) Deleted

(8) Deleted

(9) Deleted

(10) Deleted

(11) Mitigation Strategy License Condition

The licensee shall develop and maintain strategies for addressing large fires and explosions and that include the follow key areas:

(a) Fire fighting response strategy with the following elements:

- 1. Predefined coordinated fire response strategy and guidance
- 2. Assessment of mutual aid fire fighting assets
- 3. Designated staging areas for equipment and materials
- 4. Command and control
- 5. Training of response personnel

(b) Operations to mitigate fuel damage considering the following:

1. Protection and use of personnel assets
2. Communications
3. Minimizing fire spread
4. Procedures for implementing integrated fire response strategy
5. Identification of readily-available pre-staged equipment
6. Training on integrated fire response strategy
7. Spent fuel pool mitigation measures

(c) Actions to minimize release to include consideration of:

1. Water spray scrubbing
2. Dose to onsite responders

(12) Control Room Habitability License Condition

Upon implementation of Amendment No. 148 adopting TSTF-448, Revision 3, the determination of control room envelope (CRE) unfiltered air inleakage as required by SR 3.7.3.4 in accordance with TS 5.5.14.c(i), and the assessment of CRE habitability as required by Specification 5.5.14.c(ii), shall be considered met. Following implementation:

- (a) The first performance of SR 3.7.3.4, in accordance with Specification 5.5.14.c(i), shall be within the specified Frequency of 6 years, plus the 18-month allowance of SR 3.0.2, as measured from December 2004, the date of the most recent successful tracer gas test as stated in the response to Generic Letter 2003-01 dated May 30, 2006, or within the next 18 months if the time period since the most recent successful tracer gas test is greater than 6 years.
- (b) The first performance of the periodic assessment of CRE habitability, Specification 5.5.14.c(ii); shall be within 3 years, plus the 9-month allowance of SR 3.0.2, as measured from December 2004, the date of the most recent successful tracer gas test as stated in the response to Generic Letter 2003-01 dated May 30, 2006, or within the next 9 months if the time period since the most recent successful tracer gas test is greater than 3 years.
- (c) The first performance of the periodic measurement of outside air intake and exhaust damper leakage, Specification 5.5.14.d, shall be within 24 months, plus the 184 days allowed by SR 3.0.2, as measured from the date of the most recent successful damper leakage test.

(13) License Renewal License Conditions

- (a) The information in the Updated Final Safety Analysis Report (UFSAR) supplement submitted as required by 10 CFR 54.21(d) and revised during the application review process, and the licensee commitments listed in Appendix A of the Safety Evaluation Report Related to the License Renewal of Perry Nuclear Power Plant, Unit 1 dated May 2025, is collectively the "License

Renewal UFSAR Supplement.” This Supplement is henceforth part of the UFSAR which will be updated in accordance with 10 CFR 50.71(e).

As such, Vistra Operating Company LLC may make changes to the programs and activities applicable to Perry Nuclear Power Plant, Unit 1, described in this Supplement provided Vistra Operating Company evaluates such changes in accordance with the criteria set forth in 10 CFR 50.59, “Changes, Tests and Experiments,” and otherwise complies with the requirements in that section.

- (b) This License Renewal UFSAR Supplement, as specified in License Renewal License Condition (a) above, describes programs to be implemented and activities to be completed before the period of extended operation (PEO).
  - 1. Vistra Operating Company LLC shall implement those new programs and enhancements to existing programs no later than the date 6 months before the PEO.
  - 2. Vistra Operating Company LLC shall complete those activities by the date 6 months before the PEO or by the end of the last refueling outage before the PEO, whichever occurs later.
  - 3. Vistra Operating Company LLC shall notify the NRC in writing within 30 days after having accomplished item 1. above and include the status of those activities that have been or remain to be completed in item 2. above.
  - 4. The programs and commitments described in the UFSAR Supplement shall continue in effect during the PEO, to the extent set forth therein, unless modified in accordance with the process set forth in 10 CFR 50.59.
- D. Vistra Operations Company LLC is exempted from: 1) the requirements of Section III.D.2(b)(ii), containment airlock testing requirements, Appendix J to 10 CFR Part 50, due to the special circumstance described in Section 6.2.6 of SER Supplement No. 7 authorized by 10 CFR 50.12(a)(2)(iii) and 2) the requirements of Section IV.F., Full Participation Exercise, of Appendix E to 10 CFR Part 50, due to the special circumstance described in the Exemption dated November 6, 1986. These exemptions are authorized by law, will not present an undue risk to the public health and safety, and are consistent with the common defense and security. The exemptions are hereby granted pursuant to 10 CFR 50.12. With the granting of these exemptions, the facility will operate, to the extent authorized herein, in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission.
- E. Vistra Operations Company LLC shall fully implement and maintain in effect all provision of the Commission-approved physical security, training and qualification, and safeguards contingency plans, including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (61 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans, which contain Safeguards Information protected under 10 CFR 73.21, is entitled: “Perry Nuclear Power Plant Physical Security Plan” Revision 2, submitted by letter dated May 18, 2006.

Vistra Operations Company LLC shall fully implement and maintain in effect all provisions of the Commission-approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The CSP was approved by License Amendment No.158 and amended by License Amendment No. 167.

F. Deleted

G. The licensees 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 1964, as amended, to cover public liability claims.

H. This renewed license is effective as of the date of issuance and shall expire at midnight on November 7, 2046.

3. Based on the Commission's Order dated April 15, 2016, regarding the direct transfer from Ohio Edison Company (OE) to FirstEnergy Nuclear Generation, LLC (FENGen)\*, FENOC\*\* and FENGen\* shall comply with the following conditions noted below.

A. On June 1, 2016, OE shall transfer to FENGen\* the accumulated decommissioning funds held by OE for Perry. All such funds shall be deposited and held in FENGen\* nuclear decommissioning trust for Perry along with the other funds maintained by FENGen\* for Perry and shall be maintained in such trust outside of FENGen's\* administrative control and in accordance with the requirements of 10 CFR 50.75(h)(1).

B. The Support Agreement in the amount of \$400 million from FirstEnergy Solutions Corp. (FE Solutions)\*\*\* described in the application dated June 30, 2015, shall be effective and consistent with the representations in the application. FENGen\* shall take no action to void, cancel or modify the Support Agreement without the prior written consent of the NRC staff. FENGen\* shall inform the Director of the Office of Nuclear Reactor Regulation, in writing, no later than 10 working days after any funds are provided to FENGen\* by FirstEnergy Solutions\*\*\* under the terms of the Support Agreement.

C. Deleted

---

\* FirstEnergy Nuclear Generation, LLC (FENGen) has been renamed Energy Harbor Nuclear Generation LLC.

\*\* FirstEnergy Nuclear Operating Company (FENOC) has been renamed Energy Harbor Nuclear Corp.

\*\*\* FirstEnergy Solutions Corp. (FE Solutions) has been renamed Energy Harbor Corp.

4. Based on the Commission's approval regarding the change in the parent company issuing a \$400 million Support Agreement to Energy Harbor Nuclear Generation LLC, Energy Harbor Nuclear Generation LLC shall comply with the conditions noted below. This \$400 million Support Agreement supersedes all previous parent support agreements.
  - A. The Support Agreement in the amount of \$400 million described in the application dated April 14, 2023, is effective. Energy Harbor Nuclear Generation LLC shall take no action to void, cancel, or modify the Support Agreement without the prior written consent of the NRC staff. Energy Harbor Nuclear Generation LLC shall inform the Director of the Office of Nuclear Reactor Regulation, in writing, no later than 10 working days after any funds are provided to Energy Harbor Nuclear Generation LLC by Vistra Operations Company LLC under the terms of the Support Agreement.
5. Vistra Operations Company LLC shall provide to the Director of the Office of Nuclear Reactor Regulation or the Director of the Office of Nuclear Material Safety and Safeguards, as applicable, a copy of any application, at the time it is filed, to transfer (excluding grants of security interests or liens) from Vistra Operations Company LLC to its direct or indirect parent, or to any other affiliated company, facilities for the production, transmission, or distribution of electric energy having a depreciated book value exceeding ten percent (10%) of Vistra Operations Company LLC's consolidated net utility plant, as recorded on Vistra Operations Company LLC's books of account.

FOR THE NUCLEAR REGULATORY COMMISSION

**/RA/**

Gregory Bowman, Acting Director  
Office of Nuclear Reactor Regulation

Attachments/Appendices:

1. Attachments 1-2
2. Appendix A - Technical Specifications (NUREG-1204)
3. Appendix B - Environmental Protection Plan
4. Appendix C - Antitrust Conditions

Date of Issuance: July 7, 2025