

NEXTERA ENERGY POINT BEACH, LLC

DOCKET NO. 50-301

RENEWED FACILITY OPERATING LICENSE

Renewed License No. DPR-27

1. The Nuclear Regulatory Commission (NRC or the Commission), having previously made the findings set forth in License DPR-27 issued on March 8, 1973, has now found that:
 - A. The application to renew operating License No. DPR-27 filed by Nuclear Management Company, LLC (NMC) complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter 1, and all required notifications to other agencies or bodies have been duly made;
 - B. Construction of the Point Beach Nuclear Plant Unit 2 (the facility) has been substantially completed, in conformity with Provisional Construction Permit No. CPPR-47, the application, as amended, the provisions of the Act, and the rules and 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 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 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 rules and regulations of the Commission;
 - E. There is reasonable assurance (1) that the activities authorized by the renewed operating license can be conducted without endangering the health and safety of the public, and (2) that such activities will be conducted in compliance with the rules and regulations of the Commission;

- F. NextEra Energy Point Beach 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. NextEra Energy Point Beach 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; and
 - I. In accordance with the requirements of 10 CFR Part 51 (formerly Appendix D to Part 50), the renewed operating license should be issued subject to conditions for protection of the environment set forth in the Technical Specifications incorporated herein.
- 2. This renewed operating license applies to the Point Beach Nuclear Plant Unit 2, a closed cycle, pressurized, light water moderated and cooled reactor, and associated steam generators and electric generating equipment (the facility). The facility is located on the Point Beach site, in the Town of Two Creeks, Manitowoc County, Wisconsin, and is described in the Final Safety Analysis Report (FSAR), as supplemented and amended.
 - 3. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:
 - A. Pursuant to Section 104b of the Act and 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," NextEra Energy Point Beach to possess, use and operate the facility at the designated location on the Point Beach site in accordance with the procedures and limitations set forth in this renewed operating license;
 - B. Pursuant to the Act and 10 CFR Part 70, NextEra Energy Point Beach 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 Final Facility Description and Safety Analysis Report, as supplemented and amended as of March 17, 1976;

- C. Pursuant to the Act and 10 CFR Parts 30, 40 and 70, NextEra Energy Point Beach to receive, possess and use at any time any byproduct, source, and special nuclear material as sealed neutron sources for reactor startup, sealed source for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
 - D. Pursuant to the Act and 10 CFR Parts 30, 40 and 70, NextEra Energy Point Beach 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
 - E. Pursuant to the Act and 10 CFR Parts 30 and 70, NextEra Energy Point Beach to possess such byproduct and special nuclear materials as may be produced by the operation of the facility, but not to separate such materials retained within the fuel cladding.
4. This renewed operating license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations: 10 CFR Part 20, Section 30.34 of 10 CFR Part 30, Section 40.41 of 10 CFR Part 40, Sections 50.54 and 50.59 of 10 CFR Part 50, and Section 70.32 of 10 CFR Part 70; 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 below:
- A. Maximum Power Levels

NextEra Energy Point Beach is authorized to operate the facility at reactor core power levels not in excess of 1800 megawatts thermal.
 - B. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 277, are hereby incorporated in the renewed operating license. NextEra Energy Point Beach shall operate the facility in accordance with Technical Specifications.
 - C. Spent Fuel Pool Modification

The licensee is authorized to modify the spent fuel storage pool to increase its storage capacity from 351 to 1502 assemblies as described in licensee's application dated March 21, 1978, as supplemented and amended. In the event that the on-site verification check for poison material in the poison assemblies discloses any missing boron plates, the NRC shall be notified and an on-site test on every poison assembly shall be performed.

D. Physical Protection

NextEra Energy Point Beach 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 provisions 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, which contain Safeguards Information protected under 10 CFR 73.21, is entitled: "Point Beach Nuclear Plant Physical Security Plan, (Revision 4)," submitted by letter dated May 10, 2006. NextEra Energy Point Beach, LLC shall fully implement and maintain in effect all provisions of the Commission-approved Point Beach Nuclear Plant 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 Point Beach CSP was approved by License Amendment No. 247 as supplemented by a change approved by License Amendment No. 251 and License Amendment No. 256.

E. Adoption of 10 CFR 50.69, "Risk-Informed categorization and treatment of structures, systems, and components for nuclear power plants"

1. NextEra Energy Point Beach is approved to implement 10 CFR 50.69 using the processes for categorization of Risk-Informed Safety Class (RISC)-1, RISC-2, RISC-3, and RISC-4 structures, systems, and components (SSCs) using: Probabilistic Risk Assessment (PRA) models to evaluate risk associated with internal events, including internal flooding, and internal fire; the shutdown safety assessment process to assess shutdown risk; the Arkansas Nuclear One, Unit 2 (AN0-2) passive categorization method to assess passive component risk for Class 2 and Class 3 SSCs and their associated supports; and the results of non-PRA evaluations that are based on the IPEEE Screening Assessment for External Hazards, i.e., seismic margin analysis (SMA) to evaluate seismic risk, and a screening of other external hazards updated using the external hazard screening significance process identified in ASME/ANS PRA Standard RA-Sa-2009; as specified in License Amendment No. 265 dated November 26, 2018.
2. Prior to implementation of the provisions of 10 CFR 50.69, NextEra Energy Point Beach shall complete the items below:
 - a. Item A in Attachment 1, List of Categorization Prerequisites, to NextEra Energy Point Beach letter NRC 2017-0043, "License Amendment Request 287, Application to Adopt 10 CFR 50.69, 'Risk-Informed Categorization and Treatment of Structures, Systems, and Components (SSCs) for Nuclear Power Plants,' " dated August 31, 2017; and
 - b. Attachment 1, Point Beach 10 CFR 50.69 PRA Implementation Items, in NextEra Energy Point Beach letter NRC-2018-0044, "Supplement to Response to Request for Additional Information Regarding License Amendment Request 287, Application to Adopt 10 CFR 50.69, 'Risk informed Categorization and Treatment of Structures, System, and Components (SSCs) for Nuclear Power Plants,' " dated September 28, 2018.

3. Prior NRC approval, under 10 CFR 50.90, is required for a change to the categorization process specified above (e.g., change from a seismic margins approach to a seismic probabilistic risk assessment approach).
- F. NextEra Energy Point Beach Unit 2 shall implement and maintain in effect all provisions of the approved fire protection program that comply with 10 CFR 50.48(a) and 10 CFR 50.48(c), as specified in the license amendment request dated June 26, 2013, and supplements dated September 16, 2013, July 29, 2014, August 28, 2014, September 25, 2014, November 14, 2014, December 19, 2014, January 16, 2015, May 12, 2015, August 26, 2015, February 22, 2016, April 07, 2016, and May 3, 2016 and as approved in the safety evaluation report dated September 8, 2016. Except where NRC approval for changes or deviations is required by 10 CFR 50.48(c), and provided no other regulation, technical specification, license condition or requirement would require prior NRC approval, the licensee may make changes to the fire protection program without prior approval of the Commission if those changes satisfy the provisions set forth in 10 CFR 50.48(a) and 10 CFR 50.48(c), the change does not require a change to a technical specification or license condition, and the criteria listed below are satisfied.

1. Risk-Informed Changes that May Be Made Without Prior NRC Approval

A risk assessment of the change must demonstrate that the acceptance criteria below are met. The risk assessment approach, methods, and data shall be acceptable to the NRC and shall be appropriate for the nature and scope of the change being evaluated; be based on the as-built, as-operated, and maintained plant; and reflect the operating experience at the plant. Acceptable methods to assess the risk of the change may include methods that have been used in the peer-reviewed fire PRA model, methods that have been approved by NRC through a plant-specific license amendment or NRC approval of generic methods specifically for use in NFPA 805 risk assessments, or methods that have been demonstrated to bound the risk impact

- a. Prior NRC review and approval is not required for changes that clearly result in a decrease in risk. The proposed change must also be consistent with the defense-in-depth philosophy and must maintain sufficient safety margins. The change may be implemented following completion of the plant change evaluation.
- b. Prior NRC review and approval is not required for individual changes that result in a risk increase less than 1×10^{-7} /year (yr) for CDF and less than 1×10^{-8} /yr for LERF. The proposed change must also be consistent with the defense-in-depth philosophy and must maintain sufficient safety margins. The change may be implemented following completion of the plant change evaluation.

2. Other Changes that May Be Made Without Prior NRC Approval

a. Changes to NFPA 805, Chapter 3, Fundamental Fire Protection Program.

Prior NRC review and approval are not required for changes to the NFPA 805, Chapter 3, fundamental fire protection program elements and design requirements for which an engineering evaluation demonstrates that the alternative to the Chapter 3 element is functionally equivalent or adequate for the hazard. The licensee may use an engineering evaluation to demonstrate that a change to an NFPA 805, Chapter 3 element is functionally equivalent to the corresponding technical requirement. A qualified fire protection engineer shall perform the engineering evaluation and conclude that the change has not affected the functionality of the component, system, procedure, or physical arrangement, using a relevant technical requirement or standard.

The licensee may use an engineering evaluation to demonstrate that changes to certain NFPA 805, Chapter 3 elements are acceptable because the alternative is "adequate for the hazard." Prior NRC review and approval would not be required for alternatives to four specific sections of NFPA 805, Chapter 3, for which an engineering evaluation demonstrates that the alternative to the Chapter 3 element is adequate for the hazard. A qualified fire protection engineer shall perform the engineering evaluation and conclude that the change has not affected the functionality of the component, system, procedure, or physical arrangement, using a relevant technical requirement or standard. The four specific sections of NFPA 805, Chapter 3, are as follows:

- "Fire Alarm and Detection Systems" (Section 3.8);
- "Automatic and Manual Water-Based Fire Suppression Systems" (Section 3.9);
- "Gaseous Fire Suppression Systems" (Section 3.10); and,
- "Passive Fire Protection Features" (Section 3.11).

(This License Condition does not apply to any demonstration of equivalency under Section 1.7 of NFPA 805.)

b. Fire Protection Program Changes that Have No More than Minimal Risk Impact

Prior NRC review and approval are not required for changes to the licensee's fire protection program that have been demonstrated to have no more than a minimal risk impact. The licensee may use its screening process as approved in the NRC safety evaluation report dated September 8, 2016 to determine that certain fire protection program changes meet the minimal criterion. The licensee shall ensure that fire protection defense-in-depth and safety margins are maintained when changes are made to the fire protection program.

3. Transition License Conditions

- a. Before achieving full compliance with 10 CFR 50.48(c), as specified by 3.b and 3.c 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.b above.
- b. The licensee shall implement the modifications to its facility as described in Attachment S, Table S-2 "Plant Modifications Committed," of NextEra Energy Point Beach letter NRC-2016-0013 to complete the transition to full compliance with 10 CFR 50.48(c) no later than prior to startup from the second refueling outage (for each unit) after receipt of the license amendment. The licensee shall maintain appropriate compensatory measures in place until completion of these modifications.
- c. The licensee shall implement the items in Attachment S, Table S-3, "Implementation Items," of NextEra Energy Point Beach letter NRC-2016-0021, with the exception of items noted below, within 12 months after NRC approval unless that falls within a scheduled outage window; then in that case, completion will occur 60 days after the startup from that scheduled outage.
 - i. Implementation item 120 is an exception as the industry guidance is under review by the NRC and the final resolution will occur 12 months after the guidance is available unless that falls within a scheduled outage window; then in that case, completion will occur 60 days after startup from that scheduled outage.
 - ii. Implementation items 142 and 150 are exceptions because they are associated with completion of committed modifications identified in LAR Attachment S, Table S-2 and will not be completed until 3 months following the last refueling outage identified in item 3.b above.

G. Secondary Water Chemistry Monitoring Program

NextEra Energy Point Beach shall implement a secondary water chemistry monitoring program to inhibit steam generator tube degradation. This program shall include:

1. Identification of a sampling schedule for the critical parameters and control points for these parameters;
2. Identification of the procedures used to quantify parameters that are critical to control points;
3. Identification of process sampling points;
4. Procedure for the recording and management of data;
5. Procedures defining corrective actions for off control point chemistry condition; and
6. A procedure for identifying the authority responsible for the interpretation of the data, and the sequence and timing of administrative events required to initiate corrective action.

H. Containment Building Construction Truss

NextEra Energy Point Beach shall complete implementation items 3, 4, 5, and 6 included in Attachment 3 of licensee letter NRC 2019-0007, dated March 13, 2019, by the completion date specified in the Attachment.

I. Deleted

- J. 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 (ASTM) 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 insertion. Any changes to storage requirements must be approved by the NRC, as required by 10 CFR Part 50, Appendix H.

K. Mitigation Strategy

Strategies shall be developed and maintained for addressing large fires and explosions that include the following key areas:

1. Fire fighting response strategy with the following elements :
 - a. Pre-defined coordinated fire response strategy and guidance
 - b. Assessment of mutual aid fire fighting assets
 - c. Designated staging areas for equipment and materials
 - d. Command and control
 - e. Training of response personnel
2. Operations to mitigate fuel damage considering the following:
 - a. Protection and use of personnel assets
 - b. Communications
 - c. Minimizing fire spread
 - d. Procedures for implementing integrated fire response strategy
 - e. Identification of readily-available pre-staged equipment
 - f. Training on integrated fire response strategy
 - g. Spent fuel pool mitigation measures
3. Actions to minimize release to include consideration of:
 - a. Water spray scrubbing
 - b. Dose to onsite responders

L. Additional Conditions

The additional conditions contained in Appendix C, as revised through Amendment No. 245, are hereby incorporated into this license. NextEra Energy Point Beach shall operate the facility in accordance with the additional conditions.

5. The issuance of this renewed operating license is without prejudice to subsequent licensing action which may be taken by the Commission with regard to the ongoing rulemaking hearing on the Interim Acceptance Criteria for Emergency Core Cooling Systems (Docket No. RM 50-1).
6. This renewed operating license is effective as of the date of issuance, and shall expire at midnight on March 8, 2033.

FOR THE NUCLEAR REGULATORY COMMISSION

Original Signed By

R. W. Borchardt, Deputy Director
Office of Nuclear Reactor Regulation

Attachments:

1. Appendix A - Technical Specifications
2. Appendix B - Environmental Technical Specifications
3. Appendix C - Additional Conditions

Date of Issuance: December 22, 2005

Appendix A: Technical Specifications

Point Beach 2 uses the same Appendix A as Point Beach 1. Please refer to Point Beach 1 for Appendix A (ML053110031).

Appendix B: Environmental Technical Specifications

Point Beach 2 uses the same Appendix B as Point Beach 1. Please refer to Point Beach 1 for Appendix B (ML053110031).

APPENDIX C
ADDITIONAL CONDITIONS
OPERATING LICENSE DPR-27

NextEra Energy Point Beach, LLC shall comply with the following conditions and the schedules noted below:

<u>Amendment Number</u>	<u>Additional Conditions</u>	<u>Implementation Date</u>
478	Deleted	
178	This amendment is authorized contingent on compliance with commitments provided by the licensee to operate Point Beach Nuclear Plant in accordance with its service water system analyses and approved procedures. Specifically, each unit will utilize only one component cooling water heat exchanger until such time as analyses are completed and the service water system reconfigured as necessary to allow operation of one or both units with two heat exchangers in service. If two component cooling water heat exchangers are required in one or both units for maintaining acceptable component cooling water temperature prior to completion of necessary analyses to allow operation in the required configuration, the service water system will be considered in an unanalyzed condition, declared inoperable, and action taken as specified by TS LCO 3.0.3 except for short periods of time as necessary to effect procedurally controlled changes in system lineups and unit operating conditions.	Immediately
206	Deleted	
206	Deleted	
233	At the time of the closing of the transfer of the licenses from Wisconsin Electric Power Company (WEPCO) to FPLE Point Beach ¹ , WEPCO shall transfer to FPLE Point Beach* WEPCO's decommissioning funds in an aggregate minimum value of \$189.2 million for Point Beach Unit 2. FPLE Point Beach* shall deposit such funds in an external decommissioning trust fund established by FPLE Point Beach for Point Beach Units 1 and 2. The trust agreement shall be in a form acceptable to the NRC.	Immediately
	NextEra Energy Point Beach shall take no actions to cause FPL Group Capital, or its successors and assigns, to void, cancel, or modify its \$70 million Support Agreement (Agreement) to NextEra Energy Point Beach, as presented in its application dated January 26, 2007, or cause it to fail to perform or impair its performance under the Agreement, without the prior written consent from the NRC. The Agreement may not be amended or modified without 30 days prior written notice to the Director of Nuclear Reactor Regulation or his designee. An executed copy of the Agreement shall be submitted to the NRC no later than 30 days after the completion of the license transfers. Also, NextEra Energy Point Beach shall inform the NRC in writing anytime it draws upon the \$70 million Agreement.	Immediately
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242	Deleted	
244	Deleted	

¹ On April 16, 2009, the name "FPLE Point Beach, LLC" was changed to "NextEra Energy Point Beach, LLC."

APPENDIX C
ADDITIONAL CONDITIONS
OPERATING LICENSE DPR-27

NextEra Energy Point Beach, LLC shall comply with the following conditions and the schedules noted below:

<u>Amendment Number</u>	<u>Additional Conditions</u>	<u>Implementation Date</u>
244	Deleted	
245	Deleted	
245	Deleted	