



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

FLORIDA POWER AND LIGHT COMPANY

ORLANDO UTILITIES COMMISSION  
OF THE CITY OF ORLANDO, FLORIDA

AND

FLORIDA MUNICIPAL POWER AGENCY

DOCKET NO. 50-389

ST. LUCIE PLANT, UNIT NO. 2

SUBSEQUENT RENEWED FACILITY OPERATING LICENSE NO. NPF-16

The U.S. Nuclear Regulatory Commission (NRC or the Commission), having previously made the findings set forth in Renewed License No. NPF-16 issued on October 2, 2003, has now found that:

- a. The application to subsequently renew Renewed License No. NPF-16 filed by Florida Power and Light Company, Orlando Utilities Commission of the City of Orlando, Florida, and Florida Municipal Power Agency (the licensees) 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 I, and all required notifications to other agencies or bodies have been duly made;
- b. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the subsequent 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 subsequent renewed facility operating license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for St. Lucie Plant, Unit No. 2 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;
- c. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;
- d. There is reasonable assurance: (i) that the activities authorized by this subsequent renewed facility 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 rules and regulations of the Commission;

- e. Florida Power and Light Company (FPL)<sup>1</sup> is technically and financially qualified to engage in the activities authorized by this subsequent renewed facility operating license in accordance with the rules and regulations of the Commission;
- f. FPL has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;
- g. The subsequent renewal of this operating license will not be inimical to the common defense and security or to the health and safety of the public; and
- 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 Subsequent Renewed Facility Operating License No. NPF-16, subject to the conditions for protection of the environment set forth herein, is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

On the basis of the foregoing findings regarding this facility, Renewed Facility Operating License No. NPF-16, issued on October 2, 2003, is superseded by Subsequent Renewed Facility Operating License No. NPF-16, which is hereby issued to the licensees to read as follows:

- 1. This subsequent renewed facility operating license applies to the St. Lucie Plant, Unit No. 2, a pressurized water nuclear reactor, and associated steam generators and electrical generating equipment (the facility). The facility is located on the licensees' site on Hutchinson Island in St. Lucie County, Florida, and is described in the Updated Final Safety Analysis Report, as supplemented and amended, and the Environmental Report, as supplemented and amended.
- 2. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:
  - A. Pursuant to Section 103 of the Act and 10 CFR Part 50, FPL, Orlando Utilities Commission of the City of Orlando, Florida, and Florida Municipal Power Agency to possess, use, and operate the facility as a utilization facility at the designated location on the St. Lucie site in accordance with the procedures and limitations set forth in this subsequent renewed facility operating license;
  - B. Pursuant to the Act and 10 CFR Part 70, FPL 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. Pursuant to the Act and 10 CFR Parts 30, 40, and 70, FPL to receive, possess, and use at any time 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;

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<sup>1</sup> Florida Power and Light Company is authorized to act as agent for the Orlando Utilities Commission of the City of Orlando, Florida and Florida Municipal Power Agency and has exclusive responsibility and control over the physical construction, operation, and maintenance of the facility.

- D. Pursuant to the Act and 10 CFR Parts 30, 40, and 70, FPL 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 and equipment calibration or associated with radioactive apparatus or components; and
  - E. Pursuant to the Act and 10 CFR Parts 30 and 70, FPL to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.
3. This subsequent renewed facility 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 Level  
  
FPL is authorized to operate the facility at steady state reactor core power levels not in excess of 3020 megawatts (thermal).
  - B. Technical Specifications  
  
The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 214, are hereby incorporated in the subsequent renewed facility operating license. FPL shall operate the facility in accordance with the Technical Specifications.  
  
Appendix B, the Environmental Protection Plan (Non-Radiological), contains environmental conditions of the subsequent renewed facility operating license. If significant detrimental effects or evidence of irreversible damage are detected by the monitoring programs required by Appendix B of this license, FPL will provide the Commission with an analysis of the problem and plan of action to be taken subject to Commission approval to eliminate or significantly reduce the detrimental effects or damage.
  - C. DELETED
  - D. Antitrust Conditions  
  
FPL shall comply with the antitrust conditions in Appendices C and D to this subsequent renewed facility operating license.
  - E. Fire Protection  
  
FPL St. Lucie Plant, Unit No. 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 licensee amendment request dated March 22, 2013, and May 2, 2017, and supplements dated

June 14, 2013, February 24, 2014, March 25, 2014, April 25, 2014, July 14, 2014, August 27, 2014, September 10, 2014, October 10, 2014, March 10, 2015, April 1, 2015, April 20, 2015, May 12, 2015, August 21, 2015, and October 22, 2015, and as approved in the safety evaluations (SE) dated March 31, 2016, and October 23, 2017. 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 a license condition, and the criteria listed below are satisfied.

### **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 Probabilistic Risk Assessment (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 National Fire Protection Association (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  $1 \times 10^{-7}$ /year (yr) for core damage frequency and less than  $1 \times 10^{-8}$ /yr for large early release frequency. 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.

### **Other Changes that May Be Made Without Prior NRC Approval**

1. 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 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.

## 2. 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 SE dated March 31, 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.

## F. Physical Protection

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 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 contains Safeguards Information protected under 10 CFR 73.21, is entitled: "Florida Power and Light & FPL Energy Seabrook Physical Security Plan, Training and Qualification Plan and Safeguards Contingency Plan – Revision 3," submitted by letter dated May 18, 2006. St. Lucie 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 St. Lucie CSP was approved by License Amendment No. 160 as supplemented by a Clarification approved by License Amendment Nos. 164 and 172.

G. Before engaging in additional construction or operational activities which may result in a significant adverse environmental impact that was not evaluated or that is significantly greater than that evaluated in the Final Environmental Statement dated April 1982, FPL shall provide written notification to the Office of Nuclear Reactor Regulation.

H. DELETED

I. FPL shall notify the Commission, as soon as possible, but not later than 1 hour, of any accident at this facility which could result in an unplanned release of quantities of fission products in excess of allowable limits for normal operation established by the Commission.

J. FPL 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.

K. The use of ZIRLO™ clad fuel at St. Lucie Unit 2 will be subject to the following restrictions:

FPL will limit the fuel duty for St. Lucie Unit 2 to a baseline modified Fuel Duty Index (mFDI) of 600 with a provision for adequate margin to account for variations in core design (e.g., cycle length, plant operating conditions, etc). This limit will be applicable until data is available demonstrating the performance of ZIRLO™ cladding at Combustion Engineering 16x16 plants.

FPL will restrict the mFDI of each ZIRLO™ clad fuel pin to 110 percent of the baseline mFDI of 600.

For a fraction of the fuel pins in a limited number of assemblies (8), FPL will restrict the fuel duty of ZIRLO™ clad fuel pins to 120 percent of the baseline mFDI of 600. FPL shall not lift the ZIRLO™ mFDI restriction discussed above without either NRC approval of a supplement to CENPD-404-P-A that includes corrosion data from two Combustion Engineering plants (not at the same site) or NRC approval of St. Lucie Unit 2 plant-specific corrosion data.

L. Mitigation Strategy License Condition

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:
1. Pre-defined 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

M. DELETED

N. FATES38 Safety Analyses (Westinghouse Fuel Only)

FATES3B has been specifically approved for use for St. Lucie Unit 2 licensing basis analyses based on FPL maintaining the more restrictive operational/design radial power fall-off curve limits as specified in Attachment 4 to FPL Letter L-2012-121, dated March 31, 2012, as compared to the FATES3B analysis radial power fall-off curve limits. The radial power fall-off curve limits shall be verified each cycle as part of the Reload Safety Analysis Checklist (RSAC) process.

O. FPL is authorized to implement the Risk Informed Completion Time Program as approved in License Amendment Nos. 199 and 207 subject to the following conditions:

- 1. DELETED
- 2. The risk assessment approach and methods, shall be acceptable to the NRC, be based on the as-built, as-operated, and maintained plant, and reflect the operating experience of the plant as specified in NRC Regulatory Guide (RG) 1.200, "An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities." Methods to assess the risk from extending the completion times must be PRA methods accepted as part of this license amendment, or other methods approved by the NRC for generic use. If the licensee wishes to change its methods, and the change is outside the bounds of this license condition, the licensee will seek prior NRC approval via a license amendment.

P. Improved Technical Specifications Implementation License Conditions

- 1. Relocation of Certain Technical Specification Requirements

License Amendment No. 208 authorizes the relocation of certain Technical Specifications previously included in Appendix A to other licensee-controlled documents. Implementation of this amendment shall include relocation of the requirements to the specified documents, as described in Table R, Relocated Specifications and Removed Detail Changes, attached to the NRC staff's Safety Evaluation, which is enclosed in this amendment.

2. Schedule for New and Revised Surveillance Requirements (SRs)

The schedule for performing SRs that are new or revised in License Amendment No. 208 shall be as follows:

- a. For SRs that are new in this amendment, the first performance is due at the end of the first Surveillance interval, which begins on the date of implementation of this amendment.
- b. For SRs that existed prior to this amendment, whose intervals of performance are being reduced, the first reduced Surveillance interval begins upon completion of the first Surveillance performed after implementation of this amendment.
- c. For SRs that existed prior to this amendment, whose intervals of performance are being extended, the first extended Surveillance interval begins upon completion of the last Surveillance performed prior to implementation of this amendment.
- d. For SRs that existed prior to this amendment that have modified acceptance criteria, the first performance subject to the modified acceptance criteria is due at the end of the first Surveillance interval that began on the date the Surveillance was last performed prior to the implementation of this amendment.

Q. 50.69 License Condition

FPL 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: PRA models to evaluate risk associated with internal events, internal flooding, and internal fire; the shutdown safety assessment process to assess shutdown risk; the Arkansas Nuclear One, Unit 2 (ANO-2) passive categorization method to assess passive component risk for Class 2 and Class 3 and non-Class SSCs and their associated supports; the results of the non-PRA evaluations that are based on the Individual Plant Examination for External Events Screening Assessment for External Hazards updated using the external hazard screening significance process identified in American Society of Mechanical Engineers/American Nuclear Society (ASME/ANS) PRA Standard RA-Sa-2009 for other external hazards except seismic; and the alternative seismic approach as described in FPL's original submittal letter dated December 2, 2022, and all its subsequent associated supplements; as specified in License Amendment No. 209 dated March 12, 2024.

Prior NRC approval, under 10 CFR 50.90, is required for a change to the categorization process specified above.

FPL shall complete the numbered items listed in Attachment 1, List of Categorization Prerequisites, of FPL letter dated September 26, 2023 (ML23269A150), prior to implementation. All issues identified in the attachment will be addressed and any associated changes will be made, focused scope peer reviews will be performed on changes that are PRA upgrades as defined in the

PRA standard (ASME/ANS RA-Sa-2009, as endorsed by RG 1.200, Revision 2), and any findings will be resolved and reflected in the PRA of record prior to implementation of the 10 CFR 50.69 categorization process.

R. Subsequent Renewed Facility Operating License Conditions

1. The information in the Updated Final Safety Analysis Report supplement submitted as required by 10 CFR 54.21(d), and revised during the application review process, and the licensee's commitments listed in Appendix A of the "Safety Evaluation Related to the Subsequent License Renewal of St. Lucie Plant, Units 1, and 2," dated July 2023 (ML23200A146), as revised in September 2023 (ML23219A003), and as supplemented by "St. Lucie Plant, Units 1 and 2 – Supplement to Revision 1 of the Safety Evaluation for the Subsequent License Renewal Application Review Resulting from the Fourth Annual Update," dated March 9, 2026 (ML26040A122), are collectively the "Subsequent License Renewal Updated Final Safety Analysis Report Supplement." This supplement is henceforth part of the Updated Final Safety Analysis Report 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 the Subsequent License Renewal Updated Final Safety Analysis Report Supplement, provided the licensee evaluates such changes pursuant to 10 CFR 50.59, "Changes, tests, and experiments," and otherwise complies with the requirements in that section.

2. This Subsequent License Renewal Updated Final Safety Analysis Report Supplement, as defined in subsequent renewed facility operating license condition 1 above, describes programs to be implemented and activities to be completed before the subsequent period of extended operation, which is the period following the April 6, 2043, expiration of the initial renewed license.
  - a. The licensee shall implement those new programs and enhancements to existing programs no later than the date 6 months before the subsequent period of extended operation.
  - b. The licensee shall complete those activities by the date 6 months prior to the subsequent period of extended operation or by the end of the last refueling outage before the subsequent period of extended operation, whichever occurs later.
  - c. The licensee shall notify the NRC in writing within 30 days after having accomplished item 2.a above and include the status of those activities that have been or remain to be completed in item 2.b above.
  - d. The programs and commitments described in the Subsequent License Renewal Updated Final Safety Analysis Report Supplement shall continue in effect during the subsequent period of extended operation, to the extent set forth therein, unless modified in accordance with the process set forth in 10 CFR 50.59.

4. This subsequent renewed facility operating license is effective as of the date of issuance and shall expire at midnight on April 6, 2063.

FOR THE NUCLEAR REGULATORY COMMISSION

**/RA/**

Jeremy R. Groom, Acting Director  
Office of Nuclear Reactor Regulation

Attachments:

1. Appendix A, Technical Specifications
2. Appendix B, Environmental Protection Plan
3. Appendix C, Antitrust Conditions
4. Appendix D, Antitrust Conditions

Date of Issuance: April 28, 2026