John T. Burnett
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February 28, 2025

VIA ELECTRONIC FILING
Adam Teitzman, Commission Clerk
Division of Commission Clerk and Administrative Services
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

Re: Docket No. 20250011-EI
Petition by Florida Power & Light Company for Base Rate Increase

Dear Mr. Teitzman:

Attached for filing on behalf of Florida Power & Light Company ("FPL") in the above docket are the direct testimony and exhibits of FPL witness Dan DeBoer.

Please let me know if you have any questions regarding this submission.

Sincerely,

s/ John T. Burnett
John T. Burnett
Vice President & General Counsel
Florida Power & Light Company

(Document 8 of 30)

CERTIFICATE OF SERVICE
Docket 20250011-EI

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished by electronic service this 28th day of February 2025 to the following:

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Attorneys for the Citizens of the State of Florida

By: *s/ John T. Burnett*
John T. Burnett

BEFORE THE

FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 20250011-EI

FLORIDA POWER & LIGHT COMPANY

DIRECT TESTIMONY OF DAN DEBOER

Filed: February 28, 2025

TABLE OF CONTENTS

I. INTRODUCTION

Q. Please state your name and business address.

A. My name is Dan DeBoer. My business address is 15430 Endeavor Drive, Jupiter, Florida 33478.

Q. By whom are you employed and what is your position?

A. I am employed by Florida Power & Light Company ("FPL" or the "Company") as Vice President, Nuclear.

Q. Please describe your duties and responsibilities in that position.

A. I am responsible for the Nuclear fleet functional areas of engineering, training, performance improvement, regulatory affairs, security, quality assurance, online work management, and outages, which consists of major maintenance and modifications.

Q. Please describe your educational background and professional experience.

A. I hold a Bachelor of Science Degree in Chemical Engineering from the University of Notre Dame. I also earned a Senior Reactor Operator license from the Nuclear Regulatory Commission ("NRC") at the former Crystal River Nuclear Plant in Florida, and a Senior Reactor Operator Management Certification at the Browns Ferry Nuclear Station in Alabama. In addition, I completed the Institute of Nuclear Power Operation Senior Nuclear Plant Management Course.

I have spent over 35 years in the nuclear industry, beginning in the United States Navy Nuclear Submarine Force where I served as an officer for more than 24 years on active and reserve duty, retiring as a Commander. During this 35-year period, I

have served in various management positions at six nuclear stations in the United States over the last 30 years and have been with FPL since 2010. While employed with FPL, I have held numerous positions of increasing responsibility including Senior Director of Fleet Outages for NextEra Energy at Juno Beach, Operations Director at St. Lucie, Plant General Manager at NextEra Energy's Point Beach Nuclear Plant, and Site Vice President at St. Lucie. In 2022, I assumed my current position as the Vice President, Nuclear, where I am responsible for oversight and support and of both of FPL's nuclear sites.

Q. Are you sponsoring any exhibits in this case?

A. Yes. I am sponsoring the following exhibits:

- Exhibit DD-1 List of MFRs Sponsored or Co-sponsored by Dan DeBoer
- Exhibit DD-2 NRC Performance Indicators
- Exhibit DD-3 NRC Inspection Findings
- Exhibit DD-4 NRC Regulatory Status
- Exhibit DD-5 Nuclear Performance Metrics

Q. Are you sponsoring or co-sponsoring any Minimum Filing Requirements in this case?

A. Yes. Exhibit DD-1 lists the minimum filing requirements that I am sponsoring or co-sponsoring.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to: (1) provide an overview of FPL's nuclear operations; (2) describe how FPL's nuclear fleet performance has yielded significant benefits to FPL customers; (3) discuss FPL's changes made to improve performance

since the 2021 rate case; and (4) discuss the O&M and capital expenditures for the 2026 Projected Test Year and the 2027 Projected Test Year for FPL's nuclear operations.

Q. Please summarize your testimony.

A. FPL's nuclear power plants are a source of safe, reliable, clean, and cost-effective base-load energy for FPL's customers. These plants are a key component of FPL's energy mix that provide significant value to FPL's customers in terms of fuel savings, reliability, enhanced system fuel diversity, and minimization of greenhouse gas ("GHG") emissions. My testimony summarizes FPL's efforts to help ensure the continued safe, reliable, clean, and cost-effective operation of FPL's nuclear power plants to meet the significant operational and regulatory requirements for these plants for the benefit of our customers.

II. BACKGROUND ON FPL'S NUCLEAR ENERGY OPERATIONS

Q. Please summarize the benefits to FPL's customers of FPL's nuclear generation.

A. FPL's long and successful involvement with nuclear power started in the mid-1960s with the first approved facility for nuclear generation in the South. FPL's nuclear generating assets provide essential base-load capacity in and closely around FPL's South Florida load pocket where approximately 37% of our customers are located. The nuclear fleet is critical in maintaining electric system reliability, achieving fuel cost savings, and enhancing system fuel diversity. Nuclear energy has the highest capacity factor of any other energy source as reported by the U.S. Energy Information Administration. FPL's Unit Capacity Factor for 2024 was 89.2, which included three

scheduled refueling outages. FPL's nuclear generating assets are a critical component in achieving reductions in FPL's system emissions of GHGs, sulfur dioxide, nitrogen oxides, and particulate matter. FPL's four operating units avoid more than 12 million tons of carbon dioxide emissions each year, which is equivalent to removing more than 3 million cars from the road annually.

Q. Please describe the reliability benefits FPL's nuclear units provide.

A. FPL's nuclear units function as base-load generators, which means they operate continuously to supply power to the grid. In addition to providing safe, clean, and reliable power to Floridians, the nuclear fleet also provides greater flexibility in responding to spikes in demand on FPL's system. The constant supply of base-load power from the nuclear units allows FPL to quickly and efficiently dispatch its other generating units to meet demand during system peaks. This flexibility is especially important when system peaks are caused by unanticipated events, such as extreme weather.

Q. Please describe the fuel cost savings nuclear generation provides to FPL's customers.

A. FPL's nuclear generation has resulted in over $3.4 billion in fuel savings versus natural gas/fuel oil cost equivalent from January 2021 through 2024. These cost savings are passed directly to FPL customers through lower fuel charges.

Q. Describe the ownership structure for FPL's nuclear units.

A. FPL owns 100 percent of Turkey Point Units 3 and 4 and St. Lucie Unit 1. FPL owns 85.10449 percent of St. Lucie Unit 2. The balance of St. Lucie Unit 2 is owned by

the Florida Municipal Power Agency, which owns 8.806 percent, and the Orlando Utilities Commission, which owns 6.08951 percent.

Q. How long are FPL's Turkey Point and St. Lucie nuclear units currently licensed to operate?

A. On September 17, 2024, Turkey Point received subsequent license renewal from the NRC for 20 years of additional operating life for Units 3 and 4 through 2052 and 2053, respectively.

In October 2003, FPL received renewed operating licenses from the NRC for St. Lucie Units 1 and 2, which provided FPL the authority to operate those units for 20 years past the original license expiration date. Accordingly, the current license expiration dates for FPL's St. Lucie Units 1 and 2 are 2036 and 2043, respectively.

Q. Does FPL plan to renew the operating licenses for St. Lucie Units 1 and 2?

A. Yes. In August 2021, FPL filed a request with the NRC for SLRs for St. Lucie Units 1 and 2. When approved by the NRC, operating licenses for St. Lucie Units 1 and 2 will be extended for an additional 20 years, until 2056 and 2063, respectively. FPL expects the NRC to approve the SLRs for St. Lucie Units 1 and 2.

III. FPL'S NUCLEAR PLANT PERFORMANCE

Q. What metrics are used by FPL to measure the performance of FPL's nuclear plants?

A. FPL uses metrics to measure the performance of its nuclear plants, including nuclear safety and regulatory performance (as measured by the NRC).

Q. What does FPL consider the most important metric in measuring the performance of its nuclear fleet?

A. Nuclear safety is by far the most important aspect of owning and operating FPL's nuclear fleet. The nuclear safety aspects of FPL's nuclear operations are comprehensively regulated by the NRC, the Department of Homeland Security (the Federal Emergency Management Agency), the Department of Energy (Office of Nuclear Energy), and the Environmental Protection Agency. FPL has a strong nuclear safety program that includes:

- Robust plant design and construction;
- Highly experienced and well-trained personnel;
- Stringent plant security;
- Comprehensive safety planning; and
- A commitment to meet or exceed all federal, state, and local regulations.

Q. How does the NRC measure FPL's nuclear safety record?

A. The NRC maintains and tracks a set of performance indicators as objective measures of nuclear safety performance for commercial U.S. nuclear plants. These indicators monitor the performance of initiating events, safety systems, fission product barrier integrity, emergency preparedness, occupational and public radiation safety, and physical protection (security). As shown in Exhibit DD-2, all four of FPL's nuclear units are in the "green" band of all NRC Performance Indicators in 2024, indicating the best or highest rating for these indicators of nuclear safety performance. As shown in Exhibit DD-3, the NRC inspection findings for 2024 were also "green."

This indicates that the NRC inspection findings were classified as very low safety significance and indicative of acceptable nuclear safety performance.

Q. How do FPL's nuclear plants compare to the remainder of the industry in terms of the NRC performance system?

A. Based on the NRC's Performance Indicators, FPL's plants are consistent with the remainder of the U.S. nuclear industry. The NRC uses its Performance Indicators and inspection activities to determine the appropriate level of agency oversight and response, including the need for supplemental inspections, senior management meetings, and regulatory actions.

All the U.S. nuclear plants are listed in the NRC's Action Matrix, which categorizes each plant into one of five regulatory status columns based on overall regulatory performance. The five regulatory columns in order of normal baseline inspection to increasingly higher levels of regulatory oversight are: (1) licensee response; (2) regulatory response; (3) degraded cornerstone; (4) multiple/repetitive degraded cornerstone; and (5) unacceptable performance.

Approximately 7 percent of the 95 operational nuclear units in the United States are characterized by the NRC as having a level of plant performance requiring increased NRC regulatory oversight (in columns 2). Of those plants, the "regulatory response" category includes seven plants having at least one regulatory finding of low to moderate safety significance in the past 12 months.

As illustrated by Exhibit DD-4, none of FPL's units falls into categories requiring increased regulatory oversight as of December 31, 2024. Because of FPL's regulatory performance in 2023, FPL's nuclear units are in the "licensee response" column of the NRC's Action Matrix, which results in the normal baseline inspection program. In summary, FPL is proud of its safety and regulatory performance; however, this performance cannot be sustained without continued investment in our nuclear plants and our people.

Q. Please describe the operational performance of FPL's nuclear fleet.

A. Since 2022, FPL has taken steps to maintain the overall strong performance of its nuclear operations, which has resulted in a low cost per megawatt hour ("MWh") and consistently high generation. As illustrated by the Nuclear Performance Metrics in Exhibit DD-5, these metrics show a consistently strong performance from 2021 through 2024, resulting in increased low-cost output and improved reliability. As with the NRC's metrics that I discussed earlier, these improvements cannot be sustained without continued investment in our nuclear plants.

Q. What initiatives has FPL implemented since 2022 to achieve this consistent strong performance for the nuclear fleet?

A. FPL's top priority remains providing safe and reliable generation. FPL has maintained the safety and reliability of its nuclear fleet by following its Nuclear Excellence Model ("NEM"), which is the cornerstone of its commitment to achieve and sustain excellence in all aspects of its nuclear operations.

In support of its NEM, FPL has continued to implement its Self-Improving Culture/Learning Organization philosophy through the Continuous Improvement Processes ("CIP"), which engages employees to develop and implement solutions to operate more efficiently without compromising safety. This effort has resulted in the implementation of several innovative and dynamic ideas that benefit the customer.

Q. What are some examples of CIP initiatives that have been or will be implemented to operate more efficiently without compromising safety?

A. In support of improving efficiency and sharing of information, including benchmarking and fleet learnings, FPL has implemented a centralized operating model; we call this One Fleet, One Team. This model allows standardized approaches to the management of work, engineering functions, and performance improvement initiatives. Additionally, CIP initiatives continue, which include developing the infrastructure to increase work efficiency through technology, such as automation, use of artificial intelligence ("AI"), robotics, and drones. The development and adoption of technology has automated work processes, improved training programs, developed workforce analytics, implemented dynamic scheduling tools, enhanced equipment reliability trending, and reduced outage cost and duration.

Q. How does the FPL Nuclear Fleet use advanced technology to increase work efficiency?

A. FPL is using cost-saving robotics and drones to reduce manhours spent on routine work and lower industrial and radiological safety risks. In one example, FPL uses an agile mobile robot named Spot® to collect information, monitor conditions, and conduct inspections at the plants. This robot is used to monitor and increase

equipment reliability through real-time online monitoring of equipment performance. Spot® can enter high radiation areas and perform inspections, limiting exposure to FPL personnel since it can stay in these areas much longer than a team member. This technology has many capabilities that are useful in the nuclear environment such as reading gauges and checking the status of fire protection equipment. The robot can go up and down stairs easily, fit into tight spaces, self-correct, and stand up without human interference. FPL also uses drones to increase work efficiency by performing data collection on canal temperatures, monitoring wildlife, taking surveys of wetlands, and detecting algae blooms. FPL also uses remotely operated drones for many of its inspections; some examples include inspections of external structures, such as the outside of the containment building. Additionally, drones are also taken underwater for internal condenser inspections.

Q. How does the FPL Nuclear Fleet use advanced technology to increase equipment reliability?

A. Having a clear understanding of how equipment is performing is a fundamental factor in our drive to continuously improve equipment reliability. Our Center of Work Excellence ("CWE") team is implementing a comprehensive monitoring and diagnostic software program to provide on-demand, easily accessible modeling. The innovative software helps our fleet reduce more routine work through improved detection of equipment performance and predict the useful-life and time-to-failure of equipment, which helps identify the scope and frequency of maintenance through value-based maintenance and provides advanced predictive analytics. Further, instead of spending time gathering data to create a report, advanced data analytics

software is used to pull the needed data into one easy to read dashboard enabling personnel to spend more time analyzing trends instead of gathering data. The new program directly supports the safe, reliable, and event-free operation of our fleet, helping FPL identify and mitigate risk in support of reliability.

Q. Can you provide some examples of how innovation and technology is utilized to increase work efficiency?

A. Yes. The FPL Nuclear fleet uses AI models and other technology in a variety of applications. Specific examples include incorporating new technology into our equipment review and monitoring systems to evaluate preventative maintenance items on systems from a value-based perspective. This ensures that the resources deployed on preventative activities are being used in the most efficient manner. FPL has also built a generative AI platform that is compliant with federal requirements on the export of nuclear technology. This platform has allowed for the utilization of commercially available, best-in-class generative AI to be used in review and evaluation of nuclear documents to support efficiency and accuracy. FPL is currently developing a generative AI model that can access the nuclear work planning and scheduling systems to increase the efficiency and accuracy of how work is planned and scheduled at the nuclear facilities.

The FPL Nuclear fleet is changing how we plan, schedule, and execute work activities through the use of digital work packages and computer-based procedures to streamline and automate work processes. Digital work packages automate work assignments and integrate with planning and scheduling. Personnel are auto-assigned

work assignments based on expertise and availability. There is also a simplified workflow to generate work order packages and add materials from previous work orders that include cost information. Computer-based procedures digitized approximately 2,000 existing hard-copy procedures that are dynamic, less prone to errors, and automate the close-out process.

The CWE is also changing how we train for work activities. CWE group developed a library of videos for training FPL employees before performing specific tasks. FPL has implemented new virtual reality training programs that enable more efficient execution of work activities while reducing risk. For example, the crane simulator enables on-demand training without taking a crane out of service and affords trainees valuable time behind the controls to practice a variety of scenarios. Additionally, a new firearm simulator creates a more realistic experience for the on-site security officers, allowing trainers to modify the scenario mid-session and easily create new scenarios. These simulators help security focus on the fundamentals, such as grip, stance, breathing, and situational awareness, during each training session. FPL has created benefits utilizing CIP to operate more efficiently and create value for customers while maintaining high standards of quality and safety.

Q. Please describe the personnel safety performance of FPL's nuclear fleet.

A. FPL measures its nuclear fleet personnel safety performance using the total industry safety accident ("TISA") rate. FPL currently has the best possible rating for TISA that can be achieved. The TISA rate measures the injury rate for all employees and contractors that work at our nuclear sites, and it is based on the total number of

injuries per 200,000 man-hours worked over an 18-month period. The injuries in the TISA rate are industrial in nature and not radiological. The TISA rate includes injuries that would involve radiological consequences, and there have been none at FPL's sites. FPL is committed to conducting its nuclear operations in a safe and responsible manner that avoids injuries and promotes the physical safety and well-being of its employees.

IV. CAPITAL EXPENDITURES FOR FPL'S NUCLEAR BUSINESS UNIT

Q. Please summarize the principal drivers of capital expenditures for FPL's Nuclear Business Unit.

A. There are two principal drivers of capital expenditures in the Nuclear Business Unit: (1) expenditures to meet regulatory commitments and (2) expenditures to sustain long-term operations while addressing equipment lifespan and management. To accomplish these goals, FPL invests in equipment to enhance nuclear safety and improve equipment reliability. These investments allow FPL to maximize fuel savings, enhance system fuel diversity, and provide for the safe and reliable operation of its nuclear units through their renewed license terms for the benefit of our customers.

FPL plans to implement projects to meet NRC regulatory requirements including commitments associated with the SLR for Turkey Point. The NRC reinstated the SLR for Turkey Point in 2024, securing low-cost energy for FPL's customers for an additional 20 years. As a requirement of receiving the operating license extensions,

FPL was required to make regulatory commitments to perform additional inspections and modifications requiring capital expenditures.

FPL continues to implement long-term equipment reliability projects that support the safe and reliable operations of St. Lucie and Turkey Point. Equipment reliability is essential for safe and cost-effective operation of a nuclear power plant and for equipment management supporting power plant life extension. The primary components addressed in these projects consist of replacement and refurbishment of pumps, motors, valves, breakers, and turbines. FPL has planned specific equipment reliability projects to address industry operating experience, manage degradation, and optimize how regularly scheduled equipment reliability scope is performed.

Q. Please list the specific equipment reliability projects FPL has planned through 2027.

A. FPL plans to implement numerous equipment reliability projects over the next several years. The most significant of these projects are:

1. Turkey Point control system upgrades and replacements; multiyear project, next phase of implementation will be complete by 2028.
2. St. Lucie and Turkey Point transition to 24-month Nuclear Fuel designs and refueling cycles; multiyear project implementation, completion by 2027.
3. Turkey Point Reactor Coolant Pump ("RCP") upgrade project; completion by 2027
4. St. Lucie Integrated Reactor Head Assembly; completion by 2027.

5. St. Lucie Condenser Replacement; multiyear project beginning in 2026 with all implementations complete by 2031.

Q. Please describe the Turkey Point control system upgrade and replacement project and explain why it is necessary.

A. The Turkey Point control system upgrade and replacement project is similar to many capital projects implemented in the past to ensure reliable operations are maintained through the life of the plant. The current equipment is not likely to last through the SLR term. The analog spare parts are becoming obsolete in the industry, resulting in increased maintenance cost and loss of vendor support to replace the obsolete components when necessary. Replacing and upgrading the control systems will increase reliability, reduce system maintenance, and reduce the number of system surveillances required to be performed. This will also result in reductions in O&M costs for the life of the plant, as well as reduce operational risk. The Turkey Point control system upgrade and replacement is forecasted to incur costs of $12 million in 2026 and $12 million in 2027 and will be done in phases during refueling outages.

Q. Please describe the transition from 18 to 24 month refueling cycles and explain why it is necessary.

A. Currently, Turkey Point and St. Lucie use fuel designs that are based on an 18-month operating cycle, which is followed by a refueling outage to reload the reactor. During scheduled refueling outages, work is performed that can only be conducted when the plant is shut down, and this includes several inspections and testing. Primary benefits of transitioning from 18 to 24-month cycles include reduced downtime, increased availability, lower maintenance costs, operational efficiency, streamlined operations,

improved workforce management, and optimized fuel use. The transition is expected to produce benefits including cost savings associated with outage preparation, execution and recovery, and increased power generation without frequent outages. Ensuring compliance with safety regulations remains a priority, and these longer cycles will meet stringent safety standards.

Fewer refueling outages mean the plants spend more time generating electricity, thereby increasing overall availability and capacity factor. Decreased frequency of refueling outages reduces the costs associated with shutdowns, maintenance, and inspections. Longer cycles allow for more efficient planning and execution of maintenance and operational activities, potentially improving overall plant efficiency. With fewer refueling outages, the workforce can be managed more efficiently, reducing the need for additional temporary staff during outages. Additionally, longer cycles can lead to better use of nuclear fuel, potentially reducing the amount of fuel needed and associated costs. More efficient fuel use can also result in less spent fuel and nuclear waste, which has environmental and economic benefits.

The transition from 18- to 24-month refueling cycles will change the design of the nuclear fuel. The transition will begin with the Spring 2025 outage for Turkey Point Unit 4 and Spring 2026 outage for St. Lucie Unit 2. This will continue forward with Turkey Point Unit 3 in 2026 and St. Lucie Unit 1 in 2027. When a hurricane occurs during a planned refueling outage, the conditions require that refueling outage work be stopped and placed in a storm-resistant condition. Personnel not essential to the

direct operation of the nuclear plant are evacuated, and all equipment staged for work be demobilized. By placing all refueling outages in the spring, we can ensure the nuclear plants are fully assembled and fueled to maximum generation availability during Florida's hurricane season.

Q. What is the RCP upgrade project and why is it necessary?

A. Nuclear power plants rely on cooling systems to ensure safe, continuous operation of the nuclear reactor. The purpose of the RCP is to provide forced primary coolant flow to remove and transfer the amount of heat generated in the reactor core. The nuclear industry has seen a rise in the effects of an aging RCP fleet, including component fatigue cracking issues, seal issues, increased vibration, and bearing failure. While not a safety issue, potential RCP failures could cause a plant shutdown and potentially an extended shutdown if replacement rotating elements are not available. Turkey Point will refurbish or replace the original RCPs to ensure safe and reliable operation into the renewed license term. Turkey Point has six total RCPs, and five of six have been completed. The sixth pump will be completed in 2026.

Q. Why is the St. Lucie integrated reactor head assembly necessary?

A. The head assembly is a mechanical assembly of various components required to provide cooling and radiation shielding of the control rod drive mechanism and the duct work for the air-cooling system. All these components are assembled with the reactor vessel head into a single assembly that can be lifted in one lift and moved to the storage stand as a single structure during refueling outages. The integrated head assembly provides the ability to disconnect the head area cables, the head vent piping, and other instrumentation lines in one step. The integrated reactor head assembly at

St. Lucie will simplify the disassembly/reassembly of the reactor head to reduce outage critical path time by nearly two days and reduce outage costs. It will also address reliability and life cycle management issues in support of plant operations.

Q. Please describe the St. Lucie condenser replacement project and explain why it is necessary.

A. The St. Lucie condenser replacement project is similar to many large component capital projects implemented in the past to ensure reliable operations are maintained through the life of the plants. The current equipment will not last through the SLR term. The main condenser is the primary cooling component for the steam plant. It is constructed from steel and houses approximately 48,000 cooling tubes per unit. These tubes allow seawater which flows inside of them to cool and condense the steam after it has passed through the turbine. Over time, the materials degrade and must be replaced and rebuilt, which includes a structural rebuild and replacement of all tubes. This type of project must be done for many power plants, including St. Lucie. This rebuild will also support equipment reliability to ensure the high purity steam plant water is not contaminated with sea water, which can require down powers and shutdowns for recovery. In total, FPL has forecast nuclear capital expenditures of $3 million for 2026 and $29 million for 2027.

Q. Are FPL's projected nuclear capital expenditures from 2026 through 2027 necessary and reasonable?

A. Yes. FPL's 2026-2027 capital expenditures include costs to implement projects to meet NRC commitments and to invest in equipment to maintain nuclear safety and improve equipment reliability for long-term operation of the plants. This investment

will be necessary to ensure FPL's nuclear facilities maximize fuel savings, enhance system fuel diversity, improve efficiency, and allow for the safe and reliable operation of its nuclear units through their renewed license terms to the benefit of our customers. In total, FPL has forecast nuclear capital expenditures of $400 million for 2026 and $400 million for 2027.

Q. Do the forecasts for 2026 Projected Test Year and 2027 Projected Test Year O&M costs for the Nuclear Business Unit exceed the Commission's benchmark using 2023 as the benchmark year?

A. No. FPL's 2026 Projected Test Year and 2027 Projected Test Year O&M for Nuclear Production forecasts do not exceed the Commission's benchmark, using adjusted 2023 as the benchmark year. For the 2026 Projected Test Year, Nuclear's O&M funds request is approximately $59 million below the benchmark. For the 2027 Projected Test Year, Nuclear's O&M request is approximately $55 million below the benchmark.

Q. What efforts has the Nuclear Business Unit implemented to reduce O&M costs?

A. FPL implemented several CIP initiatives that have resulted in benefits to the customer. As illustrated in Exhibit DD-5 page 1, FPL's O&M cost per MWh has decreased substantially since the last rate case. In fact, as shown in Exhibit DD-5 page 2, FPL is significantly better than the top quartile for three years average operating cost calculated with nominal dollars from 2021 to 2023, which is one of the lowest nuclear O&M costs in the industry. Over the same period, total MWhs produced has increased and refueling outage durations have improved both in total time and predictability. FPL could not achieve reduction in O&M costs and maintain

a high level of safety and reliability for customers without the implementation of these CIP initiatives.

Q. Are FPL's projected nuclear O&M expenditures from 2026 through 2027 necessary and reasonable?

A. Yes. FPL's 2026-2027 O&M expenditures include costs necessary to ensure FPL's nuclear facilities maximize fuel savings, enhance system fuel diversity, and allow for the safe and reliable operation of its nuclear units through their renewed license terms for the benefit of our customers.

Q. Does this conclude your direct testimony?

A. Yes.

Florida Power & Light Company

MFRs SPONSORED OR CO-SPONSORED BY DAN DEBOER

MFR	Period	Title
SOLE SPONSOR:		
F-04	2024 Historic Year 2027 Projected Test Year	NRC SAFETY CITATIONS
CO-SPONSOR:		
B-16	2025 Prior Year 2026 Projected Test Year 2027 Projected Test Year	NUCLEAR FUEL BALANCES
C-08	2025 Prior Year 2026 Projected Test Year	DETAIL OF CHANGES IN EXPENSES
C-15	2024 Historic Year 2026 Projected Test Year 2027 Projected Test Year	INDUSTRY ASSOCIATION DUES
C-34	2024 Historic Year 2027 Projected Test Year	STATISTICAL INFORMATION
C-43	2024 Historic Year 2025 Prior Year 2026 Projected Test Year 2027 Projected Test Year	SECURITY COSTS
F-08	2026 Projected Test Year 2027 Projected Test Year	ASSUMPTIONS

NRC Performance Indicators for St. Lucie and Turkey Point

Florida Power & Light Company

As of December 31, 2024

	TURKEY POINT UNIT 3	TURKEY POINT UNIT 4	ST. LUCIE UNIT 1	ST. LUCIE UNIT 2
INITIATING EVENTS CORNERSTONE				
Unplanned Reactor Scrams per 7,000 Critical Hours (Automatic and Manual)	GREEN	GREEN	GREEN	GREEN
Unplanned Power Reactor Changes per 7,000 Critical Hours	GREEN	GREEN	GREEN	GREEN
Unplanned Scrams with Complications	GREEN	GREEN	GREEN	GREEN
MITIGATING SYSTEMS CORNERSTONE				
Mitigating System Performance	GREEN	GREEN	GREEN	GREEN
Safety System Functional Failures	GREEN	GREEN	GREEN	GREEN
BARRIERS CORNERSTONE				
RCS Activity	GREEN	GREEN	GREEN	GREEN
RCS Leakage	GREEN	GREEN	GREEN	GREEN
EMERGENCY PREPAREDNESS CORNERSTONE				
Emergency Response Organization (ERO) Drill/Exercise Performance	GREEN	GREEN	GREEN	GREEN
ERO Drill Participation	GREEN	GREEN	GREEN	GREEN
Alert and Notification System Performance	GREEN	GREEN	GREEN	GREEN
OCCUPATIONAL RADIATION SAFETY CORNERSTONE				
Occupational Exposure Control Effectiveness	GREEN	GREEN	GREEN	GREEN
PUBLIC RADIATION SAFETY CORNERSTONE				
RETS/ODCM Radiological Effluent Occurrence	GREEN	GREEN	GREEN	GREEN
PHYSICAL PROTECTION CORNERSTONE				
Protected Area Security Equipment Performance Index	GREEN	GREEN	GREEN	GREEN

» Acceptable » Performance Licensee » Response Band	GREEN	» Acceptable Performance » Increased Regulatory » Response Band	WHITE
» Acceptable Performance » Required Regulatory » Response Band	YELLOW	» Unacceptable Performance » Plants Not Normally Permitted » To Operate Within This Band	RED

BEST ← → WORST

NRC Inspection Findings for St. Lucie and Turkey Point

Florida Power & Light Company

As of December 31, 2024

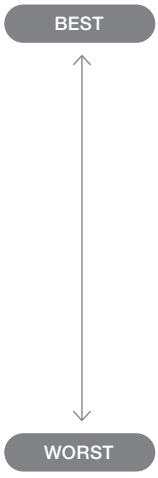
	TURKEY POINT UNIT 3	TURKEY POINT UNIT 4	ST. LUCIE UNIT 1	ST. LUCIE UNIT 2
Initiating Events	GREEN	GREEN	GREEN	GREEN
Mitigating Systems	GREEN	GREEN	GREEN	GREEN
Barriers	GREEN	GREEN	GREEN	GREEN
Emergency Preparedness	GREEN	GREEN	GREEN	GREEN
Occupational Radiation Safety	GREEN	GREEN	GREEN	GREEN
Public Radiation Safety	GREEN	GREEN	GREEN	GREEN
Physical Protection	GREEN	GREEN	GREEN	GREEN

NRC Regulatory Status for St. Lucie and Turkey Point

Florida Power & Light Company

As of December 31, 2024

TURKEY POINT UNIT 3	TURKEY POINT UNIT 4	ST. LUCIE UNIT 1	ST. LUCIE UNIT 2
Column 1 Licensee Response	Column 1 Licensee Response	Column 1 Licensee Response	Column 1 Licensee Response



Column 1
Licensee Response

Column 2
Regulatory Response

Column 3
Degraded Cornerstone

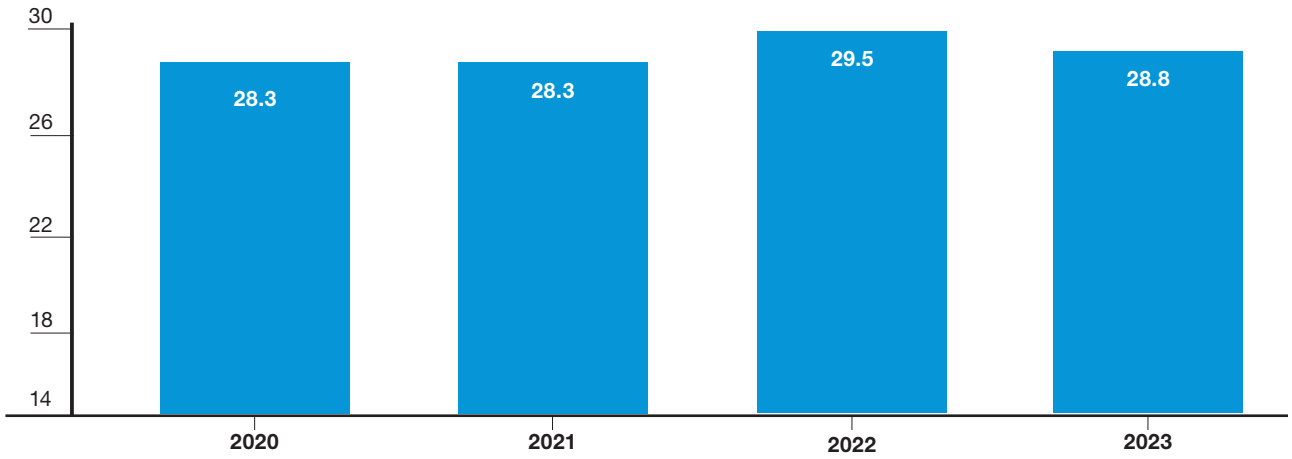
Column 4
Multiple/Repetitive Degraded Cornerstone

Column 5
Unacceptable Performance

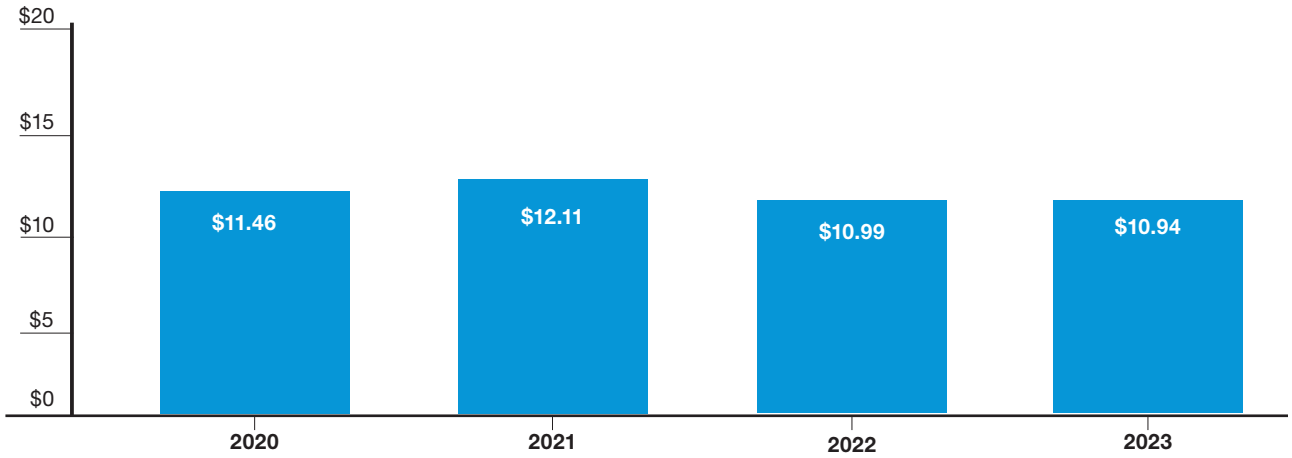
(Source: NRC Action Matrix Summary)

FPL Nuclear Performance Indicators

Generation (MM MWh)

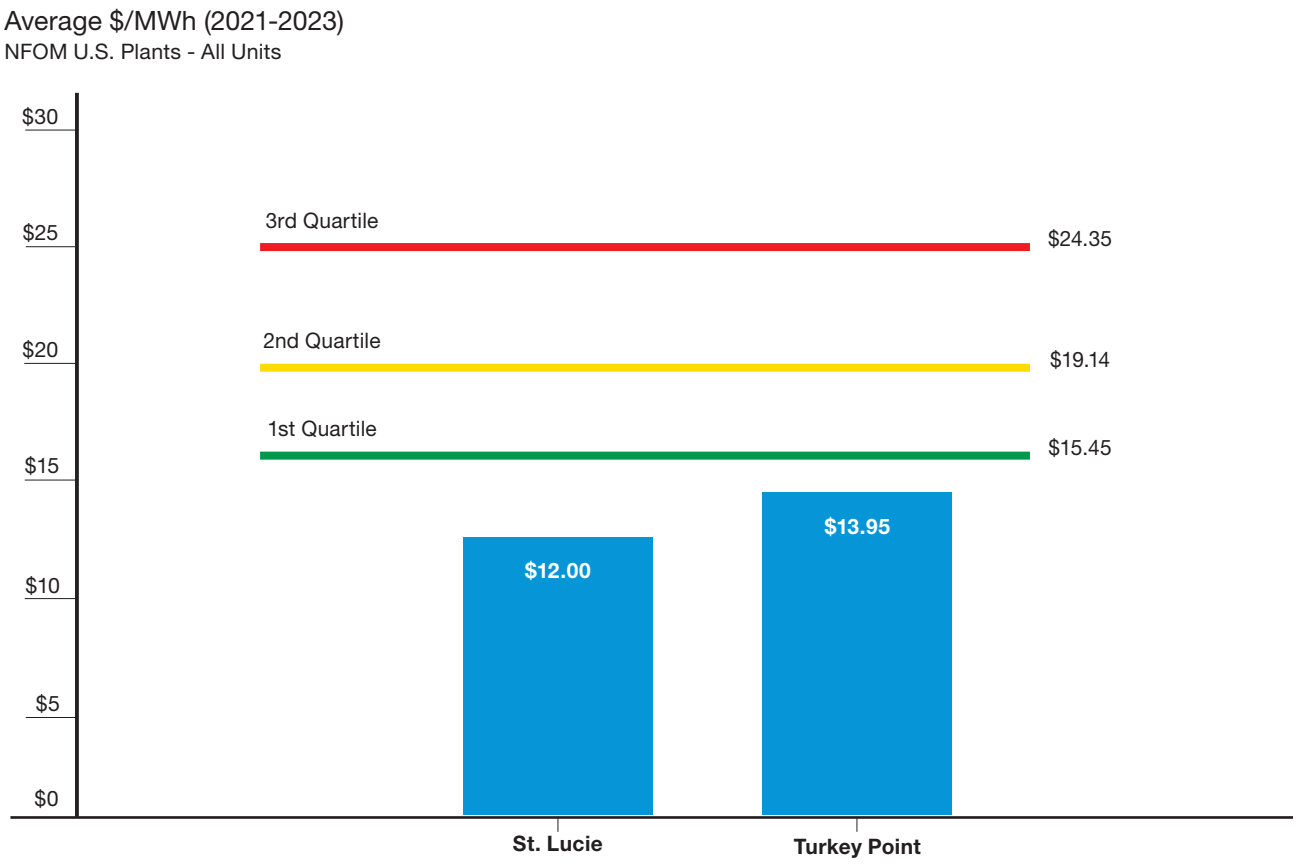


Cost per MWh



FERC Form 1: Non-Fuel O&M less Fuel Expenses; Nuclear Generation (MWh)

FPL Nuclear Performance Indicators



EUCG Book of Benchmarks: 2021-2023 Average Operating Cost per MWh