



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

NEXTERA ENERGY SEABROOK, LLC, ET AL.\*

DOCKET NO. 50-443

SEABROOK STATION, UNIT NO. 1

RENEWED FACILITY OPERATING LICENSE

Renewed License No. NPF-86

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for a 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 Seabrook Station, Unit No. 1 (the facility) has been substantially completed in conformity with Construction Permit No. CPPR-135 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. NextEra Energy Seabrook, 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 have satisfied the applicable provisions of 10 CFR 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;

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\* NextEra Energy Seabrook, LLC, is authorized to act as agent for the: Hudson Light & Power Department, Massachusetts Municipal Wholesale Electric Company, and Taunton Municipal Lighting Plant (collectively, with NextEra Energy Seabrook, LLC, "licensees") and has exclusive responsibility and control over the physical construction, operation, and maintenance of the facility.

- 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, economical, 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-86, 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 51 of the Commission's regulations and all applicable requirements have been satisfied;
  - 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; and
  - J. 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 analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by this renewed 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.
2. Based on the foregoing findings, Facility Operating License No. NPF-86, issued on March 15, 1990, is superseded by Renewed Facility Operating License No. NPF-86, which is hereby issued as follows:
- A. This renewed license applies to the Seabrook Station, Unit No. 1, a pressurized water nuclear reactor and associated equipment (the facility), owned by the licensees. The facility is located in Seabrook Township, Rockingham County, on the southeast coast of the State of New Hampshire, 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) NextEra Energy Seabrook, 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 Rockingham County, New Hampshire, in accordance with the procedures and limitations set forth in this renewed license;
    - (2) Hudson Light & Power Department, Massachusetts Municipal Wholesale Electric Company, and Taunton Municipal Lighting Plant to possess the facility at the designated location in Rockingham County, New Hampshire, in accordance with the procedures and limitations set forth in this renewed license;

- (3) NextEra Energy Seabrook, 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) NextEra Energy Seabrook, 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 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) NextEra Energy Seabrook, 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 to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and
  - (6) NextEra Energy Seabrook, 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 authorized herein.
  - (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

NextEra Energy Seabrook, LLC, is authorized to operate the facility at reactor core power levels not in excess of 3648 megawatts thermal (100% of rated power).

(2) Technical Specifications

The Technical Specifications contained in Appendix A, and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 158, are incorporated into the Renewed Facility Operating License No. NPF-86. NextEra Energy Seabrook, LLC shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

(3) License Transfer to FPL Energy Seabrook, LLC\*\*

- a. On the closing date(s) of the transfer of any ownership interests in Seabrook Station covered by the Order approving the transfer, FPL Energy Seabrook, LLC\*\*, shall obtain from each respective transferring owner all of the accumulated decommissioning trust funds for the facility, and ensure the deposit of such funds and additional funds, if necessary, into a decommissioning trust or trusts for Seabrook Station established by FPL Energy Seabrook, LLC\*\*, such that the amount of such funds deposited meets or exceeds the amount required under 10 CFR 50.75 with respect to the interest in Seabrook Station FPL Energy Seabrook, LLC\*\*, acquires on such dates(s).
- b. With respect to the decommissioning trust(s) established by FPL Energy Seabrook, LLC\*\*,
  - (i) The decommissioning trust agreement must be in a form acceptable to the NRC.
  - (ii) Investments in the securities or other obligations of FPL Group Inc. or its affiliates, successors, or assigns shall be prohibited. In addition, except for investments tied to market indexes or other non-nuclear-sector mutual funds, investments in any entity owning one or more nuclear power plants shall be prohibited.
  - (iii) The decommissioning trust agreement must provide that no disbursements or payments from the trust(s), other than for ordinary administrative expenses, shall be made by the trustee until the trustee has first given the NRC 30 days prior written notice of payment. The decommissioning trust agreement shall further provide that no disbursements or payments from the trust(s) shall be made if the trustee receives prior written notice of objection from the Director of the Office of Nuclear Reactor Regulation.
  - (iv) The decommissioning trust agreement must provide that the agreement cannot be amended in any material respect without 30 days prior written notification to the Director of the Office of Nuclear Reactor Regulation.
  - (v) The appropriate section of the decommissioning trust agreement shall provide that the trustee, investment advisor, or anyone else directing the investments made in the trust(s) shall adhere to a "prudent investor" standard, as specified in 18 CFR 35.32(a)(3) of the Federal Energy Regulatory Commission's regulations.

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\*\* On April 16, 2009, the name "FPL Energy Seabrook, LLC" was changed to "NextEra Energy Seabrook, LLC."

- c. NextEra Energy Seabrook, LLC, shall take all necessary steps to ensure that the decommissioning trust(s) are maintained in accordance with the license transfer application and the requirements of the Order approving the transfer, and consistent with the safety evaluation supporting the Order.
- d. NextEra Energy Seabrook, LLC, shall take no action to cause FPL Group Capital, Inc. or its parent companies to void, cancel, or modify the Support Agreement to provide funding of up to \$110 million for FPL Energy Seabrook, LLC\*\*, as represented in the license transfer application without prior written consent of the Director of the Office of Nuclear Reactor Regulation.

(4) Mitigation Strategy License Condition

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

- a. Fire fighting response strategy with the following elements:
  - (i) Pre-defined coordinated fire response strategy and guidance
  - (ii) Assessment of mutual aid fire fighting assets
  - (iii) Designated staging areas for equipment and materials
  - (iv) Command and control
  - (v) Training of response personnel
- b. Operations to mitigate fuel damage considering the following:
  - (i) Protection and use of personnel assets
  - (ii) Communications
  - (iii) Minimizing fire spread
  - (iv) Procedures for implementing integrated fire response strategy
  - (v) Identification of readily-available, pre-staged equipment
  - (vi) Training on integrated fire response strategy
- c. Actions to minimize release to include consideration of:
  - (i) Water spray scrubbing
  - (ii) Dose to onsite responders

(5) License Renewal License Conditions

- a. The information in the Final Safety Analysis Report (FSAR) supplement, submitted pursuant to 10 CFR 54.21(d) and as revised during the license renewal application review process, and licensee commitments as listed in Appendix A of the "Safety Evaluation Report Related to the License Renewal of Seabrook Station," are collectively the "License Renewal FSAR Supplement." This Supplement is henceforth part of the FSAR,

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which will be updated in accordance with 10 CFR 50.71(e). As such, the licensee may make changes to the programs, activities, and commitments described in this Supplement, without prior Commission approval, provided the licensee evaluates such changes pursuant to the criteria set forth in 10 CFR 50.59, "Changes, tests, and experiments," and otherwise complies with the requirements in that section.

- b. The License Renewal FSAR Supplement, as defined in license condition (5)a above, describes certain programs to be implemented and activities to be completed prior to the period of extended operation (PEO).
  - (i) NextEra Energy Seabrook, LLC shall implement those new programs and enhancements to existing programs no later than 6 months before the PEO (September 15, 2029)
  - (ii) NextEra Energy Seabrook, LLC shall complete those activities by the date 6 months before the PEO (September 15, 2029) or by the end of the last refueling outage before the PEO, whichever occurs later.
  - (iii) NextEra Energy Seabrook, LLC shall notify the NRC in writing within 30 days after having accomplished item b(i) above and include the status of those activities that have been or remain to be completed in item b(ii) above.

#### D. Exemptions

NextEra Energy Seabrook, LLC is exempted from the Section III.D.2(b)(ii) containment airlock testing requirements of Appendix J to 10 CFR Part 50, because of the special circumstances described in Section 6.2.6 of SER Supplement 5 to the original operating license (NUREG-0896, dated July 1986) and authorized by 10 CFR 50.12(a)(2)(ii) and (iii) (51 FR 37684 October 23, 1986).

NRC Materials License No. SNM-1963, issued December 19, 1985, granted an exemption pursuant to 10 CFR 70.24 with respect to requirements for criticality alarms. NextEra Energy Seabrook, LLC, is hereby exempted from provisions of 10 CFR 70.24 insofar as this section applies to the storage and handling of new fuel assemblies in the new fuel storage vault, spent fuel pool (when dry), and shipping containers.

These exemptions, authorized by law, will not present an undue risk to the public health and safety and are consistent with the common defense and security. These 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. Physical Security

The licensee shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards

contingency plans including amendments made pursuant to provision of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans<sup>1</sup>, submitted by letter dated September 23, 2004, and supplemented by letters dated October 15, October 22, and October 29, 2004, and May 18, 2006, is entitled: "Florida Power and Light & FPL Energy Seabrook Physical Security Plan, Training and Qualification Plan and Safeguards Contingency Plan." The set contains Safeguards Information protected under 10 CFR 73.21. NextEra Energy Seabrook, 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 NextEra Energy Seabrook, LLC CSP was approved by License Amendment No. 127 (as supplemented by clarifications approved by License Amendment No. 132 and License Amendment No. 146).

F. Fire Protection

NextEra Energy Seabrook, LLC, shall implement and maintain in effect all provisions of the approved fire protection program as described in the Final Safety Analysis Report, the Fire Protection Program Report, and the Fire Protection of Safe Shutdown Capability report for the facility, as supplemented and amended, and as approved in the Safety Evaluation Report, dated March 1983; Supplement 4, dated May 1986; Supplement 5, dated July 1986; Supplement 6, dated October 1986; Supplement 7, dated October 1987; and Supplement 8, dated May 1989 subject to the following provisions: NextEra Energy Seabrook, 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 shutdown in the event of a fire.

G. Fixed Incore Detector Analysis

If the methodology described in Appendix B of ANP-3243P, Revision 1, "Seabrook Station, Unit 1 Fixed Incore Detector System Analysis Supplement to YAEC-1855PA," is utilized in any plant surveillance then NextEra must notify the NRC by letter of the plant's conditions and results of that surveillance.

H. Financial Protection

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 1954, as amended, to cover public liability claims.

I. DELETED

J. Additional Conditions

The Additional Conditions contained in Appendix C, as revised through Amendment No. 159, are hereby incorporated into this renewed license. NextEra Energy

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<sup>1</sup> The Training and Qualification Plan and Safeguards Contingency Plan are Appendices to the Security Plan.

Seabrook, LLC, shall operate the facility in accordance with the Additional Conditions.

K. Inadvertent Actuation of the Emergency Core Cooling System (ECCS)

Prior to startup from refueling outage 11, FPL Energy Seabrook\*\* commits to either upgrade the controls for the pressurizer power operated relief valves (PORV) to safety-grade status and confirm the safety-grade status and water-qualified capability of the PORVs, PORV block valves and associated piping or to provide a reanalysis of the inadvertent safety injection event, using NRC approved methodologies, that concludes that the pressurizer does not become water solid within the minimum allowable time for operators to terminate the event. NextEra Energy Seabrook, LLC submitted an analysis of the inadvertent safety injection event in a letter dated November 7, 2005. In a letter dated June 9, 2006, the NRC concluded the analysis met the requirements of License Condition 2.K.

3. This renewed license is effective as of the date of issuance and shall expire at midnight on March 15, 2050.

FOR THE NUCLEAR REGULATORY COMMISSION

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Ho K. Nieh, Director  
Office of Nuclear Reactor Regulation

Attachments/ Appendices:

1. Appendix A - Technical Specifications (NUREG-1386)
2. Appendix B - Environmental Protection Plan
3. Appendix C - Additional Conditions

Date of Issuance: March 12, 2019

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