



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

April 29, 2021

Mr. Don Moul

Executive Vice President, Nuclear Division and
Chief Nuclear Officer, NextEra Energy, Inc.
NextEra Energy Duane Arnold, LLC
NextEra Energy Point Beach, LLC
NextEra Energy Seabrook, LLC
Florida Power & Light Company
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SUBJECT: U.S. NUCLEAR REGULATORY COMMISSION'S ANALYSIS OF FLORIDA POWER AND LIGHT AND NEXTERA ENERGY'S INITIAL AND UPDATED DECOMMISSIONING FUNDING PLANS FOR THE ST. LUCIE PLANT UNITS 1 AND 2, TURKEY POINT NUCLEAR GENERATING UNITS 3 AND 4, SEABROOK STATION UNIT 1, DUANE ARNOLD ENERGY CENTER, AND POINT BEACH NUCLEAR PLANT UNITS 1 AND 2 INDEPENDENT SPENT FUEL STORAGE INSTALLATIONS

Dear Mr. Moul:

By letter dated December 17, 2012, Florida Power and Light Company (FPL)¹ submitted, for U.S. Nuclear Regulatory Commission (NRC) staff review and approval, initial decommissioning funding plans (DFPs)² for the independent spent fuel storage installations (ISFSIs) at St. Lucie Plant, Units 1 and 2 (St. Lucie Units 1 and 2)³; Turkey Point Nuclear Generating Units 3 and 4

¹ FPL is the principal subsidiary of NextEra Energy, Inc. NextEra Energy Seabrook, LLC (Seabrook Station), NextEra Energy Duane Arnold, LLC (Duane Arnold Energy Center), and NextEra Energy Point Beach, LLC (Point Beach Units 1 and 2) are also subsidiaries of NextEra Energy, Inc.

² FPL submitted the initial DFPS for itself and on the behalf of the subsidiaries of NextEra Energy, Inc. NextEra Energy, Inc. submitted the updated DFPS on the behalf of its subsidiaries.

³ FPL is the sole owner of St. Lucie Plant Unit 1, and FPL, Florida Municipal Power Agency, and Orlando Utilities Commission co-own the St. Lucie Unit 2. At the time of the 2012 and 2015 DFP submittals, FPL was general licensee for the St. Lucie ISFSI. FPL, as general licensee, and its co-owners are responsible for establishing financial assurance for the decommissioning of the ISFSI at St. Lucie Plants Units 1 and 2.

(Turkey Point Units 3 and 4)⁴; Seabrook Station Unit 1 (Seabrook Station)⁵; Duane Arnold Energy Center⁶; and Point Beach Nuclear Plant Units 1 and 2 (Point Beach Units 1 and 2)⁷ (Agencywide Documents Access and Management System (ADAMS) Accession No. ML12354A134). The NRC issued a request for additional information (RAI) by letter dated May 23, 2014 (ADAMS Accession No. ML14143A141). FPL supplemented the initial DFP with a response to the RAI on August 12, 2014 (ADAMS Accession No. ML14225A655).

By letter dated March 27, 2015, NextEra Energy, Inc., submitted for NRC staff review and approval, updated DFPs, on behalf of its subsidiaries, for the ISFSIs at St. Lucie Units 1 and 2, Turkey Point Units 3 and 4, Seabrook Station, Duane Arnold Energy Center, and Point Beach Units 1 and 2 (ADAMS Accession No. ML15090A114).⁸ The NRC issued an RAI by letter dated February 27, 2018 (ADAMS Accession No. ML18058A053). FPL supplemented the updated DFPs with its response to the RAI, dated April 3, 2018 (ADAMS Accession No. ML18095A057).⁹

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR), Sections 72.30(b) and (c), and using NUREG-1757, "Consolidated Decommissioning Guidance," Volume 3, Revision 1, the NRC staff reviewed the initial DFPs submitted by FPL, including the initial and updated decommissioning cost estimates (DCEs) and the method of assuring funds for decommissioning.

Pursuant to 10 CFR 72.30(b), each holder of, or applicant for, a license under Part 72 must submit for NRC review and approval a DFP containing information on how reasonable

⁴ FPL is the sole owner of Turkey Point Units 3 and 4. FPL was the general licensee of Turkey Point ISFSI at the time of the 2012 and 2015 DFP submittals and remains the general licensee. FPL is responsible for establishing financial assurance for the decommissioning of the Turkey Point ISFSI.

⁵ NextEra Energy Seabrook, LLC., Hudson Light and Power Department, Massachusetts Municipal Wholesale Electric Company, and Taunton Municipal Lighting Plant co-own the Seabrook Station, Unit 1. At the time of the 2012 and 2015 DFP submittals, NextEra Energy Seabrook, LLC was the general licensee for the ISFSI at Seabrook Station. NextEra Energy Seabrook, LLC, as the general licensee, and its co-owners are responsible for establishing financial assurance for the decommissioning of the ISFSI at Seabrook Station.

⁶ NextEra Energy Duane Arnold, LLC, Central Iowa Power Cooperative, and Corn Belt Power Cooperative co-own the Duane Arnold Energy Center. At the time of the 2012 and 2015 DFP submittals, NextEra Energy Duane Arnold, LLC was the general licensee of the ISFSI at Duane Arnold Energy Center. NextEra Energy Duane Arnold, LLC, Central Iowa Power Cooperative, and Corn Belt Power Cooperative are responsible for establishing financial assurance for the decommissioning of the ISFSI at the Duane Arnold Energy Center.

⁷ NextEra Energy Point Beach, LLC was the general licensee and the sole owner of the ISFSI at Point Beach Units 1 and 2 at the time of the 2012 and 2015 DFP submittals, remains the general licensee, and is responsible for establishing financial assurance for the decommissioning of the ISFSI.

⁸ The general licensees and the ownership structures of the ISFSIs at St. Lucie Units 1 and 2, Turkey Point Units 3 and 4, Seabrook Station Unit 1, Duane Arnold Energy Center, and Point Beach Units 1 and 2 listed in the 2015 DFP update remain the same as reported in the initial DFP submitted by FPL in 2012.

⁹ FPL's 2018 RAI response noted that the updated information provided is also applicable to the ISFSI decommissioning cost estimates provided in an ISFSI financial assurance update dated March 30, 2017 (ADAMS Accession No. ML17130A921). The NRC staff did not analyze the March 30, 2017, submission in this letter because this financial analysis focuses on the 2012 and 2015 DFPs.

assurance will be provided that funds will be available to decommission its ISFSIs. The DFP must contain a detailed DCE in an amount reflecting: (1) the cost of an independent contractor to perform all decommissioning activities, (2) an adequate contingency factor, and (3) the cost of meeting the 10 CFR 20.1402 unrestricted use criteria (or the cost of meeting the 10 CFR 20.1403 restricted use criteria, provided the licensee can demonstrate its ability to meet these criteria). The licensee's DFP must also identify and justify using the key assumptions contained in the DCE. Further, the DFP must describe the method of assuring funds for ISFSI decommissioning, including means for adjusting cost estimates and associated funding levels periodically over the life of the ISFSI. Additionally, the DFP must specify the volume of onsite subsurface material containing residual radioactivity that will require remediation to meet the criteria for license termination and contain a certification that financial assurance for ISFSI decommissioning has been provided in the amount of the DCE.

The NRC staff reviewed and analyzed the information submitted by FPL for itself and the general licensees and co-owners of the ISFSIs on how reasonable assurance will be provided that funds will be available to decommission the ISFSIs, including the amount of the DCE and the method of assuring funds for decommissioning.

The initial DFPs submitted in 2012, as supplemented, provided the estimates of the total cost to decommission the ISFSIs for unrestricted use: for St. Lucie Units 1 and 2 as \$2,268,000 and \$2,268,000, respectively; for Turkey Point Units 3 and 4 as \$2,057,000 and \$2,057,000, respectively; for Seabrook Station as \$3,306,000; for Duane Arnold Energy Center as \$2,955,000; and for Point Beach Units 1 and 2 as \$1,563,000 and \$1,563,000, respectively, in 2013 dollars. Based on its financial analysis of the initial DFPs, the NRC staff finds that the DCEs submitted for 2012, as supplemented: 1) are based on reasonable costs of a third-party contractor; 2) include an adequate contingency factor; 3) reflect the cost of meeting the 10 CFR 20.1402 criteria for unrestricted use; and 4) are based on reasonable and documented assumptions. The NRC finds that the DCEs adequately estimate the cost, at this time, to carry out required ISFSI decommissioning activities prior to license termination, and that the DCEs are reasonable.

In the initial DFPs, as supplemented, the general licensees and co-owners of the ISFSIs relied on external sinking funds in the form of a prepaid trust as financial assurance for its ISFSI decommissioning, a method authorized by 10 CFR 50.75(e)(1)(ii) and 10 CFR 72.30(e)(5). This is allowed because the ISFSIs belong to licensees with a power reactor licenses issued under 10 CFR Part 50. The NRC staff finds that the aggregate dollar amount of the licensees' and co-owners' financial instruments provide adequate financial assurance to cover its cost estimates and, therefore, that these financial instruments are acceptable.

Based on its review, the NRC staff finds that the initial DFPs, as supplemented, contain the information required by 10 CFR 72.30(b) and provided reasonable assurance that funds will be available to decommission the ISFSIs at St. Lucie Units 1 and 2, Turkey Point Units 3 and 4, Seabrook Station, Duane Arnold Energy Center, and Point Beach Units 1 and 2.

Pursuant to 10 CFR 72.30(c), at the time of the license renewal and at intervals not to exceed 3 years, the initial DFP required by 10 CFR 72.30(b) must be resubmitted with adjustments as necessary to account for changes in costs and the extent of contamination (updated DFP). The updated DFP must update the information submitted with the original or prior approved plan. In addition, the updated DFP must also specifically consider the effect of the following events on decommissioning costs, as required by 10 CFR 72.30(c)(1)–(4): (1) spills of radioactive material producing additional residual radioactivity in onsite subsurface material, (2) facility modifications,

(3) changes in authorized possession limits, and (4) actual remediation costs that exceed the previous cost estimate.

The 2015 updated DFPs, as supplemented, provided the estimates of the total cost to decommission the ISFSIs for unrestricted use: for St. Lucie Units 1 and 2 as \$2.3 million and \$2.3 million, respectively; for Turkey Point Units 3 and 4 as \$2.1 million and 2.1 million, respectively; for Seabrook Station as \$3.3 million; for Duane Arnold Energy Center as \$3.1 million; and for Point Beach Units 1 and 2 as \$1.6 million and \$1.6 million, respectively, in 2015 dollars.

The updated DCEs considered the requirements of 10 CFR 72.30(c)(1)-(4) and, in the April 3, 2018 supplement, FPL provided a narrative on each requirement for itself and on behalf of the other general licensees. Specifically, the supplement reported that there were no changes in the factors listed in 10 CFR 72.30(c)(1)-(4) and a revision of the 2012 decommissioning cost estimates was not warranted. Based on its review of the 2015 updated DFPs and the 2018 supplement, the staff finds that the updated DCEs are based on reasonable costs of a third-party contractor, includes an adequate contingency factor, reflect the cost of meeting the 10 CFR 20.1402 criteria for unrestricted use, and are based on reasonable and documented assumptions. Therefore, the NRC staff finds that the DCEs adequately estimate the cost, at this time, to carry out required ISFSI decommissioning activities prior to license termination, and that the DCEs are reasonable.

In the updated DFPs and 2018 supplement for the ISFSIs at St. Lucie Units 1 and 2, Turkey Point Units 3 and 4, Seabrook Station, Duane Arnold, and Point Beach Units 1 and 2, the general licensees and co-owners relied on external sinking funds in the form of a prepaid trust as financial assurance for its ISFSI decommissioning, a method authorized by 10 CFR 50.75(e)(1)(ii) and 10 CFR 72.30(e)(5). This is allowed because the ISFSIs belong to licensees with power reactor licenses issued under 10 CFR Part 50. The NRC staff reviewed the 2015 DFP update and supplement and finds that the aggregate dollar amounts in the financial instruments provide adequate financial assurance to cover its cost estimates. Therefore, the NRC staff finds these financial instruments are acceptable.

The NRC staff reviewed the updated DFP submittals and supplements, including the updated DCEs and the method of assuring funds for decommissioning, in accordance with 10 CFR 72.30(c) and NUREG-1757, Vol. 3, Rev. 1. Based on its review, the NRC staff finds that the updated DFP submittals and supplements contain the information required by 10 CFR 72.30(c), and that the general licensees and co-owners have provided reasonable assurance that funds will be available to decommission the ISFSIs at St. Lucie Units 1 and 2, Turkey Point Units 3 and 4, Seabrook Station, Duane Arnold Energy Center, and Point Beach Units 1 and 2.

In addition to the NRC staff's analyses of the initial and updated DFPs and supplements, the NRC staff completed environmental reviews of the DFPs submitted for the ISFSIs at St. Lucie Units 1 and 2, Turkey Point Units 3 and 4, Seabrook Station, Duane Arnold Energy Center, and Point Beach Units 1 and 2. A *Federal Register* notice summarizing the results of these environmental reviews is scheduled to be published on May 4, 2021. The environmental assessments and findings of no significant impacts and related documents for these ISFSIs will be available in <https://www.regulations.gov> under the Docket ID: NRC-2021-0074. The environmental assessments for St. Lucie Units 1 and 2, Turkey Point Units 3 and 4, Seabrook Station, Duane Arnold Energy Center, and Point Beach Units 1 and 2 are located at ADAMS Accession Nos. ML21062A063, ML21062A057, ML21062A147, ML21062A094, and ML21062A071, respectively.

If you have any questions regarding this matter, please contact me at (301) 415-5722 or John.McKirgan@nrc.gov

Sincerely,

John B. McKirgan, Chief
Storage and Transportation Licensing Branch
Division of Fuel Management
Office of Nuclear Material Safety
and Safeguards

Docket Nos.: 72-61, 72-62, 72-63,
72-32, and 72-05
CAC No.: 001028
EPID Nos.: L-2017-FPR-0061,
L-2017-FPR-0070, L-2017-FPR-0063,
L-2017-FPR-0023, and L-2017-FPR-0055

cc: L. Nicholson, FPL

SUBJECT: U.S. NUCLEAR REGULATORY COMMISSION'S ANALYSIS OF FLORIDA POWER AND LIGHT AND NEXTERA ENERGY'S INITIAL AND UPDATED DECOMMISSIONING FUNDING PLANS FOR THE ST. LUCIE UNITS 1 AND 2, TURKEY POINT UNITS 3 AND 4, SEABROOK STATION, DUANE ARNOLD ENERGY CENTER, AND POINT BEACH UNITS 1 AND 2 INDEPENDENT SPENT FUEL STORAGE INSTALLATIONS

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ADAMS Accession Number: ML21090A241

***via email**

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