

FILED 3/4/2021 DOCUMENT NO. 02585-2021 FPSC - COMMISSION CLERK

William P. Cox Senior Attorney Florida Power & Light Company 700 Universe Boulevard Juno Beach, FL 33408-0420 (561) 304-5662 (561) 691-7135 (Facsimile)

March 4, 2021

#### STAFF'S FIRST DATA REQUEST

#### -VIA ELECTRONIC FILING-

Adam Teitzman Commission Clerk Florida Public Service Commission 2540 Shumard Oak Boulevard Tallahassee, FL 32399-0850

> Re: Docket No. 20200257-EI Florida Power & Light Company's 2020 Nuclear Decommissioning Study

Dear Mr. Teitzman:

Please find enclosed for electronic filing Florida Power & Light Company's responses to Staff's First Data Request (Nos. 1-87).

Please feel free to contact me at 561-304-5662 if you have any questions regarding this transmittal.

Sincerely,

/<u>s/ William P. Cox</u> William P. Cox Senior Attorney Florida Bar No. 0093531

Enclosure

cc: Suzanne Brownless, Special Counsel

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 1 Page 1 of 1

<u>QUESTION</u>: Nuclear Decommissioning Trust Fund

Please refer to Florida Power & Light's (FPL) 2020 Nuclear Decommissioning Study (2020 Study), Section 4, Pages 1-3. Please provide a schedule detailing the nuclear decommissioning trust fund (NDT) performance (calculated net of administrative costs on an after-tax, time weighted rate of return basis as of 12/31/2020) relative to the CPI, as measured by the U.S. Bureau of Labor Statistics, for the past one year, two years, three years, five years, ten years, and since inception.<sup>1</sup>

#### **RESPONSE**:

# Total Nuclear Decommissioning Trust Fund Time Weighted Returns after tax, after fees for the periods ending 12/31/20

NDT	<b>CPI</b> <sup>(*)</sup>
11.9%	1.2%
15.1%	1.7%
8.8%	1.8%
9.2%	1.9%
7.7%	1.7%
7.1%	2.6%
	11.9% 15.1% 8.8% 9.2% 7.7%

(\*) CPI- All Urban Consumers (CPI-U) Unadjusted

<sup>&</sup>lt;sup>1</sup>If actual fund earnings data is not yet known through December 31, 2020, please respond using the actual/estimated (estimated November and December 2020) data contained in the 2020 Study.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 2 Page 1 of 1

## <u>QUESTION</u>: <u>Nuclear Decommissioning Trust Fund</u>

Should a minimum fund earnings rate be imposed by the Commission? If the response is yes, please explain how a minimum fund earnings rate should be determined.

## **<u>RESPONSE</u>**:

Economic and financial market conditions can vary widely over time and are difficult if not impossible to predict. Therefore, a fixed minimum fund earnings rate should not be imposed for the nuclear decommissioning funds. It is reasonable that the Company be accountable for taking the appropriate steps intended to preserve the principal value as well as the purchasing power of contributions collected from customers for decommissioning. In addition, in Docket No. 870098-EI, Order No. 21928 and as reaffirmed in Order No. PSC-95-1531-FOF-EI, and also Order No. PSC-02-0055-PAA-EI, the Commission stated that:

"Rather than attempting to set a prospective minimum fund earnings rate which may or may not be reasonable under future economic conditions, we will require that the companies set aside funds sufficient to meet the Commission's best estimate of the decommissioning liability and require the companies to maintain the purchasing power as well as the principal amount of those contributions. The companies' investment performance will be evaluated along with all other decommissioning activities every five years. If it is found that the companies' investment earnings, net of taxes and all other administrative costs charged to the fund, did not meet or exceed the CPI average for the period, then we will consider ordering the utility to cover this shortfall with additional monies to keep the trust whole with respect to inflation. We, therefore, find a minimum fund earnings rate equivalent to the level of inflation over each five year review period would be appropriate."

The Company believes this is a reasonable approach, and it should remain in effect.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 3 Page 1 of 4

## <u>QUESTION</u>: <u>Nuclear Decommissioning Trust Fund</u>

Please explain FPL's investment strategy for its nuclear decommissioning trust. Please discuss in detail the objectives and guidelines governing the trust funds such as dollar/portfolio size limitations on issuers, and any other possible restrictions or constraints.

## RESPONSE:

.

FPL follows a disciplined and prudent investment strategy for the nuclear decommissioning trust ("NDT"). There are several aspects to this strategy:

**1. Asset Allocation:** FPL has established a conservative mix of assets to achieve longterm growth of principal coupled with an attempt to minimize downside volatility. Asset mix policy as of 12/31/20 was:

Asset Class	Target Allocation
Equity/Growth Assets	50%
Income Oriented Assets	50%

The FPL NDT asset allocation policy combines Equity/Growth Assets for long-term growth of principal coupled with Income Oriented Assets consisting of primarily investment-grade bonds. Alternative strategies are part of the equity/growth or income oriented allocations depending on the underlying strategy. Private equity strategies are included in the equity/growth allocation and private debt and other credit related strategies are included in the income oriented allocation. We use alternative strategies to enhance the overall risk-return profile of the NDT, improve the NDT's investment diversification and help protect against a rising interest rate environment as well as to reduce volatility through select exposure to investments not subject to the daily price fluctuations of the public markets.

Rebalancing the portfolio to target asset mix is accomplished periodically.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 3 Page 2 of 4

- 2. Investment Manager Guidelines: For the FPL NDT, each individual separate account manager has its own set of relevant guidelines depending on the strategy employed. For commingled funds, FPL carefully reviews the investment policy and guidelines of the commingled fund for prudence and fit with FPL's overall objectives.
  - a. Equity Manager Separate Accounts: First a specific mandate is determined (such as large-cap stocks, all-cap stocks, etc.), and FPL works with the manager to agree on a set of reasonable and prudent guidelines. Key guidelines are:
    - i. Holdings readily marketable and diversified by issue, industry and sector.
    - ii. NextEra Energy, Inc. securities are prohibited.
    - iii. Nuclear plant owners' securities are prohibited.
  - b. **Fixed Income Manager Separate Accounts**: The guidelines are somewhat dependent on the particular manager and strategy. Key restrictions are:
    - i. Maximum per issuer
    - ii. Maximum in sectors
    - iii. Minimum average quality
    - iv. Maximum in non-investment grade
    - v. Duration range

.

- vi. NextEra Energy, Inc. securities are prohibited.
- vii. Nuclear plant owners' securities are prohibited.

On a quarterly basis, each specific guideline and restriction is monitored for each separate account manager. A report is prepared by FPL's independent investment consultant for review by FPL staff.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 3 Page 3 of 4

Asset Class	% Target	FPL NDT	Type of Accounts	Type of Guidelines
	Allocation	Managers		
		S&P 500 Fund	Commingled	Those of the fund
		Market Completion Fund	Commingled	Those of the fund
Equity/Growth	50%	All-Cap Index	Separate Account	Individually determined
		Global Equity	Separate	Individually
		1 2	Account	determined
		Private Equity	Commingled	Those of the fund
		Diversified	Samarata	In dividually
			Separate	Individually determined
		Fixed Income	Account	determined
Income	50%	Convertible Arbitrage Strategy	Commingled	Those of the fund
Oriented	5070	Opportunistic	Commingled and	Those of the fund /
		Credit	Separate Account	Individually
		Strategies	-	determined
		Lending Strategies	Commingled	Those of the fund

3. Other potential risk areas that are monitored and carefully considered are:

.

- **a.** Liquidity: Approximately 87% of the FPL NDT is liquid within a few days. Longerterm alternative strategies have lower liquidity but higher expected return. The alternative strategies will be kept to a small portion of the NDT.
- **b.** Leverage: Some of the alternative strategies utilize leverage, ranging from 25% to 100%. Typical leverage is approximately 50%.
- c. Currency: Some of the managers may own a small amount of foreign securities.
- **d.** Valuation: Publicly traded equities are easy to value. Most bonds are as well, despite not having a public exchange. A few securities and some holdings of the alternative strategies may be more difficult to value. Valuation policies of these funds are monitored.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 3 Page 4 of 4

e. Business: FPL considers overall exposure to a particular investment management firm. This is managed by diversification among managers. The restriction on NextEra Energy Inc. and other nuclear owners is also a business and industry risk diversifier.

Overall, the FPL NDT has a carefully thought out investment strategy designed to have a high probability of meeting full funding of decommissioning expenses at the time of license expiration. The prudent investor standard has been applied in allocating the assets.

.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 4 Page 1 of 2

# <u>QUESTION</u>: <u>Nuclear Decommissioning Trust Fund</u>

Please provide a detailed breakdown of the trust fund portfolio by type of securities held, maturity composition (average maturity), credit rating of any fixed income investments, and other relevant categories.

## RESPONSE:

# A detailed breakdown of major asset categories for the FPL NDT is provided below.

#### FPL NDT Characteristics as of 9/30/20<sup>1</sup> <u>\$ in Millions</u>

AssetClass	Market Value	% of Total NDT	Weighted Avg. Market Capitalization	Weighted Median Market Capitalization	Price/ Earnings Ratio	Price/ Book Ratio	Dividend Yield
Equity/Growth – Public Equity	\$2,431	50%	\$375,313	\$125,960	25.9	3.6	1.7%

AssetClass	Market Value	% of Total NDT	Portfolio Company Enterprise Value	Style
Equity/Growth - Private Equity	\$109	2%	2% - Greater than \$10 B 1% - \$5 - \$10 B 2% - \$2 - \$5 B 8% - \$1 - \$2 B 56% - \$250 M - \$1 B 31% - Less Than \$250 M	49% - Buyout 7% - Growth 19% - Co-Investment 3% - Secondary 23% - Special Situations

Asset Class	Market Value	% of Total NDT	Avg. Maturity (Years)	Avg. Duration (Years)	Avg. Quality (S&P)	Yield to Maturity	Current Yield
Income Oriented – Diversified Fixed Income	\$1,876	39%	7.8	5.4	А	2.5%	3.7%

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 4 Page 2 of 2

Asset Class	Market Value	% of Total NDT	Avg. Maturity (Years)	Avg. Duration (Years)	Avg. Quality (S&P)	Current Yield	Leverage
Income Oriented – Convertible Arbitrage Strategy	\$50	1%	4.9	4.0	B+	1.5%	1.84:1

Asset Class	Market Value	% of Total NDT	Avg. Quality (S&P)	Current Yield
Income Oriented – Opportunistic Credit Strategies	\$189	4%	CCC	6.2%

				C	apital Struct	ure			
Asset Class	Market Value	% of Total NDT	Current Yield	% of Performing Loans	1 <sup>st</sup> Lien Term Loan	2 <sup>nd</sup> Lien Term Loan	Unitranche Term Loan	Mezzanine	Equity
Income Oriented – Lending Strategies	\$179	4%	8.6%	80%	90.4%	2.3%	1.7%	0.1%	5.6%

<sup>1</sup> Most recently available data

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 5 Page 1 of 1

## <u>QUESTION</u>: Nuclear Decommissioning Trust Fund

Please discuss the relationship FPL has with the trustee of its NDT funds from the inception of the trust through the present. Please include in this discussion an explanation of how the trustee was selected, whether or not the trustee is affiliated with the utility, and how the trustee or its role has changed over time.

## **<u>RESPONSE</u>**:

State Street Bank & Trust Company (SSBT) served as the trustee for the nuclear decommissioning trust (NDT) from 1988 through mid-2005. In 2004, FPL solicited competitive service proposals from several trustee banks, including SSBT. A rigorous analysis of the proposals and on-site meetings were conducted in the fall of 2004 with three of the leading NDT trustee candidates – The Bank of New York, Mellon Bank and SSBT. As a result of the review, SSBT was replaced effective July 1, 2005 with Mellon Bank. In 2008, Mellon Bank and The Bank of New York merged and the combined entity, BNY Mellon, continues to serve as trustee. BNY Mellon's role, as trustee, has remained consistent over the years with its core responsibilities being securities processing, safekeeping and reconciliation, income collection, corporate actions, global class actions, proxy processing, security valuation, fund servicing, and client accounting and reporting. BNY Mellon is an independent corporation and is not affiliated with FPL.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 6 Page 1 of 2

## <u>QUESTION</u>: Nuclear Decommissioning Trust Fund

Please discuss the relationship FPL has with the (fund) manager of its NDT funds from the inception of the trusts through the present. Please include in this discussion an explanation of how the fund manager was selected, whether or not the fund manager is affiliated with the utility, and how the fund manager or its role has changed over time.

## **<u>RESPONSE</u>**:

Prior to December of 1993, the nuclear decommissioning trust (NDT) funds were managed, since inception, internally by FPL as an extension of the portfolio management activities that had been conducted in-house for many years. In December 1993, external investment managers were retained. Capital Markets Advisors, Inc. (CMA) was retained for the fixed income management of the NDT funds. In December 1994, equities were introduced and Mellon Capital Management Corporation was hired to manage the equity component of the NDT funds. In December 1998, an additional fund manager, NISA Investment Advisors, LLC (NISA), was retained to manage a portion of the fixed income assets. In 2009, an initiative began to broaden and diversify the decommissioning trust funds and the list of firms retained to manage the assets of the NDT has changed and grown over the period. As of December 31, 2020, CMA and NISA no longer served as fund managers, and the FPL NDT assets were managed by the following firms:

Angelo, Gordon & Co., L.P. Amundi Pioneer Institutional Asset Management, Inc. Apollo Global Management, Inc. Avenue Europe International Management, LP Blackstone Group, Inc. **BNY Mellon Investment Management** Brightwood Capital Advisors, LLC Cohesive Capital Management, LP **Comvest Partners Cross Ocean Partners** Fidelity Institutional Asset Management, LLC HPS Investment Partners, LLC Intermediate Capital Group, Inc. Kayne Anderson Capital Advisors, L.P. KKR Asset Management, LLC Lazard Asset Management Macquarie Asset Management Marathon Asset Management MB Global Partners, LLC

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 6 Page 2 of 2

MidOcean Partners Morgan Stanley Investment Management New Mountain Capital Oak Hill Advisors Oak Hill Capital Palisade Capital Management, LLC Related Fund Management, LLC Rialto Capital Management, LLC State Street Global Advisors TCW Asset Management Welsh, Carson, Anderson & Stowe Westport Capital Partners LLC York Capital Management

Each of the fund managers are large, well-known firms in their respective fields and are selected pursuant to a thorough due diligence process. While the number of fund managers has changed over time, each manager's fundamental role has not changed – they are individually charged with prudently managing the assets entrusted to them. None of the firms are affiliated with FPL.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 7 Page 1 of 1

#### <u>QUESTION</u>: Nuclear Decommissioning Trust Fund

Please provide a schedule detailing the trustee fee (all costs as a percentage of average asset balance as of 12/31/2020) for FPL's pension fund, employee savings fund, and NDT funds.<sup>1</sup> Please include an explanation of the differences, if any, in the trustee fees for each of these funds.

#### RESPONSE:

## Schedule of Trustee Fees Paid by fund assets in 2020 as a percentage of average asset balance as of 12/31/20

Pension Fund	.007%
Employee savings fund	(a)
Nuclear decommissioning trust fund	.001%

(a) The "employee savings fund" is an individual account, defined contribution plan which is qualified under Section 401(a) of the Internal Revenue Code titled "Next Era Energy, Inc. Employee Retirement Savings Plan." Fees under the Retirement Savings Plan are paid in a different manner than the other three funds in that expenses are primarily paid through charges to the individual participant accounts through the expense ratios associated with the specific investment options offered under the plan as well as additional charges to participant accounts. The expenses ratios are asset-based and reflect an investment option's total annual operating expenses and include investment management and other fees. Other administrative fees and expenses associated with maintaining the Plan, such as for recordkeeping, legal, accounting and trustee services, are deducted from individual accounts in the Plan.

The fee for the nuclear decommissioning trust fund is lower than for the pension fund because the pension fund is more complex in its investment structure than the nuclear decommissioning trust fund. For example, the pension fund employs more managers than the nuclear decommissioning trust fund. As a consequence, a different level of accounting, reporting and securities-related services are provided for the pension fund, which causes the fees to be higher than for the nuclear decommissioning trust fund.

<sup>&</sup>lt;sup>1</sup>If actual funds earnings data is not yet known through December 31, 2020, please respond using the most-current data to the month available.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 8 Page 1 of 1

## <u>QUESTION</u>: <u>Nuclear Decommissioning Trust Fund</u>

Please provide a schedule detailing the investment manager fee (all costs as a percentage of average asset balance as of 12/31/2020) for FPL's pension fund, employee savings fund, and NDT funds.<sup>1</sup> Please include an explanation of the differences, if any, in the investment manager fees for each of these funds.

# RESPONSE:

# Schedule of Total Investment Management Fees Paid by fund assets in 2020 as a percentage of average asset balance as of 12/31/20

Pension Fund	0.520%
Employee savings fund	(a)
Nuclear decommissioning trust fund	0.354%

(a) The "employee savings fund" is an individual account, defined contribution plan which is qualified under Section 401(a) of the Internal Revenue Code titled "Next Era Energy, Inc. Employee Retirement Savings Plan." Fees under the Retirement Savings Plan are paid in a different manner than the other three funds in that expenses are primarily paid through charges to the individual participant accounts through the expense ratios associated with the specific investment options offered under the plan as well as additional charges to participant accounts. The expenses ratios are asset-based and reflect an investment option's total annual operating expenses and include investment management and other fees. Other administrative fees and expenses associated with maintaining the Plan, such as for recordkeeping, legal, accounting and trustee services are deducted from individual accounts in the Plan.

The fees for the nuclear decommissioning fund are lower than for the pension fund in part because the nuclear decommissioning trust fund has a higher emphasis on fixed income securities and indexed equities, both of which have lower fund management fee structures than many of the equity strategies used in the pension fund.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 9 Page 1 of 1

## <u>QUESTION</u>: <u>Nuclear Decommissioning Trust Fund</u>

Please provide a schedule detailing the total administrative costs (all costs as a percentage of average asset balance as of 12/31/2020) for FPL's pension fund, employee savings fund, and NDT funds.<sup>1</sup> Please include an explanation of the differences, if any, in the total administrative costs for each of these funds.

# RESPONSE:

## Schedule of Total Administrative Costs Paid by fund assets in 2020 as a percentage of average asset balance as of 12/31/20 (a)

Pension Fund	0.642%
Employee savings fund	0.148%(b)
Nuclear decommissioning trust fund	0.366%

- (a) Total administrative costs include trustee costs and investment management fees as discussed in Data Request Nos. 7 and No. 8.
- (b) The "employee savings fund" is an individual account, defined contribution plan which is qualified under Section 401(a) of the Internal Revenue Code titled "Next Era Energy, Inc. Employee Retirement Savings Plan." Fees under the Retirement Savings Plan are paid in a different manner than the other three funds in that expenses are primarily paid through charges to the individual participant accounts through the expense ratios associated with the specific investment options offered under the plan as well as additional charges to participant accounts. The expenses ratios are asset-based and reflect an investment option's total annual operating expenses and include investment management and other fees. Other administrative fees and expenses associated with maintaining the Plan, such as for recordkeeping, legal, accounting and trustee services are deducted from individual accounts in the Plan. Because of the variable nature of asset-based fees, the figures represent estimates of the expenses.

The total administrative fees for the nuclear decommissioning fund is lower than for the pension fund because the pension fund requires certain services, such as benefit disbursement and global securities-related services and has an investment structure which includes more costly asset types (such as international equities). The nuclear decommissioning fund has a reduced level of reporting and performance analytic services.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 10 Page 1 of 1

<u>QUESTION</u>: <u>Nuclear Decommissioning Trust Fund</u>

What are, if any, the legal investment constraints on the decommissioning fund? Does the company have any additional investment constraints? Please explain.

## **<u>RESPONSE</u>**:

FPL's qualified NDT is subject to Section 468A of the Internal Revenue Code of 1986, as amended (the "Code"), which provides that the trust is prohibited from engaging in self-dealing as defined in Section 4951(d) of the Code.

NDT funds that are subject to FERC regulation are governed by the FERC requirement that the funds be managed externally under the "prudent investor" standard, as explained in the response to Staff's First Data Request No. 16. The applicable regulations provide that the decommissioning trust may not be under the administrative control of the licensee and that the day-to-day investment decisions should be made by the trustee or investment manager and not by the licensee.

For additional information, see FPL's response to Staff's First Data Request, No. 3.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 11 Page 1 of 2

## <u>QUESTION</u>: <u>Nuclear Decommissioning Trust Fund</u>

Please refer to FPL's 2020 Study, Support Schedule D, Page 1 of 1.

- a. Please refer to "Note (2)" associated with Support Schedule D. Please provide detailed calculations which support the statement: "FPL remeasured its deferred tax assets to the new federal corporate tax rate of 21%, which resulted in a reduction of deferred tax assets by \$141 million."
- b. Please refer to "Note (3)" associated with Support Schedule D. Please provide detailed calculations which support the statement: "[t]rust fund earnings are taxed at the current tax rate in effect, 4.458% for the periods of 2018 through 2021, while the deferred tax asset is recorded using 5.5% for the same period resulting in variances."
- c. Please verify that the deferred taxes associated with the Nuclear Decommissioning Reserve Funds were generated by the book tax timing differences associated with the annual amortization of the capitalized decommissioning liability because decommissioning expenses paid from the nonqualified fund cannot be deducted for tax purposes until actually incurred.

## **<u>RESPONSE</u>**:

a. As the result of tax reform legislation (2017 Tax Cuts & Jobs Act) signed into law in December 2017, FPL remeasured its deferred tax assets to the new federal corporate tax rate of 21%, which resulted in a reduction of deferred tax assets associated with the nonqualified decommissioning reserve by \$141 million. Calculation is shown below:

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 11 Page 2 of 2

	Dec-17	Ref
Non Qualified Decommissioning Reserve Balance	(1,067,516,536)	<a></a>
Deferred Tax Asset at Statutory Rate	411,794,504	d = <a> * <b></b></a>
Deferred Tax Asset Remeasured	270,562,066	e = <a> * <c></c></a>
Excess Deferred Tax Liability/(Deficiency)	(141,232,438)	f = <e> - <d></d></e>
Tax Rates:	Existing Rate	New Rate
Fed	35.0000%	21.0000%
Federal Benefit of State	-1.9250%	-1.1550%
Total Federal	33.0750%	19.8450%
State	5.5000%	5.5000%
Combined Tax Rate	38.5750%	25.3450%
	<b></b>	<c></c>

b. On Sept. 12, 2019, the Florida Department of Revenue released a Tax Information Publication (TIP) in which it announced that the Florida corporate income and franchise tax rate would be reduced from 5.5% to 4.458% for tax years beginning in 2019, 2020 and 2021. The Nonqualified Fund Trust earnings are paying current income tax using the lowered FL income tax rate of 4.458% for period 2019 & 2020. This tax rate cut is temporary and will revert to 5.5% in 2022. Thus, the deferred income tax asset on the non-qualified decommissioning reserve is calculated using the tax rate it is going to reverse in the future. The cumulative difference resulting from this rate change is \$654 thousand and was calculated as shown (table in \$ thousands):

NON-QUALIFIED FUND	_	
Est/Actual Fund Balance @ 12/31/2020	\$712,004	
Est/Actual Reserve Balance@12/31/2020	\$1,142,029	
Difference between Fund and Reserve	(\$430,025)	x
Re-measurement of Deferred Tax - Federal	\$141,232	x
Deferred Tax @ 12/31/2020	\$289,447	x
Re-measurement of Deferred Tax - State	\$654	Sum of x

c. Yes, the deferred taxes are associated with the book tax timing difference related to the Non-Qualified Nuclear Decommissioning Reserve. Decommissioning expenses will be deducted for tax when expenses are actually incurred.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 12 Page 1 of 2

## <u>QUESTION</u>: Nuclear Decommissioning Trust Fund

Please refer to the 2020 Study, Support Schedules G (for both the St. Lucie and Turkey Point estimates), Pages 1-8.

- a. Please define the all acronyms appearing in the row above the column titles of this table.
- b. Regarding the determination of escalation rates, please discuss in detail the reasons why each of the individual inflation indices for labor, materials, shipping, and burial were selected.
- c. Given that funding status is highly dependent on assumed escalation rates, please explain why FPL believes the assumed average escalation rates, ranging from 3.13 percent to 3.19 percent for all four nuclear units are appropriate for use in this proceeding.

# RESPONSE:

a) The acronyms appearing in the row above the column titles of the table (Support Schedules G Page 1 of 8) are index indicator mnemonics used by Global Insight. PC stands for "Percent Change" and the remaining indicators are defined as follows:

Indicator	Inflation Index
PC JPGDP	Chained price indexgross domestic product
PC JWSSNF	Total compensation per hour in nonfarm business
PC WPISOP2000	Producer price indexintermediate materials
PC CSVTS	Consumer Spending -Transportation Services
СРІ	Consumer price index, all-urban

b) Each of the individual inflation indices selected (labor, materials, shipping, and other) are consistent with the indices that were recommended by Commission Staff, determined appropriate and approved by the Commissioning in Order No. PSC-95-1531-FOF-EI, and subsequently reaffirmed by the Commission in Order No. PSC-02-0055-PAA-EI. FPL is not aware of any changes that would invalidate the use of these Commission approved indices, and therefore the continued use of these indices was considered appropriate.

Consistent with past practices, the annual escalation rate used for Burial was developed based on the Company specific data and historical experience and is more fully discussed in Section 2 (Assumptions) for each of the plant sites.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 12 Page 2 of 2

c) FPL cannot predict with certainty the timing and degree of change in future forecasts of escalation indices. As such, FPL believes that reliance on Commission approved practices and consistent use of published indices is both reasonable and appropriate but at the same time supports the need for continued periodic review and update of all relevant factors as is currently specified by Commission Rule. Each study is a snapshot of the funded status of the obligation at a point in time. Future studies will consider and incorporate reasonable changes including those associated with updates to escalation rates.

As shown in Support Schedule G, each total average is derived by averaging all yearly inflation of cash flows on a unit by unit basis. The majority of inflation factors used in this study come from the third-party source Global Insight (IHS Markit). The sources of these factors, cost indices chosen, and calculation methodology are consistent with prior FPL decommissioning studies filed and approved by the Commission.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 13 Page 1 of 1

## <u>QUESTION</u>: Nuclear Decommissioning Trust Fund

Please explain how FPL's 2020 Study complies with the Nuclear Regulatory Commission's (NRC) rule on financial requirements for nuclear power reactors.

# RESPONSE:

The costs and schedules included in FPL's 2020 decommissioning cost studies follow the general guidance and processes described in the 1996 NRC published revisions to the general requirements for decommissioning nuclear power plants under the U.S. Code of Federal Regulations, Title 10, Parts 2, 50 and 51, "Decommissioning of Nuclear Power Reactors," Nuclear Regulatory Commission, Federal Register Volume 61. The format and content of the estimates are also consistent with the recommendations of Regulatory Guide 1.202, issued by the NRC in February 2005.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 14 Page 1 of 1

<u>QUESTION</u>: <u>Nuclear Decommissioning Trust Fund</u>

Please provide the NRC's minimum decommissioning trust fund requirements for Turkey Point Units 3 and 4, and St. Lucie Units 1 and 2, expressed in 2020 dollars.

## RESPONSE:

The NRC's minimum decommissioning trust fund requirements expressed in 2020 dollars are as follows:

	NRC Minimum
	(2020 dollars)
St. Lucie Unit 1	\$497,783,346
St. Lucie Unit 2 <sup>(1)</sup>	\$423,635,978
Turkey Point Unit 3	\$481,568,240
Turkey Point Unit 4	\$481,568,240

<sup>(1)</sup> FPL share only.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 15 Page 1 of 1

## <u>QUESTION</u>: <u>Nuclear Decommissioning Trust Fund</u>

Please explain how FPL is complying with NRC requirements as they pertain to control of the NDT funds.

## RESPONSE:

The Nuclear Regulatory Commission's (NRC) decommissioning rule 10 C.F.R. § 50.75 requires that licensees provide reasonable financial assurance that funds will be available for decommissioning through one of three methods: (a) prepayment prior to the start of operation, (b) an external sinking fund, or (c) surety, insurance or other guarantee method. An external sinking fund is defined as "a fund established and maintained by setting funds aside periodically in an account segregated from licensee assets and outside the licensee's administrative control in which the total amount of funds would be sufficient to pay decommissioning cost at the time termination of operation is expected."

The Company provides for financial assurance through the assets held in its nuclear decommissioning fund which are held in trust with BNY Mellon as trustee. This constitutes an external sinking fund which complies with the NRC final rule.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 16 Page 1 of 1

## <u>QUESTION</u>: Nuclear Decommissioning Trust Fund

Please explain how FPL is complying with NRC requirements as they pertain to management of the investments that comprise the NDT funds.

## RESPONSE:

Nuclear Regulatory Commission decommissioning regulations do not contain specific requirements pertaining to nuclear decommissioning trust (NDT) fund investments for licensees that are subject to cost of service regulation. However, NDTs that are subject to FERC regulation must comply with the requirement that the funds be managed externally under the "prudent investor" standard. FPL's NDT funds are subject to FERC regulation and accordingly, FPL's NDT trust assets are invested in accordance with the "prudent investor" standard of care set forth in Restatement of the Law (Third), Trusts, which provides that the fiduciary must exercise reasonable care, skill and caution, and apply such standard to investments not in isolation but in the context of the trust portfolio and as part of an overall investment strategy, incorporating risk and return objectives reasonably suitable to the trust. In addition, the fiduciary has a duty to diversify the investments unless under the circumstances it is not prudent to do so, must conform to the duties of loyalty and impartiality, act with prudence in delegating authority, and incur only costs that are reasonable and appropriate.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 17 Page 1 of 1

<u>QUESTION</u>: Nuclear Decommissioning Trust Fund

Please explain whether FPL has requested any exceptions to the NRC guidelines on decommissioning reserves. If so, please provide copies of any related correspondence to and from the NRC regarding this matter.

#### RESPONSE:

FPL has not requested any exceptions to the Nuclear Regulatory Commission (NRC) guidelines on decommissioning reserves for the St. Lucie and Turkey Point nuclear units.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 18 Page 1 of 1

## <u>QUESTION</u>: End of Life Material & Supplies

Please refer to FPL's 2020 Decommissioning Study for the St. Lucie Nuclear Unit Nos. 1 & 2, Section 7 (Support Schedule E, Page 1 of 1), the End-of-Life Materials and Supplies Inventory Expense (EOL M&S) Accrual Calculation to answer.

Support Schedule E, Page 1 of 1, reflects values prepared as of December 31, 2020. Please provide an updated version of Schedule E showing all values prepared as of the accrual date of January 1, 2022.

- a. In the updated version of Schedule E, what is the resulting annual amortization from January 1, 2022 to the end of license?
- b. What annual amortization expense associated with EOL M&S is FPL currently recording?

## <u>RESPONSE</u>:

- a. Please see FPL's response to Staff's First Data Request, No. 19.
- b. Please see FPL's response to Staff's First Data Request, No. 19.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 19 Page 1 of 1

<u>QUESTION</u>: End of Life Material & Supplies

Please refer to FPL's 2020 Decommissioning Study for the St. Lucie Nuclear Unit Nos. 1 & 2, Section 7 (Support Schedule E, Page 1 of 1), the End-of-Life Materials and Supplies Inventory Expense (EOL M&S) Accrual Calculation to answer.

Please provide a spreadsheet (with formulas intact and cells unlocked) showing the development of the data appearing in response to Question number 18.

<u>RESPONSE</u>: Please see Attachment No. 1 to this Data Request, No. 19.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 20 Page 1 of 1

## <u>QUESTION</u>: <u>End of Life Material & Supplies</u>

Please refer to FPL's 2020 Decommissioning Study for the St. Lucie Nuclear Unit Nos. 1 & 2, Section 7 (Support Schedule E, Page 1 of 1), the End-of-Life Materials and Supplies Inventory Expense (EOL M&S) Accrual Calculation to answer.

Please identify what assumptions are incorporated into the estimated value of the EOL M&S inventory (Schedule E) prepared as of the accrual date of January 1, 2022.

## RESPONSE:

For End-of-Life Materials and Supplies Inventory Accrual Calculation as of January 1, 2022 FPL did not change the ending inventory or estimated salvage assumptions used in the study (below). Also refer to Attachment No.1 to this response for calculation assumptions.

## St. Lucie:

- 1. Inventory balance, by component, as of August 4, 2020 used as a proxy for average inventory balance.
- 2. Issues based on inventory turnover rate
  - a. Inventory turnover rate utilized is based on a 4-year average inventory turnover rate.
- 3. Purchases assumes amount of issues escalated using Consumer Price Index, all urban.
- 4. Purchases decrease to 75% of issues beginning in 2036 when Unit 1 will shut down.
- 5. Purchases decrease to 25% of issues in 2042, the year before Unit 2 will shut down.
- 6. Salvage value is assumed at 2.1%. Rate is based on historical sales of obsolete inventory.

FPL did however calculate the increase in reserve as of December 31, 2021 by adding an additional twelve months of amortization expense for St. Lucie Unit 2 (The expense amount approved by Order No. PSC-16-0250-PAA-EI). Lastly, the total "number of months until end of license" was reduced by twelve months for St. Lucie Unit 2.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 21 Page 1 of 1

## <u>QUESTION</u>: End of Life Material & Supplies

Please refer to FPL's 2020 Decommissioning Study for the St. Lucie Nuclear Unit Nos. 1 & 2, Section 7 (Support Schedule E, Page 1 of 1), the End-of-Life Materials and Supplies Inventory Expense (EOL M&S) Accrual Calculation to answer.

Please identify what EOL M&S assumptions, if any, were incorporated in the Energy Solutions study that are new, revised, or otherwise different and were not incorporated when EOL M&S was calculated for the 2015 Study.

## RESPONSE:

There are no new, revised, or different assumptions for EOL M&S incorporated in the Energy Solutions study.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 22 Page 1 of 1

## <u>QUESTION</u>: End of Life Material & Supplies

Please refer to FPL's 2020 Decommissioning Study for the St. Lucie Nuclear Unit Nos. 1 & 2, Section 7 (Support Schedule E, Page 1 of 1), the End-of-Life Materials and Supplies Inventory Expense (EOL M&S) Accrual Calculation to answer.

Please identify the principle reasons or sources why the value of EOL M&S inventory in the 2020 Study (approximately \$33.9) is approximately 25 percent greater than the amount included in the 2015 Study (approximately \$27.1M)? Specify in your response what portion of the increase is attributable to actual M&S inventory amounts incurred to-date, and what portion is attributable to M&S inventory amounts in forecasted (e.g., projected) periods up to EOL.

## <u>RESPONSE</u>:

The value of EOL M&S inventory in the 2020 Study is approximately 25% greater than in 2015 primarily due to a lower inventory turnover rate assumed in 2020. A 4-year average inventory turnover rate was used in the calculation of EOL M&S inventory for the 2015 and 2020 Studies. In the 2015 study, the extended power uprate outages occurred in the 4-year average calculation, creating a higher average inventory turnover rate.

Utilizing a higher inventory turnover rate will result in more issues of inventory and a greater reduction in inventory value when the inventory purchases are reduced 7 years before shut down of St. Lucie Unit 2. This resulted in a lower ending value in 2015 vs 2020.

The use of materials and supplies will vary depending upon the number of refueling outages and projects implemented in a given year. FPL utilized a 4- year average inventory turnover rate to provide a levelized rate to derive the annual issues assumed through decommissioning.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 23 Page 1 of 1

## <u>QUESTION</u>: <u>End of Life Material & Supplies</u>

Please refer to FPL's 2020 Decommissioning Study for the St. Lucie Nuclear Unit Nos. 1 & 2, Section 7 (Support Schedule E, Page 1 of 1), the End-of-Life Materials and Supplies Inventory Expense (EOL M&S) Accrual Calculation to answer.

Please identify the principle reasons or sources why the value of EOL M&S Salvage in the 2020 Study (approximately \$448 thousand) is approximately 172 percent greater than the amount in the 2015 Study (\$260K)? Specify in your response what portion of the increase is attributable to current M&S Salvage amounts versus what portion of the increase is attributable to forecasted amounts in projected periods up to EOL.

## **RESPONSE**:

The value of EOL M&S Salvage in the 2020 Study is approximately 172% greater than in 2015 primarily due to a higher salvage value percentage assumed in 2020. Nuclear inventory is unique and will have little value other than scrap value when the units are decommissioned. FPL determined the salvage value of its EOL M&S based on prior obsolete inventory sales as a reasonable basis that FPL could expect to receive in the future. Based on obsolete inventory sales for each Study, 2.1% of book value for salvage was assumed in 2020 and 1.0% in 2015.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 24 Page 1 of 1

## <u>QUESTION</u>: End of Life Material & Supplies

Please refer to FPL's 2020 Decommissioning Study for the St. Lucie Nuclear Unit Nos. 1 & 2, Section 7 (Support Schedule E, Page 1 of 1), the End-of-Life Materials and Supplies Inventory Expense (EOL M&S) Accrual Calculation to answer.

Generally speaking, does FPL expect that any EOL M&S at end of license at the St. Lucie Nuclear Station would be potentially useful at the Turkey Point Nuclear Station? Why or why not?

## RESPONSE:

Due to the different design between the St. Lucie and Turkey Point nuclear units, only a small percentage of inventory could potentially be useful at the Turkey Point Nuclear Station.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 25 Page 1 of 1

<u>QUESTION</u>: <u>End of Life Material & Supplies</u>

Please refer to FPL's 2020 Decommissioning Study for the St. Lucie Nuclear Unit Nos. 1 & 2, Section 7 (Support Schedule E, Page 1 of 1), the End-of-Life Materials and Supplies Inventory Expense (EOL M&S) Accrual Calculation to answer.

In descending order, please identify the top 3 highest value items in the EOL M&S inventory at the St. Lucie Nuclear Station.

## RESPONSE:

The 3 highest value items in EOL M&S inventory at the St. Lucie Nuclear Station is as follows:

1. Valves\$20.6 million2. Electric switches, relays, fuses\$11.1 million3. Fasteners\$9.6 million

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 26 Page 1 of 1

## <u>QUESTION</u>: End of Life Material & Supplies

Please refer to FPL's 2020 Decommissioning Study - St. Lucie Nuclear Units 1 & 2, Section 2 – Assumptions, page 8 of 11.

FPL states that the Florida Public Service Commission (Commission) authorized it to begin recording the amortization of estimated end of life materials and supplies (EOL M&S) costs as a base rate fuel expense with a credit to a separate unfunded sub-account of Reserve Account 228. However, page 25 of Order No. PSC-02-0055-PAA-EI indicates that the Commission found, in part, that "the amortization expense associated with EOL M&S inventories should be accounted for as a debit to nuclear maintenance expense," and not as a base rate fuel expense.

Please explain how FPL has been accounting for the annual EOL M&S amortization expenses for the St. Lucie Unit, and whether its accounting treatment complies with the Commission's Order.

## RESPONSE:

The statement in Section 2, page 8 of 11 inadvertently referenced the treatment applicable to End of Life Last Core Nuclear Fuel. Regrettably, the error in the language was carried over from prior studies. The statement should have indicated the treatment to be a debit to nuclear maintenance expense as indicated in Order No. PSC-02-0055-PAA-EI (page 25), which is consistent with FPL's actual accounting.

In accordance with Order No. PSC-02-0055-PAA-EI, effective May 2002, FPL began recording the annual amortization expense associated with the EOL M&S inventories as a debit to nuclear maintenance expense account 528 and a credit to an unfunded operating reserve account 228. Also, as Commission directed, the Company has addressed the costs associated with EOL M&S inventories in its subsequent decommissioning studies so that the related annual accruals could be revised, if warranted. Effective January 1, 2017, consistent with Order No. PSC-16-0560-AS-EI, the annual amortization expense for EOL M&S inventories was updated to reflect the current annual amortization of \$1,262,575 for Turkey Point and \$709,860 for St. Lucie as proposed in FPL's 2015 Nuclear Decommissioning study and approved by Order No. PSC-16-0250-PAA-EI.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 27 Page 1 of 1

<u>QUESTION</u>: End of Life Material & Supplies

On January 11, 2021, a docket was established regarding a petition for rate increase (Docket No. 20210015-EI). Although issues have not been identified yet for Docket No. 20210015-EI, will FPL propose an issue(s) in that case to include EOL M&S inventories as a base rate component? Please explain your response.

#### **<u>RESPONSE</u>**:

As directed by the Commission in Order PSC-02-0055-PAA-EI, the recovery of EOL M&S Inventories costs are considered a base rate component. As such, any change should be considered in conjunction with changes in other base rate costs and revenue requirement determinations addressed in a general base rate proceeding. FPL currently plans to file its Petition and supporting documents in Docket No. 20210015-EI on or about March 12, 2021. At this time, prior to the case being filed, FPL has not determined or identified all of the specific issues it will propose in that proceeding. However, depending on the substantive information provided and produced in connection with Docket No. 20210015-EI, there may be specific issues on this topic, similar to Issues 65, 66, and 111 identified in Docket No. 20160021-EI.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 28 Page 1 of 1

## <u>QUESTION</u>: End of Life Material & Supplies

Please refer to FPL's 2020 Decommissioning Study for the Turkey Point Nuclear Unit Nos. 3 & 4, Section 7 (Support Schedule E, Page 1 of 1), the End-of-Life Materials and Supplies Inventory Expense (EOL M&S) Accrual Calculation to answer.

Schedule E, Page 1 of 1, reflects values prepared as of December 31, 2020. Please provide an updated version of Schedule E showing all values prepared as of the accrual date of January 1, 2022.

- a. In the updated version of Schedule E, what is the resulting annual amortization from January 1, 2022 to the end of license?
- b. What annual amortization expense associated with EOL M&S is FPL currently recording?

## RESPONSE:

- a. Please see FPL's response to Staff's First Data Request, No. 29.
- b. Please see FPL's response to Staff's First Data Request, No. 29.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 29 Page 1 of 1

**QUESTION**:

End of Life Material & Supplies

Please refer to FPL's 2020 Decommissioning Study for the Turkey Point Nuclear Unit Nos. 3 & 4, Section 7 (Support Schedule E, Page 1 of 1), the End-of-Life Materials and Supplies Inventory Expense (EOL M&S) Accrual Calculation to answer.

Please provide a spreadsheet (with formulas intact and cells unlocked) showing the development of the data appearing in response to Question number 28.

**RESPONSE:** 

Please see Attachment No.1 to this Data Request, No. 29.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 30 Page 1 of 1

#### <u>QUESTION</u>: End of Life Material & Supplies

Please refer to FPL's 2020 Decommissioning Study for the Turkey Point Nuclear Unit Nos. 3 & 4, Section 7 (Support Schedule E, Page 1 of 1), the End-of-Life Materials and Supplies Inventory Expense (EOL M&S) Accrual Calculation to answer.

Please identify what assumptions are incorporated into the estimated value of the EOL M&S inventory prepared as of the accrual date of January 1, 2022.

## **RESPONSE**:

For End-of-Life Materials and Supplies Inventory Accrual Calculation as of January 1, 2022 FPL did not change the ending inventory or estimated salvage assumptions used in the study (below). Also refer to Attachment No.1 for Staff's First Data Request No. 20 for calculation assumptions.

## Turkey Point

- 1. Inventory balance, by component, as of August 4, 2020, used as a proxy for average inventory balance.
- 2. Issues based on inventory turnover rate
  - a. Inventory turnover rate utilized is based on a 4-year average inventory turnover rate.
- 3. Purchases assumes amount of issues escalated using Consumer Price Index, all urban.
- 4. Purchases decrease to 25% of issues in 2052, the year before Unit 4 will shut down.
- 5. Salvage value is assumed at 2.1%. Rate is based on historical sales of obsolete inventory.

FPL did however calculate the increase in reserve as of December 31, 2021, by adding an additional twelve months of amortization expense for Turkey Pt. Unit 4 (The expense amount approved by Order No. PSC-16-0250-PAA-EI). Lastly, the total "number of months until end of license" was reduced by twelve months for Turkey Pt. Unit 4.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 31 Page 1 of 1

## <u>QUESTION</u>: End of Life Material & Supplies

Please refer to FPL's 2020 Decommissioning Study for the Turkey Point Nuclear Unit Nos. 3 & 4, Section 7 (Support Schedule E, Page 1 of 1), the End-of-Life Materials and Supplies Inventory Expense (EOL M&S) Accrual Calculation to answer.

Please identify what assumptions were incorporated in the Energy Solutions study that are new, revised, or otherwise different and were not incorporated when EOL M&S was calculated for the 2015 Study.

# RESPONSE:

There are no new, revised, or different assumptions for EOL M&S incorporated in the Energy Solutions study.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 32 Page 1 of 1

## <u>QUESTION</u>: End of Life Material & Supplies

Please refer to FPL's 2020 Decommissioning Study for the Turkey Point Nuclear Unit Nos. 3 & 4, Section 7 (Support Schedule E, Page 1 of 1), the End-of-Life Materials and Supplies Inventory Expense (EOL M&S) Accrual Calculation to answer.

Please identify the principle reasons or sources why the value of EOL M&S inventory in the 2020 Study (approximately \$43.7) is approximately 19 percent greater than the amount included in the 2015 Study (approximately \$36.7)? Specify in your response what portion of the increase is attributable to actual M&S inventory amounts incurred to-date, and what portion is attributable to M&S inventory amounts in forecasted (e.g., projected) periods up to EOL.

## <u>RESPONSE</u>:

The value of EOL M&S inventory in the 2020 Study is approximately 19% greater than in 2015 primarily due to a lower inventory turnover rate assumed in 2020. A 4-year average inventory turnover rate was used in the calculation of EOL M&S inventory for the 2015 and 2020 Studies. In the 2015 study, the extended power uprate outages occurred in the 4-year average calculation, creating a higher average inventory turnover rate.

Utilizing a higher inventory turnover rate will result in more issues of inventory and a greater reduction in inventory value when the inventory purchases are reduced 1 year before shut down of Turkey Point Unit 4. This resulted in a lower ending value in 2015 vs. 2020.

The use of materials and supplies will vary depending upon the number of refueling outages and projects implemented in a given year. FPL utilized a 4-year average inventory turnover rate to provide a levelized rate to derive the annual issues assumed through decommissioning.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 33 Page 1 of 1

#### <u>QUESTION</u>: End of Life Material & Supplies

Please refer to FPL's 2020 Decommissioning Study for the Turkey Point Nuclear Unit Nos. 3 & 4, Section 7 (Support Schedule E, Page 1 of 1), the End-of-Life Materials and Supplies Inventory Expense (EOL M&S) Accrual Calculation to answer.

Please identify the principle reasons why the value of EOL M&S Salvage inventory in the 2020 Study (approximately \$913K) is approximately 160 percent greater than the amount included in the 2015 Study (approximately \$352K)? Specify in your response what portion of the increase is attributable to current M&S Salvage amounts versus what portion of the increase is attributable to forecasted amounts in projected periods up to EOL.

## RESPONSE:

The value of EOL M&S Salvage in the 2020 Study is approximately 160% greater than in 2015 primarily due to a higher salvage value percentage assumed in 2020. Nuclear inventory is unique and will have little value other than scrap value when the units are decommissioned. FPL determined the salvage value of its EOL M&S is based on prior obsolete inventory sales as a reasonable basis that FPL could expect to receive in the future. Based on obsolete inventory sales for each Study, 2.1% of book value for salvage was assumed in 2020 and 1.0% in 2015.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 34 Page 1 of 1

<u>QUESTION</u>: End of Life Material & Supplies

Please refer to FPL's 2020 Decommissioning Study for the Turkey Point Nuclear Unit Nos. 3 & 4, Section 7 (Support Schedule E, Page 1 of 1), the End-of-Life Materials and Supplies Inventory Expense (EOL M&S) Accrual Calculation to answer.

In descending order, please identify the top 3 highest value items in the EOL M&S inventory at the Turkey Point Nuclear Station.

#### RESPONSE:

The 3 highest value items in EOL M&S inventory is as follows:

1.	Electric switches, relays, fuses	\$13.3 million
2.	Valves	\$13.3 million
3.	Electric Components	\$6.9 million

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 35 Page 1 of 1

## <u>QUESTION</u>: End of Life Material & Supplies

For the purposes of the following request, please refer to the Assumptions tab of the 2020 Decommissioning Study, page 6 of 9 for Turkey Point Units 3 & 4.

FPL states that the Florida Public Service Commission (Commission) authorized it to begin recording the amortization of estimated end of life materials and supplies (EOL M&S) costs as a base rate fuel expense with a credit to a separate unfunded sub-account of Reserve Account 228. However, page 25 of Order No. PSC-02-0055-PAA-EI indicates that the Commission found, in part, that "the amortization expense associated with EOL M&S inventories should be accounted for as a debit to nuclear maintenance expense," and not as a base rate fuel expense.

Please explain how FPL has been accounting for the annual EOL M&S amortization expenses for the Turkey Point Unit, and whether its accounting treatment complies with the Commission's Order.

#### RESPONSE:

The statement in Section 2, page 6 of 9 inadvertently referenced the treatment applicable to End of Life Last Core Nuclear Fuel. Regrettably, the error in the language was carried over from prior studies. The statement should have indicated the treatment to be a debit to nuclear maintenance expense as indicated in Order No. PSC-02-0055-PAA-EI (page 25), which is consistent with FPL's actual accounting.

In accordance with Order No. PSC-02-0055-PAA-EI, effective May 2002, FPL began recording the annual amortization expense associated with the EOL M&S inventories as a debit to nuclear maintenance expense account 528 and a credit to an unfunded operating reserve account 228. Also, as Commission directed, the Company has addressed the costs associated with EOL M&S inventories in its subsequent decommissioning studies so that the related annual accruals could be revised, if warranted. Effective January 1, 2017, consistent with Order No. PSC-16-0560-AS-EI, the annual amortization expense for EOL M&S inventories was updated to reflect the current annual amortization of \$1,262,575 for Turkey Point and \$709,860 for St. Lucie as proposed in FPL's 2015 Nuclear Decommissioning study and approved by Order No. PSC-16-0250-PAA-EI.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 36 Page 1 of 1

#### **QUESTION**:

End of Life Nuclear Fuel (Last Core)

Please refer to FPL's 2020 Decommissioning Study for the St. Lucie Nuclear Unit Nos. 1 & 2, Section 8 (Support Schedule F, Page 1 of 1), the End-of-Life Unamortized Nuclear Fuel expense calculation in FPL's 2020 Decommissioning Study for the St. Lucie Nuclear Unit to answer.

Please identify the principle reasons why the Remaining Amount to be Recovered for St. Lucie Unit 1 in the 2020 Study (approximately \$16.2 million) is about 74 percent lower, compared to the amount in the 2015 Study (approximately \$64.3 million)?

#### **RESPONSE:**

The principal reasons for the decline for St. Lucie Unit 1 are:

- 1. Total Fuel costs have gone down approximately 35% from five years ago.
- 2. There are 60 months of amortization since 2015 to 2020 that lowers the amount.
- 3. The amortization in subsection 2 above was based upon the 35% more fuels costs, leaving the remaining amount to be lower.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 37 Page 1 of 1

## <u>QUESTION</u>: <u>End of Life Nuclear Fuel (Last Core)</u>

Please refer to FPL's 2020 Decommissioning Study for the St. Lucie Nuclear Unit Nos. 1 & 2, Section 8 (Support Schedule F, Page 1 of 1), the End-of-Life Unamortized Nuclear Fuel expense calculation in FPL's 2020 Decommissioning Study for the St. Lucie Nuclear Unit to answer.

Please identify the principle reasons why the Remaining Amount to be Recovered for St. Lucie Unit 2 in the 2020 Study (approximately \$23.2 million) is over 71 percent lower, compared to the amount in the 2015 Study (approximately 80.8 million)?

# RESPONSE:

The principal reasons for the decline for St. Lucie Unit 2 are:

- 1. Total Fuel costs have gone down approximately 35% from five years ago.
- 2. There are 60 months of amortization since 2015 to 2020 that lowers that amount.
- 3. The amortization in subsection 2 above was based on the 35% more fuels cost, leaving the remaining amount to be lower.
- 4. In 2022, the final load of fresh fuel for the last cycle was loaded at the prorated amounts of remaining months. All three burn cycles for that last cycle were also prorated for the remaining months.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 38 Page 1 of 1

## <u>QUESTION</u>: End of Life Nuclear Fuel (Last Core)

Please refer to FPL's 2020 Decommissioning Study for St. Lucie Nuclear Units 1 & 2: Section 7 (Support Schedule F - End-of-Life Unamortized Nuclear Fuel Accrual Calculation) with values prepared as of December 31, 2020. Please provide an updated version of Schedule F showing all values prepared as of the accrual date of January 1, 2022.

## RESPONSE:

As a point of clarification, FPL understands this inquiry to be about the last core calculation for St. Lucie (Support Schedule F) in section 8, not section 7 as stated in the written question.

The required amortization is determined by dividing the difference between the estimated EOL value and the cumulative amortization balance at a point in time, by remaining amortization period (assumed to the end of operating license). For the purpose of this response, a calculation of the annual amortization expense using the estimates shown on Support Schedule F updated for an accrual date of January 1, 2022 will be provided. Please see FPL's response to Staff's First Data Request, No. 39.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 39 Page 1 of 1

<u>QUESTION</u>: End of Life Nuclear Fuel (Last Core)

Please provide a spreadsheet (with formulas intact and cells unlocked) showing the development of the data appearing in response to Question number 38.

<u>RESPONSE</u>: Please see Attachment No. 1 to this data request, No. 39.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 40 Page 1 of 1

## <u>QUESTION</u>: End of Life Nuclear Fuel (Last Core)

Please identify what assumptions are incorporated into the estimated values shown in the updated Schedule F prepared as of the accrual date of January 1, 2022

# RESPONSE:

FPL assumes this question is referring to the assumption in Schedule F for St. Lucie Units 1 and 2. As such, please see Attachment No. 1 to Staff's First Data Request, No. 39.

For End-of-Life Unamortized Nuclear Fuel Accrual Calculation as of January 1, 2022, FPL did not change the Cost of Unburned Fuel assumptions used in the study (below).

The assumptions used are:

- 1. Budget costs were used for total fuel costs for the first three cycles & escalated at 2.5% annually after that.
- 2. Last cycle total fuel costs is prorated for the amount of months remaining for the last cycle.
- 3. The burn rates percentages for each of the three (3) cycles remain the same for each Unit.
  - a. PSL1 43%, 40%, 17%
  - b. PSL2 43%, 38%, 19%
  - c. PTN3 44%, 43%, 13%
  - d. PTN4 46%, 39%, 15%
- 4. Final unburned fuel is calculated at shutdown using the unburn rates for each of the three (3) cycles.

Refer to Attachment No. 1 to this data request, No. 40, for calculation of Last Core.

FPL did however calculate the increase in reserve as of 12/31/2021 by adding an additional twelve months of amortization expense for each of the units at St. Lucie (the expense amount approved by Order No. PSC-16-0250-PAA-EI). Lastly, the total "number of months until end of license" was reduce by twelve months for each of the units at St. Lucie.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 41 Page 1 of 1

<u>QUESTION</u>: End of Life Nuclear Fuel (Last Core)

Please identify what assumptions, if any, appearing in response to Question 40 and incorporated in the Energy Solutions study are new, revised, or otherwise different and were not incorporated in the 2015 Study?

#### RESPONSE:

There are no new, revised, or different assumptions for Last Core incorporated in the Energy Solutions study.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 42 Page 1 of 1

<u>QUESTION</u>: End of Life Nuclear Fuel (Last Core)

What will be the remaining amount of End of Life Nuclear Fuel to be recovered by FPL as of January 1, 2022?

RESPONSE:

FPL assumes this question is referring to the remaining amount of End of Life Nuclear Fuel at St. Lucie Units 1 and 2.

Please see FPL's response to Staff's First Data Request, No. 39.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 43 Page 1 of 1

# <u>QUESTION</u>: End of Life Nuclear Fuel (Last Core)

What is the resulting annual amortization of End of Life Nuclear Fuel from January 1, 2022 to the end of license?

## **<u>RESPONSE</u>**:

FPL assumes this question is referring to the resulting annual amortization of End of Life Nuclear Fuel for St. Lucie Units 1 and 2.

Please see FPL's response to Staff's First Data Request, No. 39.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 44 Page 1 of 1

<u>QUESTION</u>: End of Life Nuclear Fuel (Last Core)

What annual amortization expense associated with Last Core is FPL currently recording?

## **RESPONSE**:

FPL is currently recording \$11,072,910 in annual amortization expense for last core (\$6,172,023 for St. Lucie and \$4,900,887 for Turkey Point). The current recording practice became effective January 2017, consistent with the Stipulation and Settlement Agreement approved by the Commission in Order No. PSC-16-0560-AS-EI, and is based on the estimates included in the 2015 decommissioning study approved by the Commission in Order No. PSC-16-0250-PAA-EI.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 45 Page 1 of 1

## <u>QUESTION</u>: End of Life Nuclear Fuel (Last Core)

Please refer to FPL's 2020 Decommissioning Study for the Turkey Point Nuclear Unit Nos. 3 & 4, Section 8 (Support Schedule F, Page 1 of 1), the End-of-Life Unamortized Nuclear Fuel expense calculation in FPL's 2020 Decommissioning Study for Turkey Point Nuclear Unit to answer.

Please identify the principle reasons why the Remaining Amount to be Recovered for Turkey Point Unit 3 in the 2020 Study (approximately \$27 million) is over 36 percent lower, compared to the amount in the 2015 Study (approximately \$42.3 million)?

# **<u>RESPONSE</u>**:

The principal reasons for the decline for Turkey Point Unit 3 are:

- 1. Total Fuel costs have gone down approximately 35% from five years ago.
- 2. There are 60 months of amortization since 2015 to 2020 that lowers that amount.
- 3. The amortization in subsection 2 above was based on the 35% more fuel cost, leaving the remaining amount to be lower.
- 4. In 2022, the final load of fresh fuel for the last cycle was loaded at the prorated amounts of remaining months. All three (3) burn cycles for that last cycle were also prorated for the remaining months.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 46 Page 1 of 1

## <u>QUESTION</u>: <u>End of Life Nuclear Fuel (Last Core)</u>

Please refer to FPL's 2020 Decommissioning Study for the Turkey Point Nuclear Unit Nos. 3 & 4, Section 8 (Support Schedule F, Page 1 of 1), the End-of-Life Unamortized Nuclear Fuel expense calculation in FPL's 2020 Decommissioning Study for Turkey Point Nuclear Unit to answer.

Please identify the principle reasons why the Remaining Amount to be Recovered for Turkey Point Unit 4 in the 2020 Study (approximately \$30 million) is over 27 percent lower, compared to the amount in the 2015 Study (approximately \$41.6 million)?

# RESPONSE:

The principal reasons for the decline in Turkey Point Unit 4 are:

- 1. Total Fuel costs have gone down approximately 35% from five years ago.
- 2. There are 60 months of amortization since 2015 to 2020 that lowers that amount.
- 3. The amortization in subsection 2 above was based on the 35% more fuel cost, leaving the remaining amount to be lower.
- 4. In 2022, the final load of fresh fuel for the last cycle was loaded at the prorated amounts of remaining months. All three (3) burn cycles for that last cycle were also prorated for the remaining months.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 47 Page 1 of 1

## <u>QUESTION</u>: End of Life Nuclear Fuel (Last Core)

Please refer to FPL's 2020 Decommissioning Study for Turkey Point Nuclear Units 3 & 4: Section 7 (Support Schedule F - End-of-Life Unamortized Nuclear Fuel Accrual Calculation) with values prepared as of December 31, 2020. Please provide an updated version of Schedule F showing all values prepared as of the accrual date of January 1, 2022.

## RESPONSE:

As a point of clarification, FPL understands this inquiry to be about the last core calculation for Turkey Pt. (Support Schedule F) in section 8, not section 7 as stated in the written question.

The required amortization is determined by dividing the difference between the estimated EOL value and the cumulative amortization balance at a point in time, by remaining amortization period (assumed to the end of operating license). For the purpose of this response, a calculation of the annual amortization expense using the estimates shown on Support Schedule F updated for an accrual date of January 1, 2022, will be provided. Please see FPL's response to Staff's First Data Request, No. 48.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 48 Page 1 of 1

<u>QUESTION</u>: End of Life Nuclear Fuel (Last Core)

Please provide a spreadsheet (with formulas intact and cells unlocked) showing the development of the data appearing in response to Question number 47.

<u>RESPONSE</u>: Please see Attachment No. 1 to this data request, No. 48.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 49 Page 1 of 1

## <u>QUESTION</u>: End of Life Nuclear Fuel (Last Core)

Please identify what assumptions are incorporated into the estimated values shown in the updated Schedule F prepared as of the accrual date of January 1, 2022.

# RESPONSE:

FPL assumes this question is referring to the assumption in Schedule F for Turkey Pt. 3 and 4. As such, please see FPL's response to Staff's First Data Request, No. 48.

For End-of-Life Unamortized Nuclear Fuel Accrual Calculation as of January 1, 2022, FPL did not change the Cost of Unburned Fuel assumptions used in the study (below).

The assumptions used are:

- 1. Budget costs were used for total fuel costs for the first three cycles & escalated at 2.5% annually after that.
- 2. Last cycle total fuel costs is prorated for the amount of months remaining for the last cycle.
- 3. The burn rates percentages for each of the three (3) cycles remain the same for each Unit.
- 4.
- a. PSL1-43%, 40%, 17%
- b. PSL2 43%, 38%, 19%
- c. PTN3 44%, 43%, 13%
- d. PTN4 46%, 39%, 15%
- 5. Final unburned fuel is calculated at shutdown using the unburn rates for each of the three (3) cycles.

Refer to Attachment No. 1 of Staff's First Data Request No. 40 for calculation of Last Core.

FPL did however calculate the increase in reserve as of December 21, 2021 by adding an additional twelve months of amortization expense for each of the units at Turkey Pt. (the expense amount approved by Order No. PSC-16-0250-PAA-EI). Lastly, the total "number of months until end of license" was reduce by twelve months for each of the units at Turkey Pt.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 50 Page 1 of 1

<u>QUESTION</u>: End of Life Nuclear Fuel (Last Core)

Please identify what assumptions, if any, appearing in response to Question 49 and incorporated in the Energy Solutions study are new, revised, or otherwise different and were not incorporated in the 2015 Study?

#### RESPONSE:

There are no new, revised, or different assumptions for Last Core incorporated in the Energy Solutions study.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 51 Page 1 of 1

<u>QUESTION</u>: End of Life Nuclear Fuel (Last Core)

What will be the remaining amount of End of Life Nuclear Fuel to be recovered by FPL as of January 1, 2022?

#### RESPONSE:

FPL assumes this question is referring to the remaining amount of End of Life Nuclear Fuel at Turkey Pt. 3 and 4.

Please see FPL's response to Staff's First Data Request, No. 48.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 52 Page 1 of 1

# <u>QUESTION</u>: End of Life Nuclear Fuel (Last Core)

What is the resulting annual amortization of End of Life Nuclear Fuel from January 1, 2022 to the end of license?

## RESPONSE:

FPL assumes this question is referring to the resulting annual amortization of End of Life Nuclear Fuel for Turkey Pt. 3 and 4.

Please see FPL's response to Staff's First Data Request, No. 48.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 53 Page 1 of 1

<u>QUESTION</u>: End of Life Nuclear Fuel (Last Core)

What annual amortization expense associated with Last Core is FPL currently recording?

<u>RESPONSE</u>: Please see FPL's response to Staff's First Data Request, No. 44.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 54 Page 1 of 1

## <u>QUESTION</u>: End of Life Nuclear Fuel (Last Core)

Please identify any research being undertaken or developing technologies FPL is aware of that may serve to minimize the amount of unburned fuel remaining at shutdown and reduce the associated costs.

#### RESPONSE:

In 2000, FPL conducted analyses of utilizing shorter operating cycles to lower last core exposure. The analysis indicated that running shorter cycles will result in lower unit fuel costs for the nuclear units, but will not significantly reduce, and may increase, the amount of underutilized fuel in the reactor at the end of the last cycle of operation. With shorter cycles, a typical fuel assembly will reside in the core for more cycles and will be amortized at a less rapid rate. As a result, the portion of the last core attributable to the fresh fuel is lower, but the portion of the last core attributable to the fresh fuel is lower, but the portion of the last core attributable to the fresh fuel is lower, but the portion of the last core attributable to the system fuel cost impacts of operating the nuclear units on shorter cycles. Shorter cycles imply that the nuclear units would be refueling more frequently and the overall availability of the units over their remaining lives would be less than under the current 18-month operating cycle. During these more frequent refueling outages, generating units with higher marginal costs would be dispatched to serve the customers' load increasing system fuel costs. The overall economics of using the shorter operating cycles are not projected to be favorable. No other known research or developing technologies have been identified since the above analyses were performed in 2000.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 55 Page 1 of 1

## <u>QUESTION</u>: End of Life Nuclear Fuel (Last Core)

Has there been any change to FPL's methodology for determining the cost of unburned fuel remaining in the reactor at the end of plant life since the 2015 Cost Study?

## RESPONSE:

The methodology for determining the cost of unburned fuel remaining in the reactor at the end of plant life changed since the 2015 Cost Study. The 2020 Cost Study prorated the amount of fuel put into reactor based on the number of remaining months until shutdown. The final unburned fuel is calculated at shutdown using the unburn rates for each of the three (3) cycles in 2020 as opposed to 2015, which did not prorate the last cycle.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 56 Page 1 of 1

## <u>QUESTION</u>: End of Life Nuclear Fuel (Last Core)

Please refer to Section 8 (Support Schedule F, Page 1 of 1), the End-of-Life Unamortized Nuclear Fuel Accrual Calculation, in FPL's 2020 Decommissioning Studies for St. Lucie Units 1 & 2 and Turkey Point Units 3 & 4. Please explain the principle reason(s) why the estimated cost of the Last Core for the St. Lucie Units decreased by approximately 40 percent, while the estimated cost of the Last Core for the Turkey Point Units did not change by significant amounts. For ease of reference, the Table below ("FPL Estimated Cost of Last Core") shows a comparison of estimated cost of Last Core from the 2015 and 2020 Cost Studies.

FPL Estimated Cost of Last Core							
		2015 Study	ly 2020 Study		Percent Change		
SL1	\$	89,300,000	\$	56,900,000	-36.3%		
SL2	\$	98,700,000	\$	55,700,000	-43.6%		
TP3	\$	67,500,000	\$	65,300,000	-3.3%		
TP4	\$	62,700,000	\$	63,800,000	1.8%		

# RESPONSE:

The principle reason why Turkey Point did not decrease by the same percentage as St. Lucie Units 1 & 2 is that each unit at Turkey Point was granted a license extension for another 20 years which was escalated at 2.5% annually until the new shutdown dates.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 57 Page 1 of 1

## <u>QUESTION</u>: End of Life Nuclear Fuel (Last Core)

Please refer to the Turkey Point and St. Lucie Decommissioning Study, Section 2, Page 2. In the first paragraph titled "Decommissioning Methods," it is written that "Decommissioning also includes the dismantlement, disposal and site restoration activities associated with the non-contaminated portion of the facilities. These activities are not required for termination of the operating license but are required to address other non-radiological requirements associated with the release of the site." Please identify what specific requirements are being referred to in this passage.

# RESPONSE:

Decommissioning is an inherently destructive process with many site buildings partially or demolished in the process of component removal and radiological remediation. The termination of the NRC's license for the site's reactors permits the unrestricted use of the property, but the site can still pose an ongoing liability to the owner. Additional remediation of an industrial site is required by State and Federal Environmental Protection Agency (EPA) environmental regulations for chemical hazards such as asbestos, PCB, lead, and mercury. Owners of nuclear facilities remediate the site for chemical hazards per State and EPA regulations at the same time the radiological remediation occurs.

The specific requirements will depend upon the owner's plans for the site at the time the reactors are decommissioned. There are no specific requirements included in the estimate at this time.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 58 Page 1 of 1

<u>QUESTION</u>: End of Life Nuclear Fuel (Last Core)

Has the AIF/NESP-036 report, "Guidelines for Producing Commercial Nuclear Power Plant Decommissioning Cost Estimates" been changed or updated since 2015? If not, is the version relied upon for the 2015 analysis the same version FPL utilized for its 2020 Turkey Point and St. Lucie decommissioning estimates?

#### RESPONSE:

No, the AIF/NESP-036 report has not been updated or changed since 2015. Yes, the same version was relied upon (as guidelines) in developing the 2015 and 2020 Turkey Point and St. Lucie decommissioning cost estimates.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 59 Page 1 of 1

<u>QUESTION</u>: End of Life Nuclear Fuel (Last Core)

Please refer to the St. Lucie Decommissioning Study, Section 11, Page 31 and the Turkey Point Decommissioning Study, Section 10, Page 35. Please confirm that both the Turkey Point and St. Lucie Decommissioning Cost Estimate assumed no net positive salvage value (decommissioning cost offset) for scrap metals.

#### RESPONSE:

FPL confirms that the Turkey Point and St. Lucie decommissioning cost analyses did not assume a net-positive salvage value for scrap metals.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 60 Page 1 of 1

## <u>QUESTION</u>: End of Life Nuclear Fuel (Last Core)

Please refer to the St. Lucie and Turkey Point Decommissioning Study, Section 11, Page 7. Please refer to Page 7 of the Comparison Report for both Turkey Point and St. Lucie, "Property Taxes", which states that the "2020 Decommissioning Cost Estimate assumes land only taxes will be paid post shutdown..." Please explain how this differs from the property tax calculation in the 2015 Decommissioning Study.

## **RESPONSE:**

As stated in Section 11, Page 7, it is not certain how the 2015 Decommissioning Study calculated the Property Taxes. The 2020 Decommissioning Cost Estimate (DCE) included only the taxes for the land value of the non-operating units through decommissioning. During the time period between the first unit shutdown and the second unit shutdown, it was assumed that the operating unit paid the property taxes (not included in the DCE costs) with the exception of the first unit portion of the shared land taxes.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 61 Page 1 of 1

## <u>QUESTION</u>: End of Life Nuclear Fuel (Last Core)

Please refer to the St. Lucie Decommissioning Study, Section 11, Page 34 and the Turkey Point Decommissioning Study, Section 10, Page 35. Number 47 for St. Lucie and number 44 for Turkey Point states that severance costs were not included in the Decommissioning Cost Estimate.

- a. Will severance costs be incurred by FPL as a result of Units 1 and 2 being shut down?
- b. If the answer to part A is yes, how does FPL anticipate severance costs be recovered by FPL?

# RESPONSE:

- a. At this time, FPL has not determined whether severance costs will be incurred as a result of Units 1 and 2 being shut down.
- b. Not applicable.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 62 Page 1 of 1

<u>QUESTION</u>: End of Life Nuclear Fuel (Last Core)

Please refer to the St. Lucie Decommissioning Study, Section 11, Page 34, No. 49, and the Turkey Point Decommissioning Cost Estimate, Section 10, Page 35, No. 46. Each of the studies states "The most recent NRC requirements for Security, Emergency Response, Fukushima, Cyber Security and any other regulatory changes have been included." Please elaborate on how each of these requirements differ from the 2015 Study and what the impact was on overall costs.

#### RESPONSE:

No additional requirements are included above what was included in the 2015 Study.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 63 Page 1 of 1

#### <u>QUESTION</u>: Site Restoration

Please refer to the St. Lucie Decommissioning Study, Section 12, Page 3 and the Turkey Point Decommissioning Study, Section 11, Page 3. Paragraph 5 of the Summary, referencing cost associated with License Termination activities, states that, "The primary driver is EnergySolutions' methodology of minimizing inefficient decontamination activity and removing buildings/structures as radiological in lieu of clean. Our experience has shown this method to reduce personnel to dose, increase general site safety, and provide schedule certainty."

- a. Please elaborate on EnergySolutions' experience with this methodology.
- b. Please provide any analysis EnergySolutions conducted that shows the proven savings associated with this methodology.

## RESPONSE:

- a. EnergySolutions (ES) has utilized this methodology at the Fort Calhoun Station in Omaha, Nebraska, and with the demolition of the Zion Nuclear Station in Zion, Illinois.
- b. ES has provided FPL with a HIGHLY SENSITIVE demonstrative exhibit reflecting an application of the methodology. This demonstrative exhibit is highly sensitive and provided by ES only for limited release.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 64 Page 1 of 1

#### <u>QUESTION</u>: Site Restoration

Please explain the Nuclear Regulatory Commission (NRC) requirements, if any, regarding site restoration.

#### **<u>RESPONSE</u>**:

Most decommissioning plans envision releasing the site to the public for unrestricted use, meaning any residual radiation would be below NRC's limits of 25 millirem annual exposure and there would be no further regulatory controls by the NRC. Final Status Surveys are performed for the end state condition to provide validation that the NRC limit is achieved. Unless, a portion of the power plant (*e.g.*, turbine/generator building) is being reutilized, it is more cost effective to demolish the remaining plant buildings and restore the site for future unrestricted use than to leave abandoned structures behind. Site restoration includes meeting state regulatory requirements to stabilize the ground surface to provide protection from storm water runoff and soil erosion.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 65 Page 1 of 1

# QUESTION: Site Restoration

Please describe, if known, FPL's future plans for the St. Lucie and Turkey Point sites after decommissioning.

# RESPONSE:

FPL has not developed plans for use of either of the nuclear plant sites after decommissioning.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 66 Page 1 of 1

# <u>QUESTION</u>: <u>Site Restoration</u>

Please generally describe the security measures that will be in place during plant decommissioning periods through the conclusion of ISFSI operational/ISFSI decommissioning periods.

# RESPONSE:

Currently, both the power reactor physical security requirements in Part 73 of Title 10 of the Code of Federal Regulations (10 CFR) and the Nuclear Regulatory Commission (NRC) security orders that apply to licensees of nuclear power reactors under 10 CFR Part 50 apply equally to operating and decommissioning power reactor licensees; the 10 CFR Part 50 license is retained after permanent cessation of operations and removal of fuel from the reactor vessel. The NRC recognizes that licensees that have permanently ceased operations and have no fuel in the reactor vessel which presents a significantly reduced risk to public health and safety compared with operating reactors. Because of the lower comparative risk from a decommissioned power reactor, licensees typically request exemptions from regulatory requirements on the basis that the application of a specific regulation in the particular circumstance of decommissioned plants is not necessary to achieve the underlying purpose of the regulations and orders.

The decommissioning cost studies for Turkey Point and St. Lucie assume that FPL will receive the exemptions needed to reduce the size of the plants' current security organization while continuing to provide reasonable assurance of adequate protection of the public health and safety and common defense and security at the sites.

The decommissioning cost studies assume that the security organization will be present full time (24-hour), with armed responders while fuel is on site and modified as decommissioning progresses.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 67 Page 1 of 1

# <u>QUESTION</u>: <u>Site Restoration</u>

Please refer to the St. Lucie Decommissioning Study, Section 11, Page 35, and the Turkey Point Decommissioning Study, Section 10, Page 35. Please elaborate as to why the INPO and Electric Power Research Institute fees are not included in the 2020 Decommissioning Study when they were included in the 2015 Study.

# **RESPONSE**:

INPO and Electric Power Research Institute fees support operations and are not required once the unit shuts down. The assumption in the study is these fees are not needed and would be immediately cancelled once St. Lucie and Turkey Point permanently shut down.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 68 Page 1 of 1

# <u>QUESTION</u>: <u>Site Restoration</u>

Please refer to the St. Lucie Decommissioning Study, Section 12, Page 6, and the Turkey Point Decommissioning Study, Section 11, Page 6. Please refer to Page 6 of the Comparison Report, Section 12 for St. Lucie, and Section 11 for Turkey Point. Under Florida LLRW Inspection Fees, please elaborate on what is meant by "the change in methodology."

# **RESPONSE**:

"The change in methodology" refers to EnergySolutions' methodology of minimizing inefficient decontamination activity and removing buildings/structures as radiological in lieu of decontaminating the facilities. Experience has shown this method will reduce personnel dose, increase general site safety, and provide schedule certainty. This methodology produces an increased amount of low-level radioactive waste (LLRW), which would increase the LLRW Inspection Fees.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 69 Page 1 of 1

## <u>QUESTION</u>: Site Restoration

Please refer to the St. Lucie Decommissioning Study, Section 12, Page 6, and the Turkey Point Decommissioning Study, Section 11, Page 6. Under Insurance & Regulatory Fees, please elaborate on each of the "multiple decommissioning milestones" that lead to the insurance premiums being reduced.

# RESPONSE:

For prompt decon scenario, the milestones would be:

- •All spent fuel removed from the spent fuel pool;
- •All radiological material removed except for the ISFSI; and
- •Spent fuel removed from the ISFSI.

# For SAFSTOR, the milestones would be:

- •All spent fuel removed from the spent fuel pool;
- •All spent fuel removed from the ISFSI; and
- •All radiological material is removed.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 70 Page 1 of 3

### <u>QUESTION</u>: General

For the purposes of the following requests, please refer to FPL's 2020 St. Lucie Decommissioning Study, Section 12, Page 5 of 10, Table 2 as well as FPL's 2020 Turkey Point Decommissioning Study, Section 11, Page 5 of 10, Table 2.

- a. Please explain in more each of the cost elements listed in these summary tables, including a sample listing of what each cost element contains.
- b. Please identify which aggregate category NRC License Termination, Spent Fuel Management, or Site Restoration – that each of the cost elements identified in 1a. was assigned to.
- c. Please explain how the Corporate Support (fixed overhead) charges shown in this summary table were developed.
- d. Please identify the Corporate Support (fixed overhead) percent used in the decommissioning cost studies.

# <u>RESPONSE</u>:

# a. General

The methodology used to identify and develop the cost centers in the estimates follows the basic approach originally presented in the AIF/NESP-036 study report, "Guidelines for Producing Commercial Nuclear Power Plant Decommissioning Cost Estimates".

**Characterization/Surveys** - costs associated with the initial radiological surveys of the plant and surrounding environment, ongoing monitoring of the decommissioning process (against an established criteria for release of material and the property), and the final radiological survey of the plant and surrounding environment required to demonstrate that the facility meets the NRC's requirements for termination of the license and release of the property for unrestricted use. (Baseline radiological surveys, final site surveys, and verification surveys).

Corporate Support (Fixed Overhead) - costs associated with site operations support.

**Decontamination & Removal** - labor and equipment costs required to flush, clean, and disassemble plant components and commodities from their installed location for transportation to a central area for processing/disposal, controlled removal of contaminated and activated concrete, remediation of any hazardous waste, excavation of soil, demolition of site buildings, etc.

**Energy** - costs associated with power purchased to support decommissioning activities (*e.g.*, operating waste processing systems, cranes, tooling, ventilation, and lighting) and for maintaining critical site services.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 70 Page 2 of 3

**Florida LLRW Inspection Fee** - costs associated with Rule 64E-5.1508 Inspection of Low- Level Radioactive Waste Shipments:

"(6) Each generator of radioactive waste whose shipment is inspected by the department's representative will be billed quarterly by the department a fee of \$1.95 per cubic foot (0.02832 cubic meter) of waste shipped or \$150.00 per shipment inspected, whichever is greater."

**Insurance & Regulatory Fees** - costs for maintaining nuclear liability and property insurance throughout the decommissioning (coverage is adjusted as decommissioning proceeds), including long term storage, costs associated with emergency planning (as long as spent fuel is in the spent fuel pool) including payments to local municipalities, costs associated with regulatory license(s), NRC costs for monitoring and approving changes in the plant's technical specifications, decommissioning related submittals (*e.g.*, exemptions, license termination plans, Final Status Surveys, etc.).

**Misc. Equipment/Site Services** - cost associated with tooling and equipment needed to support decontamination and dismantling activities (*e.g.*, contamination control equipment, rigging, portable waste processing equipment, etc.).

**Program Management** – costs associated with the organization identified to oversee the decommissioning project and manage the day-to-day site activities, similar in structure to the operating organization, although much reduced in size and function. Includes the costs for the plant personnel, supplemental engineering, and contractors.

Property Taxes - costs associated with assessed value of the property.

**Security** – costs associated with maintaining an on-site, plant security force including surveillance personnel, access/egress control and processing personnel, a rapid response contingent, training, and supervisory personnel.

**Spent Fuel Management** – costs associated with the relocation of the spent fuel from the spent fuel storage pools to the DOE and/or ISFSI, including hardware (dry storage canisters and horizontal storage modules), the labor and equipment to load the canisters with spent fuel, seal-weld the canisters, transfer the canisters, etc., as well as contractor campaign costs (*e.g.*, for mobilization, subcontractors, ancillary services, demobilization). Also, includes ISFSI operating costs and spent fuel maintenance cost.

**Spent Fuel Pool Isolation** – costs associated with isolating the spent fuel pools (power, controls, water cooling, water makeup, etc.) from the adjacent power block buildings so that decontamination and dismantlement can proceed in adjacent power block buildings without impacting spent fuel storage and fuel transfer activities.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 70 Page 3 of 3

**Waste Packaging, Transportation & Disposal (Class A, B, C)** – includes costs to package, transport, and dispose of low-level radioactive waste. The study assumes that most of the material requiring controlled disposal will be shipped to the Energy*Solutions*' facility in Utah for disposal, and that higher activity waste, not suitable for disposal at the Utah facility, will be shipped to a facility in west Texas. The costs included additional fees and surcharges for specific waste types (*e.g.*, large components such as the steam generators or irradiated metal from the reactor). **Waste Packaging, Transportation & Disposal (GTCC)** – includes costs to package, transport, and dispose of GTCC radioactive waste. Presently, a facility does not exist for the disposal of wastes exceeding 10 CFR 61 Class C limitations; therefore, the study assumes that the DOE will accept the GTCC waste along with the spent fuel.

b. The subcategory "License Termination" is used to accumulate costs that are consistent with "decommissioning" as defined by the NRC in its financial assurance regulations (*i.e.*, 10 CFR §50.75). The cost reported for this subcategory is generally sufficient to terminate the plant's operating license, recognizing that there may be some additional cost impact from spent fuel management.

The "Spent Fuel Management" subcategory contains costs associated with the packaging and transfer of spent fuel from the wet storage pools to the DOE and/or ISFSI for interim storage, as well as the transfer of the spent fuel in storage at the ISFSI to the DOE. Costs are included for the operation of the storage pools and the management of the ISFSI until such time that the transfer is complete. It does not include any spent fuel management expenses incurred prior to the cessation of plant operations, nor does it include any cost related to the final disposal of the spent fuel. This subcategory contains costs to decommission the ISFSI (as required by 10 CFR §72.30).

"Site Restoration" is used to capture costs associated with the dismantling and demolition of buildings and facilities demonstrated to be free from contamination. This includes structures never exposed to radioactive materials, as well as those facilities that have been decontaminated to appropriate levels. Structures are removed to a nominal depth of three feet below grade and backfilled.

- c. The corporate support was comprised of a site-specific value (*e.g.*, \$1.88 million for St. Lucie or \$3.3 million for Turkey Point; less the Site Tools and Equipment identified for each site \$0.6 for SL and \$0.8 for TP). The cost was shared between the two units at each site.
- d. The corporate support used in the studies was not percentage-based. See FPL's response to subpart (c) above.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 71 Page 1 of 2

# QUESTION: Spent Nuclear Fuel

For the following requests, please refer to FPL's 2020 St. Lucie Decommissioning Study, Section 2, Page 11 of 11, as well as FPL's 2020 Turkey Point Decommissioning Study, Section 2, Page 9 of 9.

- a. Since Florida Power & Light's (FPL) 2015 Decommissioning Study, has the company received any additional Spent Nuclear Fuel (SNF) reimbursements from the Federal Government as a result of the 2009 Settlement Agreement? If yes, please identify the cost and the date each cost was incurred, as well as the associated reimbursement amount and the date each associated reimbursement was received (Please present the reimbursement amounts as incremental to the total of \$233,328,195 provided in Order No. PSC-16-0250-PAA-EI, page 9).
- b. Please specify when these reimbursements detailed in 2a. have been/will be credited to ratepayers and through what mechanism.
- c. Please identify the projected costs and associated DOE recovery amounts for both St. Lucie and Turkey Point Nuclear Units, as well as the time period for when these costs and cost recovery from DOE will be incurred.
- d. Are there any cost recovery amounts currently being litigated, or has the 2009 Settlement Agreement eliminated any and all related litigation for the time being?
- e. Please explain the basis for segregating DOE recoverable SNF management costs (as specified in FPL's St. Lucie Decommissioning Study, Section 2, Page 11 of 11 and in FPL's 2020 Turkey Point Decommissioning Study Section 2, Page 9 of 9) and DOE nonrecoverable costs of SNF management. Refer to FPL's Total SNF costs in FPL's St. Lucie Decommissioning Study, Section 11, Page 36 of 45, Table 6-1 and in FPL's 2020 Turkey Point Decommissioning Study, Section 10, Page 36 of 45, Table 6-1.

# RESPONSE:

a. Yes. The date and amount of each reimbursement are as follows:

Date	Received	Amount
Expenditures through 12/31/2015	Sept 2016	\$9,230,419
Expenditures through 12/31/2016	November 2017	\$19,822,524
Expenditures through 12/31/2017	July 2020	\$19,873,563
Expenditures through 12/31/2018	Pending <sup>1</sup>	\$31,216,975
Expenditures through 12/31/2019	Pending <sup>1</sup>	\$23,517,055

<sup>&</sup>lt;sup>1</sup> See subsection (d.)

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 71 Page 2 of 2

- b. Amounts referenced in response to subsection 71a. above are credited to customers as costs are incurred and have not been charged to customers since January 1, 2010. FPL has recorded recoverable amounts to a receivable account and has not charged customers for anticipated recoverable amounts. However, as discussed in response to 71.d, a portion of 2018 and 2019 costs are in dispute as to whether such costs are reimbursable under the terms of the Settlement Agreement. Any portion of FPL's claim that is ultimately disallowed by DOE would not be credited to customers.
- c. Refer to St. Lucie and Turkey Point Decommissioning Cost Study "Appendix F-5" Estimated DOE Reimbursement by year.
- d. The Settlement Agreement eliminated the original litigation with DOE over spent fuel storage. Under the Settlement Agreement, claims are made annually by FPL to recover certain spent nuclear fuel management costs. To date, such claims have been filed through calendar year 2019. The calendar year 2020 claim will be filed in April 2021. DOE has rejected an estimated \$4.8 million in costs incurred by FPL in calendar years 2018 and 2019. FPL is disputing DOE's determination. We expect to arbitrate if negotiations fail. FPL does not currently expect any impact on post-shutdown recovery of spent nuclear fuel management costs, which are included in the scope of the nuclear decommissioning study.
- e. Consistent with FPL's prior Nuclear Decommissioning study, FPL specifically segregates the expected DOE reimbursement amounts related to spent nuclear fuel (SNF) management costs per unit (Section 2) due to its impact on the funding requirement calculation. Several points of clarification related to this question:

Each of the individual report's "Table 6-1" shows the total decommissioning costs by plant, on a decommissioning method (scenario) basis. Said another way, the costs shown in Table 6-1 are total costs to decommission units 3 and 4 combined for Turkey Pt. and total costs to decommission units 1 and 2 combined for St. Lucie depending on methodology.

The second item is that the costs shown under "Spent Fuel" in Table 6-1 for each of the scenarios represents total gross costs associated with SNF, not "DOE nonrecoverable costs of SNF management" as stated in the question.

The DOE reimbursement (Section 2) is the expected reimbursement (by unit) derived from the gross SNF costs estimated in Scenario 1 (Table 6-1) respectively. As mentioned earlier, FPL takes the gross SNF costs from Table 6-1 scenario 1 less the expected DOE reimbursement (Section 2) to calculate net SNF costs for its funding requirement calculations in Support Schedule G.

Finally, the expected DOE reimbursement amounts shown in Section 2 (Page 11 and 9) are presented in the same manner as the "total decommissioning costs" by unit shown in Section 2 (Page 3) and correspond to Appendix F-5.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 72 Page 1 of 1

# QUESTION: Spent Nuclear Fuel

FPL stated in its last Decommissioning Study that it was unaware of any state jurisdictions that have not allowed utilities to include SNF settlements in their decommissioning funding analyses (Dkt. 20150265-EI, Document No. 01157-2016, Request No. 2, Page 1 of 1). Does FPL have any update to this response? If so, please include the respective order numbers with the decisions.

# RESPONSE:

FPL is unaware of any state utility commissions that have not allowed utilities to include payments received from DOE as a result of either SNF litigation or settlement in their decommissioning funding analyses.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 73 Page 1 of 1

# QUESTION: Spent Nuclear Fuel

In FPL's 2015 Decommissioning Study, the company states that its assumed projected date for the DOE to begin any transfers/pick up of commercial SNF was 2030. (Dkt. 20150265-EI, Document No. 07868-2015, Section 3, Page 53 of 60). However, in FPL's 2020 Decommissioning Study, FPL adjusts this projected date to 2033. Please explain the basis for FPL's change in the expected date for DOE to begin any transfers/pick up of commercial SNF.

# **RESPONSE**:

The 2020 Decommissioning Study still assumes industry/commercial transfers/pickup to the DOE to begin in 2030; however, it is assumed that DOE would not begin taking spent fuel from Turkey Point and St. Lucie until 2031 (2031 in 2015 Decommissioning Study – Document F02-1714-002, Rev. 0; Section 3.8; Page 53 of 60) and 2033 (2032 in 2015 Decommissioning Study – Document F02-1714-001, Rev. 0; Section 3.8; Page 53 of 60) respectively.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 74 Page 1 of 1

## <u>QUESTION</u>: ISFSI Decommissioning

Please refer to FPL's St. Lucie Decommissioning Study, Section 11, Page 32-35 of 45 and FPL's 2020 Turkey Point Decommissioning Study, Section 10, Page 32-35 of 45 for the following requests.

- a. Please explain why EnergySolutions not include ISFSI expansion costs in their cost estimate (per assumption No. 37 for St. Lucie, assumption No. 35 for Turkey Point) despite its recognition that such an expansion may be required?
- b. The narratives on Page 10 of 11 of Section 2 of FPL's St. Lucie Decommissioning Study and Page 8 of 9 of Section 2 of FPL's 2020 Turkey Point Decommissioning Study, read, "This updated 2020 decommissioning study includes the costs relating to the construction, operation, and dismantlement of an on-site independent spent fuel storage installation (ISFSI) that is required to accommodate the timely decommissioning of the St. Lucie (Turkey Point) units." Have all such referenced ISFSI construction costs already been incurred? Please explain.
- c. What is the available capacity of the existing ISFSIs and when does FPL anticipate the ISFSI's may reach capacity?
- d. What is FPL's inventory of dry casks and other dry storage containment structures and materials at the St. Lucie and Turkey Point nuclear units, and when does FPL anticipate that these inventories will be placed into service?

# RESPONSE:

- a. The 2020 DCEs for Turkey Point and St Lucie assume any required ISFISI buildout will be complete prior to permanent plant shutdown, and therefore such costs are not included as decommissioning costs.
- b. Any and all costs for any required ISFSI expansion for both Turkey Point and St. Lucie will be incurred prior to permanent plant shutdown.
- c. For the ISFSI PAD, FPL has recently begun to evaluate alternatives for storage design to minimize impact and scope of pad expansion. St. Lucie will fill 1st pad with 2022 spring campaign. Turkey Point has significant space and if the alternative system can be used, it will not require expansion through end of license.
- d. FPL purchases dry casks when needed for a spent fuel loading campaign. Spares are not ordered. The last placed Horizontal Storage Modules (HSMs) are not used until a new set is installed for radiological safety when assembling new set of HSMs.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 75 Page 1 of 1

# <u>QUESTION</u>: ISFSI Decommissioning

Please refer to FPL's St. Lucie Decommissioning Study, Section 11, Appendix B-1 and FPL's Turkey Point Decommissioning Study, Section 10, Appendix B-1. Please explain why EnergySolutions has differing DOE transfer timing expectations for wet fuel (2034) versus dry fuel (2047).

# RESPONSE:

Per FPL's spent fuel schedule, it is assumed that the DOE will not transfer from both the spent fuel pool and the ISFSI simultaneously. It is assumed that the DOE will begin transfer from the spent fuel pool prior to a plant ceasing operation and continue until all spent fuel has been transferred from the pool to either the DOE or to the ISFSI. At which time the DOE will begin removing material from the ISFSI (dry fuel). This difference in timing shown in Appendix B-1 is not intended to be a different operation only to show that in Period 1 (Turkey Point and St. Lucie) and Period 2 (St. Lucie) the spent fuel will be transferred directly from the spent fuel pool, while in Period 5 the spent fuel will be transferred from the ISFSI.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 76 Page 1 of 2

# <u>QUESTION</u>: ISFSI Decommissioning

Please identify the annual pre-shutdown spent fuel management costs (historical and projected) associated with the spent fuel pools and the ISFSIs for St. Lucie and Turkey Point Nuclear Units. Further, please also identify how and when such costs have been/will be recovered from FPL customers, and the amount and timing of related DOE reimbursements.

# RESPONSE:

# St. Lucie and Turkey Point Pre-Shutdown Spent Fuel Pool Costs:

Prior to shut down, FPL Spent Fuel Pool maintenance consists of several activities performed by various site staff groups to maintain the Spent Fuel Pool on each unit. Activities performed by the site consist of the following:

- Operations Non-Licensed Operators demineralizer valve is locked closed and observe housekeeping. entering the rooms twice daily to inspect the differential pressure (DP) on the water purification filters, water level, validate the
- Chemistry performs weekly sampling of water chemical composition for boron concentration and isotopic activity; monthly for pH, conductivity, Fluoride, Chloride, Sulfate, Turbidity, Reactive Silica and Total Silica; and quarterly for Calcium, Magnesium and Aluminum; they also are responsible for the disposal of the contaminated water purification filters when replaced.
- Nuclear Fuel personnel perform monthly Foreign Material Exclusion (FME) log validations, housekeeping observations and an annual inventory and validation of fuel assembly locations.
- Maintenance support and replace the water purification filters upon notification from Operations that the filter DP reaches the specified limit which occurs quarterly, maintains the lighting as well as required maintenance and repairs to the cooling pumps and motors.

Similarly, there are activities to maintain the building enclosing the Spent Fuel Pool. Neither the incurred costs nor the forecasted costs are specifically segregated but are included in the base operating expenses of the site. Base operating expenses have been/will be recovered through base rates.

# St. Lucie and Turkey Point Pre-Shutdown ISFSI Costs:

FPL ISFSI costs consist of equipment and labor needed for site staff groups and external contractors to remove spent nuclear fuel from the Spent Fuel Pool and to place it in ISFSI for dry storage, as well ongoing maintenance and surveillance of the ISFSI.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 76 Page 2 of 2

The annual pre-shutdown spent fuel management costs (historical and projected) associated with the ISFSIs for St. Lucie and Turkey Point Nuclear Units submitted to the DOE for reimbursement, together with the historical amounts recovered from Government reimbursements, are set forth below. The Settlement Agreement between FPL and the Government recovers most, but not all, ISFSI related expenses. FPL submits claims in April of each year for costs incurred in the previous year that should be recovered under the Settlement Agreement. FPL is typically reimbursed in the year the claim is submitted unless FPL disputes amounts that the Department of Energy has rejected for reimbursement. As noted below, any amounts reimbursed by the Government offset costs incurred. If an amount is not reimbursed by the Government, such amount is recovered through base rates.

ucie and	Turkey Poin	t H	istorical An	d F	orecast Sp	ent Fu	el Mana	igemen	t Costs -	ISFSI
Year		Re	DOE imbursement Amount		Total Costs					
1997 - 2007	Final	\$	77,152,032		99,676,062					
2008	Final	\$	17,951,796	\$	21,674,523					
2009	Final	\$	20,247,584	\$	30,511,609					
2010	Final	\$	57,079,526	\$	57,291,987					
2011	Final	\$	31,152,911	\$	31,148,888					
2012	Final	\$	10,804,886	\$	10,819,659					
2013	Final	\$	13,269,632	\$	13,419,190					
2014	Final	\$	5,670,812	\$	5,673,067					
2015	Final	\$	9,230,419	\$	9,403,912					
2016	Final	\$	19,822,524	\$	19,915,627					
2017	Final	\$	19,873,563	\$	20,208,015					
2018	Request - Est.		Pending	\$	31,216,975					
2019	Request - Est.		Pending	\$	23,517,055					
2020	Estimate			\$	27,834,018					
2021	Forecast			\$	31,501,469					
2022	Forecast			\$	19,757,139					
2023	Forecast			\$	24,042,920					
2024	Forecast			\$	23,711,841					
2025	Forecast			\$	36,173,081					
2026	Forecast			\$	24,566,290					
	Total	\$	282,255,686	\$	562,063,326					

FPL forecasted amounts are only available through 2026. The gross forecasted amount is reported. As noted above, not all amounts are recovered under the Settlement Agreement.

Also refer to Staff's First Data Request, No. 71(b), related to reimbursement to FPL customers.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 77 Page 1 of 1

<u>QUESTION</u>: <u>Dry Fuel/GTCC Storage and Transfer</u>

Please refer to FPL's 2020 St. Lucie Decommissioning Study, Section 12, Page 8 and 9 of 10, and FPL's 2020 Turkey Point Decommissioning Study, Section 11, Page 8 and 9 of 10. Please explain how/where the Greater than Class C (GTCC) packaging costs were accounted for in the 2015 Decommissioning Cost Estimate (DCE) compared to the 2020 DCE for both St. Lucie and Turkey Point.

## **RESPONSE:**

In the 2020 DCE, the costs for the GTCC are assumed to be packaged in the same canisters used for the spent fuel. These costs are included in Appendix C-1, section 3a.8.

The 2015 St. Lucie DCE states in Section 1, Page 9 in Document F02-1714-001, Rev. 0 that "The GTCC is packaged in the same canisters used for spent fuel and either stored on site or shipped directly to a DOE facility as it is generated (depending upon the timing of the decommissioning and whether the spent fuel has been removed from the site prior to the start of decommissioning)."

The St. Lucie 2015 DCE in Table C-1, Unit 1 period 5d and Unit 2 period 3d contains costs associated with GTCC. The Turkey Point DCE contains costs associated with GTCC in period 3d for both units.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 78 Page 1 of 1

# <u>QUESTION</u>: Dry Fuel/GTCC Storage and Transfer

In the Decommissioning Cost Analysis sections of FPL's 2020 St. Lucie and Turkey Point Decommissioning Studies (Section 11, Page 15 of 45 and Section 10, Page 15 of 45, respectively) the narrative states "[a]lthough courts have held that DOE is obligated to accept and dispose of GTCC, issues regarding potential costs remain potentially unsettled. Therefore, EnergySolutions conservatively estimates a GTCC waste disposal cost." Please elaborate on these "unsettled issues" regarding potential GTCC disposal costs and why EnergySolutions, LLC deemed it necessary to include a conservative GTCC disposal cost in their cost analysis at this time.

# RESPONSE:

While the courts have stated that the DOE is obligated to accept the GTCC material, the ruling did not state that the DOE would be obligated to dispose of the GTCC material for free. Based on this information, the conservative disposal costs have been included in the 2020 DCE.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 79 Page 1 of 1

# <u>QUESTION</u>: Spent Fuel Management

Please refer to FPL's 2020 St. Lucie Decommissioning Study, Section 12, Page 7 of 10 and FPL's 2020 Turkey Point Decommissioning Study, Section 11, Page 7 of 10. Under Spent Fuel Management, the narrative states that a portion of the 49.2% decrease in the Spent Fuel Management Costs estimate from the 2015 Decommissioning Study is attributed to "the anticipated savings by FPL of 25% for the container material and equipment due to bulk purchasing." Please list any other factors that may have contributed to this 49.2% estimated decrease in Spent Fuel Management Costs.

# RESPONSE:

Turkey Point – Another factor is the 20-year operating extension. While this does not reduce the need for the ISFSI maintenance and security, the 2020 Decommissioning Cost Estimate (DCE) only provides costs for these items post shutdown of the facility. 2015 DCE included costs for an ISFSI expansion, whereas the 2020 DCE does not.

St. Lucie – In addition to the 25% savings of the containers, the assumption that all spent fuel will be removed from the Independent Spent Fuel Storage Installation (ISFSI) by 2071 will save two years of security and ISFSI maintenance costs as compared to the 2015 DCE. The 2015 DCE also included costs for an ISFSI expansion, whereas the 2020 DCE does not.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 80 Page 1 of 1

### <u>QUESTION</u>: Transportation

Please refer to FPL's St. Lucie Decommissioning Study, Section 11, Page 14 of 45 and FPL's 2020 Turkey Point Decommissioning Study, Section 10, Page 14 of 45. The narrative states, "Transportation costs for the selected routes and modes are obtained from vendor quotes or published tariffs whenever possible." Please identify the source the EnergySolutions used to develop their transportation cost estimates.

# **RESPONSE**:

EnergySolutions utilized their internal transportation groups for pricing of waste packaging and transportation.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 81 Page 1 of 1

# <u>QUESTION</u>: <u>Document Requests - Nuclear Decommissioning Trust Fund</u>

Please provide the most recent status report FPL submitted to the NRC regarding its decommissioning funds. Please also note when the next status report due to the NRC.

# RESPONSE:

Please see Attachment No. 1 to this data request, No. 81. The next status report is due by March 31, 2021.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 81 Attachment 1 of 1 Page 1 of 26



## MAR 2 5 2019

L-2019-046 10 CFR 50.75(f)(1) 10 CFR 72.30(c)

Nuclear Regulatory Commission Attn: Document Control Desk Washington, DC 20555-0001

RE: St. Lucie Units 1 and 2 Docket Nos. 50-335 and 50-389 Docket No. 72-61

> Turkey Point Units 3 and 4 Docket Nos. 50-250 and 50-251 Docket No. 72-62

NextEra Energy Seabrook, LLC Seabrook Station Docket No. 50-443 Docket No. 72-63

NextEra Energy Point Beach, LLC Point Beach Units 1 and 2 Docket Nos. 50-266, 50-301 Docket No. 72-05

Decommissioning Funding Status Reports / Independent Spent Fuel Storage Installation (ISFSI) Financial Assurance Update

Pursuant to 10 CFR 50.75(f)(1) and 10 CFR 72.30(c), enclosed are the Decommissioning Funding Status (DFS) Reports and Independent Spent Fuel Storage Installation Financial Assurance Update for the following units:

- 1. St. Lucie Units 1 and 2
- 2. Turkey Point Units 3 and 4
- 3. Seabrook Station
- 4. Point Beach Units 1 and 2

Florida Power and Light Company (FPL) is the sole owner of Turkey Point Units 3 and 4 and St. Lucie Unit 1. FPL, Florida Municipal Power Agency, and Orlando Utilities Commission own St. Lucie Unit 2. The report for St. Lucie Unit 2 provides the status of decommissioning funding for all three owners of that unit.

Florida Power & Light Company

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 81 Attachment 1 of 1 Page 2 of 26

L-2019-046 Page 2 of 2

NextEra Energy Seabrook, LLC (Seabrook), Hudson Light and Power Department, Massachusetts Municipal Wholesale Electric Company, and Taunton Municipal Lighting Plant own Seabrook Station. The report for Seabrook Station provides the status of decommissioning funding for all four owners of that unit.

NextEra Energy Point Beach, LLC is the sole owner of Point Beach Units 1 and 2.

This letter contains no new commitments and no revisions to existing commitments.

Should there be any questions, please contact Steve Catron at (561) 304-6206.

Wo

William Parks Nuclear Licensing and Regulatory Compliance Director

Enclosures (2)

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 81 Attachment 1 of 1 Page 3 of 26

# Enclosure 1

Decommissioning Funding Status Reports 10 CFR 50.75(f)(1)

- St. Lucie Units 1 and 2
- Turkey Point Units 3 and 4
- Seabrook Station
- Point Beach Units 1 and 2

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 81 Attachment 1 of 1 Page 4 of 26

#### St. Lucie Nuclear Plant – Unit 1 Florida Power and Light Company (FPL), Decommissioning Funding Status Report

1. The minimum decommissioning fund estimate pursuant to 10 CFR 50.75(b) and (c).
Plant Owner (% Ownership)
NRC
Minimum (a)

 Minimum (a)

 FPL (100%)
 491,668,470

(a) Refer to St. Lucie Unit 1 for calculation assumptions

2. The amount accumulated at the end of the calendar year preceding the date of the report. (Trust fund balance is net of taxes)

	Total <sup>1</sup>
FPL (100%)	1,016,752,531

3. Projected Funds at Shutdown (2% real rate of return).

		Total
	FPL (100%) (see note (b))	1,428,728,538
	(b) Pursuant to Florida Public Service Commission (FPSC) Order No. PS PAA-EI, customer contributions to the decommissioning trust remain a June 29, 2016.	
•	Any contracts upon which the licensee is relying pursuant to 10 CFR 50.75(e)(1)(v).	None
•	Any modifications to a licensee's method of providing financial assurance occurring since the last submitted report.	None

6. Any material changes to trust agreements.

None

4.

5.

<sup>&</sup>lt;sup>1</sup> NRC letter dated November 26, 2008, St. Lucie Plant, Unit Nos. 1 and 2 – Biennial Decommissioning Funding Report (TAC Nos. MD9354 and MD9355), directed FPL to report all funds within the trust as designated for radiological decommissioning purposes since FPL does not earmark each cost component of decommissioning within the trust. However, the trust includes non-earmarked funds for spent fuel management and site restoration purposes collected at the direction of the Florida Public Service Commission (FPSC). FPL understands that under NRC guidance, either an order of the FPSC or an NRC exemption would be necessary to utilize the funds for these non-radiological purposes. For informational purposes only, St. Lucie Unit 1 allocates the trust account amounts by license termination, spent fuel management and site restoration costs based on assumptions from the decommissioning cost study filed in December 2015 with the FPSC.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 81 Attachment 1 of 1 Page 5 of 26

### ST. LUCIE NUCLEAR PLANT - UNIT 1 NRC Minimum Decommissioning Cost Determination

NRC Minimum = \$101.58 million X (0.65L + 0.13E + 0.22B)

Where:

\$101.58 million is value for reference PWR in 1986 dollars

L = Labor escalation factor to current year<sup>3</sup>

E = Energy escalation factor to current year<sup>4</sup>

B = LLRW escalation factor to current year<sup>5</sup>

#	Item Description	Value
1	Labor escalation factor for Quarter 4, 2018 <sup>3</sup>	132.5
2	Base adjustment factor from NUREG-1307 <sup>2</sup>	1.98
3	Escalation factor from NUREG-1307	100
4	L = #1 times #2 divided by #3	2.62
5	Electric power escalation factor, 2018 <sup>6</sup>	240.2
6	Electric power escalation factor for Jan., 1986 from NUREG-1307	114.2
7	Fuel escalation factor for 2018 <sup>7</sup>	223.6
8	Fuel escalation factor for Jan., 1986 from NUREG-1307	82
9	P = #5 divided by #6	2.10
10	F = #7 divided by #8	2.73
11	E = 0.58P(#9) + 0.42F(#10) per NUREG-1307	2.37
12	Value of B from Table 2.1 of NUREG-1307 <sup>5</sup>	12.853
13	0.65L(#4) + 0.13E(#11) + 0.22B(#12)	4.84
14	1986 minimum-millions of dollars for PWR	101.58
15	2018 minimum-millions of dollars: #13 times #14	491.7

<sup>&</sup>lt;sup>2</sup> NUREG 1307, Rev 17, Table 3.2

<sup>&</sup>lt;sup>3</sup> NUREG 1307 specified that source is Bureau of Labor Statistics Data, Employment Cost Index, Series CIU201000000220I (South Region).

<sup>&</sup>lt;sup>4</sup> NUREG 1307 specifies that source is a weighted calculation using Bureau of Labor Statistics Data, Producer Price Index-Commodities, Series wpu0573 (light fuel oils) and wpu0543 (industrial electric power).

<sup>&</sup>lt;sup>5</sup> NUREG 1307 provides a value for B in Table 2.1.

<sup>&</sup>lt;sup>6</sup> December 2018 value is 240.2 (See note #4) Information was preliminary as of 01/15/19.

<sup>&</sup>lt;sup>7</sup> December 2018 value is 223.6 (See note #4) Information was preliminary as of 01/15/19.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 81 Attachment 1 of 1 Page 6 of 26

### ST. LUCIE NUCLEAR PLANT - UNIT 1

The St. Lucie Unit 1 trust includes non-earmarked funds for spent fuel management and site restoration purposes collected at the direction of the Florida Public Service Commission (FPSC). FPL understands that under NRC guidance, either an order of the FPSC or an NRC exemption would be necessary to utilize the funds for these non-radiological purposes. For informational purposes only, the data summarized below allocates the NRC license termination portion of the trust fund balance based upon percentages in FPL's most recent FPSC decommissioning cost study. St. Lucie Unit 1 is utilizing the formula method to demonstrate financial assurance pursuant to 10CFR 50.75(b).

TLG Cost Study (thousands of \$2015)	St. Lucie Unit 1
License Termination	589,149
Spent Fuel Management	296,190
Site Restoration	49,309
Total	934,648
Category %	
License Termination	63.03%
Spent Fuel Management	31.69%
Site Restoration	5.28%
Total	100%
	ent e
Projected Trust Fund Balance at Shutdown	1,428,728,538

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 81 Attachment 1 of 1 Page 7 of 26

St. Lucie Nuclear Plant – Unit 2 Florida Power and Light Company (FPL), Florida Municipal Power Agency (FMPA), Orlando Utilities Commission (OUC) Decommissioning Funding Status Report

1. The minimum decommissioning fund estimate pursuant to 10 CFR 50.75(b) and (c).

Plant Owner (% Ownership)	NRC Minimum (a)
FPL (85.10449%)	418,431,944
FMPA (8.806%)	43,296,326
OUC (6.08951%)	29,940,201
Total	491,668,470

(a) Refer to St. Lucie Unit 2 for calculation assumptions

2. The amount accumulated at the end of the calendar year preceding the date of the report. (Trust fund balances are net of taxes)

	Total <sup>8</sup>
FPL (85.10449%)	860,941,961
FMPA (8.806%)	81,873,016
OUC (6.08951%)	42,227,949
Total	985,042,925

### 3. Projected Funds at Shutdown (2% real rate of return).

	Total
FPL (85.10449%) (see note (b))	1,392,455,52
FMPA (8.806%) (see note (c))	132,418,37
OUC (6.08951%) (see note (c))	68,297,91
	otal 1.593,171,81

(b) Pursuant to Florida Public Service Commission (FPSC) Order No. PSC-16-0250-PAA-EI, customer contributions to the decommissioning trust remain at zero effective June 29, 2016.

(c) Assumes no contributions to the fund.

### Any contracts upon which the licensee is relying pursuant to 10 CFR 50.75(e)(1)(v).

None

5. Any modifications to a licensee's method of providing financial assurance occurring since the last submitted report.

None

6. Any material changes to trust agreements.

None

<sup>&</sup>lt;sup>8</sup> NRC letter dated November 26, 2008, St. Lucie Plant, Unit Nos. 1 and 2 – Biennial Decommissioning Funding Report (TAC Nos. MD9354 and MD9355), directed FPL to report all funds within the trust as designated for radiological decommissioning purposes since FPL does not earmark each cost component of decommissioning within the trust. However, the trust includes non-earmarked funds for spent fuel management and site restoration purposes collected at the direction of the Florida Public Service Commission (FPSC). FPL understands that under NRC guidance, either an order of the FPSC or an NRC exemption would be necessary to utilize the funds for these non-radiological purposes. For informational purposes only, St. Lucie Unit 2, allocates the trust account amounts by license termination, spent fuel management and site restoration costs based on assumptions from the decommissioning cost study filed in December 2015 with the FPSC.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 81 Attachment 1 of 1 Page 8 of 26

### ST. LUCIE NUCLEAR PLANT - UNIT 2 NRC Minimum Decommissioning Cost Determination

NRC Minimum = \$101.58 million X (0.65L + 0.13E + 0.22B)

Where:

\$101.58 million is value for reference PWR in 1986 dollars

L = Labor escalation factor to current year<sup>10</sup>

E = Energy escalation factor to current year<sup>11</sup>

B = LLRW escalation factor to current year<sup>12</sup>

#	Item Description	Value
1	Labor escalation factor for Quarter 4, 2018 <sup>10</sup>	132.5
2	Base adjustment factor from NUREG-1307 9	1.98
3	Escalation factor from NUREG-1307	100
4	L = #1 times #2 divided by #3	2.62
5	Electric power escalation factor, 2018 <sup>13</sup>	240.2
6	Electric power escalation factor for Jan., 1986 from NUREG-1307	114.2
7	Fuel escalation factor for 2018 <sup>14</sup>	223.6
8	Fuel escalation factor for Jan., 1986 from NUREG-1307	82
9	P = #5 divided by #6	2.10
10	F = #7 divided by #8	2.73
11	E = 0.58P(#9) + 0.42F(#10) per NUREG-1307	2.37
12	Value of B from Table 2.1 of NUREG-1307 <sup>12</sup>	12.853
13	0.65L(#4) + 0.13E(#11) + 0.22B(#12)	4.84
14	1986 minimum-millions of dollars for PWR	101.58
15	2018 minimum-millions of dollars: #13 times #14	491.7

<sup>9</sup> NUREG 1307, Rev 17, Table 3.2

<sup>&</sup>lt;sup>10</sup> NUREG 1307 specified that source is Bureau of Labor Statistics Data, Employment Cost Index, Series CIU201000000220I (South Region).

<sup>&</sup>lt;sup>11</sup> NUREG 1307 specifies that source is a weighted calculation using Bureau of Labor Statistics Data, Producer Price Index-Commodities, Series wpu0573 (light fuel oils) and wpu0543 (industrial electric power).

<sup>&</sup>lt;sup>12</sup> NUREG 1307 provides a value for B in Table 2.1.

<sup>&</sup>lt;sup>13</sup> December 2018 value is 240.2 (See note #11) Information was preliminary as of 01/15/19.

<sup>&</sup>lt;sup>14</sup> December 2018 value is 223.6 (See note #11) Information was preliminary as of 01/15/19.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 81 Attachment 1 of 1 Page 9 of 26

#### ST. LUCIE NUCLEAR PLANT - UNIT 2

The St. Lucie Unit 2 trust includes non-earmarked funds for spent fuel management and site restoration purposes collected at the direction of the Florida Public Service Commission (FPSC). FPL understands that under NRC guidance, either an order of the FPSC or an NRC exemption would be necessary to utilize the funds for these non-radiological purposes. For informational purposes only, the data summarized below allocates the NRC license termination portion of the trust fund balance based upon percentages in FPL's most recent FPSC decommissioning cost study. St. Lucie Unit 2 is utilizing the formula method to demonstrate financial assurance pursuant to 10CFR 50.75(b).

Florida Power and Light Company Decommissioning Trust Fund - License Termination Fun As of December 31, 2018	ds			
TLG Cost Study (thousands of \$2015)	St. Lucie Unit 2	FPL	FMPA	OUC
License Termination	619,088			
Spent Fuel Management	190,515			
Site Restoration	62,228			
Total	871,831			
Category %				
License Termination	71.01%			
Spent Fuel Management	21.85%			
Site Restoration	7.14%			
Total	100%			
Projected Trust Fund Balance at Shutdown	<b>*</b> 1,593,171,813	1,392,455,526	132,418,372	68,297,915
Projection at Shutdown - License Termination Portion (Allocation based on TLG Study)	1,131,312,779	988,783,958	94,030,409	48,498,413

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 81 Attachment 1 of 1 Page 10 of 26

None

None

None

#### Turkey Point Nuclear Plant – Unit 3 Florida Power and Light Company (FPL), Decommissioning Funding Status Report

 1. The minimum decommissioning fund estimate pursuant to 10 CFR 50.75(b) and (c).

 Plant Owner (% Ownership)
 NRC

 Minimum (a)
 FPL (100%)
 475,652,555

FPL (100%) (a) Refer to Turkey Point Unit 3 for calculation assumptions

2. The amount accumulated at the end of the calendar year preceding the date of the report. (Trust fund balance is net of taxes)

	Total <sup>15</sup>
FPL (100%)	839,232,304

3. Projected Funds at Shutdown (2% real rate of return).

	Total
FPL (100%) (see note (b))	1,097,718,787

(b) Pursuant to Florida Public Service Commission (FPSC) Order No. PSC-16-0250-PAA-EI, customer contributions to the decommissioning trust remain at zero effective June 29, 2016.

- Any contracts upon which the licensee is relying pursuant to 10 CFR 50.75(e)(1)(v).
- Any modifications to a licensee's method of providing financial assurance occurring since the last submitted report.
- 6. Any material changes to trust agreements.

<sup>&</sup>lt;sup>15</sup> NRC letter dated November 26, 2008, St. Lucie Plant, Unit Nos. 1 and 2 – Biennial Decommissioning Funding Report (TAC Nos. MD9354 and MD9355), directed FPL to report all funds within the trust as designated for radiological decommissioning purposes since FPL does not earmark each cost component of decommissioning within the trust. However, the trust includes non-earmarked funds for spent fuel management and site restoration purposes collected at the direction of the Florida Public Service Commission (FPSC). FPL understands that under NRC guidance, either an order of the FPSC or an NRC exemption would be necessary to utilize the funds for these non-radiological purposes. For informational purposes only, Turkey Point Unit 3, allocates the trust account amounts by license termination, spent fuel management and site restoration costs based on assumptions from the decommissioning cost study filed in December 2015 with the FPSC

Florida Power & Light Company Docket No. 20200257-EI **Staff's First Data Request** Request No. 81 Attachment 1 of 1 Page 11 of 26

### **TURKEY POINT NUCLEAR PLANT - UNIT 3** NRC Minimum Decommissioning Cost Determination

NRC Minimum = \$98.27 million X (0.65L + 0.13E + 0.22B)

Where:

\$98.27 million is value for reference PWR in 1986 dollars L = Labor escalation factor to current year<sup>17</sup>

E = Energy escalation factor to current year<sup>18</sup>

B = LLRW escalation factor to current year<sup>19</sup>

#	Item Description	Value
1	Labor escalation factor for Quarter 4, 2018 <sup>17</sup>	132.5
2	Base adjustment factor from NUREG-1307 <sup>16</sup>	1.98
3	Escalation factor from NUREG-1307	100
4	L = #1 times #2 divided by #3	2.62
5	Electric power escalation factor, 2018 <sup>20</sup>	240.2
6	Electric power escalation factor for Jan., 1986 from NUREG-1307	114.2
7	Fuel escalation factor for 2018 <sup>21</sup>	223.6
8	Fuel escalation factor for Jan., 1986 from NUREG-1307	82
9	P = #5 divided by #6	2.10
10	F = #7 divided by #8	2.73
11	E = 0.58P(#9) + 0.42F(#10) per NUREG-1307	2.37
12	Value of B from Table 2.1 of NUREG-1307 <sup>19</sup>	12.853
13	0.65L(#4) + 0.13E(#11) + 0.22B(#12)	4.84
14	1986 minimum-millions of dollars for PWR	98.27
15	2018 minimum-millions of dollars: #13 times #14	475.7

<sup>&</sup>lt;sup>16</sup> NUREG 1307, Rev 17, Table 3.2

<sup>&</sup>lt;sup>17</sup> NUREG 1307 specified that source is Bureau of Labor Statistics Data, Employment Cost Index, Series CIU201000000220I (South Region).

<sup>&</sup>lt;sup>18</sup> NUREG 1307 specifies that source is a weighted calculation using Bureau of Labor Statistics Data, Producer Price Index-Commodities, Series wpu0573 (light fuel oils) and wpu0543 (industrial electric power).

<sup>&</sup>lt;sup>19</sup> NUREG 1307 provides a value for B in Table 2.1.

<sup>&</sup>lt;sup>20</sup> December 2018 value is 240.2. (See note #18) Information was preliminary as of 01/15/19.

<sup>&</sup>lt;sup>21</sup> December 2018 value is 223.6 (See note #18) Information was preliminary as of 01/15/19.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 81 Attachment 1 of 1 Page 12 of 26

#### **TURKEY POINT NUCLEAR PLANT - UNIT 3**

The Turkey Point Unit 3 trust includes non-earmarked funds for spent fuel management and site restoration purposes collected at the direction of the Florida Public Service Commission (FPSC). FPL understands that under NRC guidance, either an order of the FPSC or an NRC exemption would be necessary to utilize the funds for these nonradiological purposes. For informational purposes only, the data summarized below allocates the NRC license termination portion of the trust fund balance based upon percentages in FPL's most recent FPSC decommissioning cost study. Turkey Point Unit 3 is utilizing the formula method to demonstrate financial assurance pursuant to 10CFR 50.75(b).

Florida Power and Light Company
Decommissioning Trust Fund - License Termination Funds
As of December 31, 2018

TLG Cost Study (thousands of \$2015)	Turkey Point Unit 3
License Termination	580,783
Spent Fuel Management	224,586
Site Restoration	40,665
Total	846,034
Category %	
License Termination	68.65%
Spent Fuel Management	26.55%
Site Restoration	4.81%
Total	100%
Projected Trust Fund Balance at Shutdown	1,097,718,787
Projection at Shutdown - License Termination Portion (Allocation based on TLG Study)	753,558,852

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 81 Attachment 1 of 1 Page 13 of 26

555

None

None

#### Turkey Point Nuclear Plant – Unit 4 Florida Power and Light Company (FPL), Decommissioning Funding Status Report

 1. The minimum decommissioning fund estimate pursuant to 10 CFR 50.75(b) and (c).

 Plant Owner (% Ownership)

 NRC

 Minimum (a)

FPL (100%)	475,652,
(a) Refer to Turkey Point Unit 4 for calculation	

assumptions

2. The amount accumulated at the end of the calendar year preceding the date of the report. (Trust fund balance is net of taxes)

	Total <sup>22</sup>
FPL (100%)	948,100,859

3. Projected Funds at Shutdown (2% real rate of return).

	Total
FPL (100%) (see note (b))	1,258,077,527
	and the second

(b) Pursuant to Florida Public Service Commission (FPSC) Order No. PSC-16-0250-PAA-EI, customer contributions to the decommissioning trust remain at zero effective June 29, 2016.

- Any contracts upon which the licensee is relying pursuant to 10 CFR 50.75(e)(1)(v).
- 5. Any modifications to a licensee's method of providing financial assurance occurring since the last submitted report. None
- 6. Any material changes to trust agreements.

<sup>&</sup>lt;sup>22</sup> NRC letter dated November 26, 2008, St. Lucie Plant, Unit Nos. 1 and 2 – Biennial Decommissioning Funding Report (TAC Nos. MD9354 and MD9355), directed FPL to report all funds within the trust as designated for radiological decommissioning purposes since FPL does not earmark each cost component of decommissioning within the trust. However, the trust includes non-earmarked funds for spent fuel management and site restoration purposes collected at the direction of the Florida Public Service Commission (FPSC). FPL understands that under NRC guidance, either an order of the FPSC or an NRC exemption would be necessary to utilize the funds for these non-radiological purposes. For informational purposes only, Turkey Point Unit 4, allocates the trust account amounts by license termination, spent fuel management and site restoration costs based on assumptions from the decommissioning cost study filed in December 2015 with the FPSC.

Florida Power & Light Company Docket No. 20200257-EI **Staff's First Data Request** Request No. 81 Attachment 1 of 1 Page 14 of 26

### **TURKEY POINT NUCLEAR PLANT - UNIT 4** NRC Minimum Decommissioning Cost Determination

NRC Minimum = \$98.27 million X (0.65L + 0.13E + 0.22B)

Where:

98.27 million is value for reference PWR in 1986 dollars L = Labor escalation factor to current year<sup>24</sup>

E = Energy escalation factor to current year<sup>25</sup>

B = LLRW escalation factor to current year<sup>26</sup>

#	Item Description	Value
1	Labor escalation factor for Quarter 4, 2018 24	132.5
2	Base adjustment factor from NUREG-1307 23	1.98
3	Escalation factor from NUREG-1307	100
4	L = #1 times #2 divided by #3	2.62
5	Electric power escalation factor, 2018 <sup>27</sup>	240.2
6	Electric power escalation factor for Jan., 1986 from NUREG-1307	114.2
7	Fuel escalation factor for 2018 <sup>28</sup>	223.6
8	Fuel escalation factor for Jan., 1986 from NUREG-1307	82
9	P = #5 divided by #6	2.10
10	F = #7 divided by #8	2.73
11	E = 0.58P(#9) + 0.42F(#10) per NUREG-1307	2.37
12	Value of B from Table 2.1 of NUREG-1307 <sup>26</sup>	12.853
13	0.65L(#4) + 0.13E(#11) + 0.22B(#12)	4.84
14	1986 minimum-millions of dollars for PWR	98.27
15	2018 minimum-millions of dollars: #13 times #14	475.7

<sup>23</sup> NUREG 1307, Rev 17, Table 3.2

<sup>&</sup>lt;sup>24</sup> NUREG 1307 specified that source is Bureau of Labor Statistics Data, Employment Cost Index, Series CIU201000000220I (South Region).

<sup>25</sup> NUREG 1307 specifies that source is a weighted calculation using Bureau of Labor Statistics Data, Producer Price Index-Commodities, Series wpu0573 (light fuel oils) and wpu0543 (industrial electric power).

<sup>&</sup>lt;sup>26</sup> NUREG 1307 provides a value for B in Table 2.1.

<sup>&</sup>lt;sup>27</sup> December 2018 value is 240.2 (See note #25) Information was preliminary as of 01/15/19.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 81 Attachment 1 of 1 Page 15 of 26

#### **TURKEY POINT NUCLEAR PLANT - UNIT 4**

The Turkey Point Unit 4 trust includes non-earmarked funds for spent fuel management and site restoration purposes collected at the direction of the Florida Public Service Commission (FPSC). FPL understands that under NRC guidance, either an order of the FPSC or an NRC exemption would be necessary to utilize the funds for these nonradiological purposes. For informational purposes only, the data summarized below allocates the NRC license termination portion of the trust fund balance based upon percentages in FPL's most recent FPSC decommissioning cost study. Turkey Point Unit 4 is utilizing the formula method to demonstrate financial assurance pursuant to 10CFR 50.75(b).

TLG Cost Study (thousands of \$2015)	Turkey Point Unit 4
License Termination	624,798
Spent Fuel Management	255,084
Site Restoration	53,633
Total	933,515
Category %	
License Termination	66.93%
Spent Fuel Management	27.33%
Site Restoration	5.75%
Total	100%
Projected Trust Fund Balance at Shutdown	1,258,077,527
Projection at Shutdown - License Termination Portion (Allocation based	
on TLG Study)	842,026,451

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 81 Attachment 1 of 1 Page 16 of 26

#### Seabrook Station NextEra Energy Seabrook, LLC, Hudson Light and Power Department, Massachusetts Municipal Wholesale Electric Company, Taunton Municipal Lighting Plant Decommissioning Funding Status Report<sup>29</sup>

# 1. The minimum decommissioning fund estimate pursuant to 10 CFR 50.75(b) and (c). Plant Owner (% Ownership) NRC Minimum (a) NextEra Energy Seabrook, LLC. (88.22889%) 467,981,914 Hudson Light and Power Department (.07737%) 410,384 Massachusetts Municipal Wholesale Electric Company (11.5934%) 61,493,480 Taunton Municipal Lighting Plant (.10034%) 532,221 Total

(a) Refer to Seabrook for calculation assumptions

# 2. The amount accumulated at the end of the calendar year preceding the date of the report. (Trust fund balances are net of taxes)

		Total <sup>30</sup>
NextEra Energy Seabrook, LLC. (88.22889%)		625,374,110
Hudson Light and Power Department (.07737%)		551,959
Massachusetts Municipal Wholesale Electric Company (11.5934%)		61,431,124
Taunton Municipal Lighting Plant (.10034%)		720,042
Т	otal	688,077,235

#### 3. Projected Funds at Shutdown (2% real rate of return).

	Total
NextEra Energy Seabrook, LLC. (88.22889%)	1,246,867,218
Hudson Light and Power Department (.07737%)	1,100,493
Massachusetts Municipal Wholesale Electric Company (11.5934%)	122,481,014
Taunton Municipal Lighting Plant (.10034%)	1,435,615
Total	1,371,884,340

<sup>&</sup>lt;sup>29</sup> The New Hampshire Nuclear Decommissioning Financing Committee (NDFC) was established under New Hampshire law to provide assurance of adequate funding for decommissioning of nuclear generating facilities. This was intended "to ensure proper and safe decommissioning and subsequent surveillance of nuclear reactor sites to the extent necessary to prevent such sites from constituting a hazard to future generations." RSA 162-F:1. The NDFC is responsible for determining the appropriate amount of money that needs to be set aside and maintained in a trust fund, for the purpose of decommissioning any nuclear facilities located in the state of New Hampshire.
<sup>30</sup> NRC letter dated November 26, 2008, St. Lucie Plant, Unit Nos. 1 and 2 – Biennial Decommissioning Funding Report (TAC Nos.

<sup>&</sup>lt;sup>30</sup> NRC letter dated November 26, 2008, St. Lucie Plant, Unit Nos. 1 and 2 – Biennial Decommissioning Funding Report (TAC Nos. MD9354 and MD9355), directed FPL to report all funds within the trust as designated for radiological decommissioning purposes since FPL does not earmark each cost component of decommissioning within the trust. The Seabrook trusts contain non-earmarked funds for spent fuel management and site restoration purposes collected at the direction of the NDFC. NextEra understands that under NRC guidance, either an order of the NDFC or an NRC exemption would be necessary to utilize the funds for these non-radiological purposes. For informational purposes only, Seabrook allocates the trust account amounts by license termination, spent fuel management and site restoration costs based on assumptions from the decommissioning cost study filed in 2015 with the NDFC.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 81 Attachment 1 of 1 Page 17 of 26

	Seabrook Station NextEra Energy Seabrook, LLC, Hudson Light and Power Department, Massachusetts Municipal Wholesale Electric Company, Taunton Municipal Lighting Plant Decommissioning Funding Status Report	
4.	Any contracts upon which the licensee is relying pursuant to 10 CFR 50.75(e)(1)(v).	None
5.	Any modifications to a licensee's method of providing financial assurance occurring since the last submitted report.	None
6.	Any material changes to trust agreements.	None

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 81 Attachment 1 of 1 Page 18 of 26

#### SEABROOK STATION NRC Minimum Decommissioning Cost Determination

NRC Minimum = \$105 million X (0.65L + 0.13E + 0.22B)

Where:

\$105 million is value for reference PWR in 1986 dollars

L = Labor escalation factor to current year $^{32}$ 

E = Energy escalation factor to current year<sup>33</sup>

B = LLRW escalation factor to current year<sup>34</sup>

#	Item Description	Value
1	Labor escalation factor for Quarter 4, 2018 32	136.5
2	Base adjustment factor from NUREG-1307 31	2.16
3	Escalation factor from NUREG-1307	100
4	L = #1 times #2 divided by #3	2.95
5	Electric power escalation factor, 2018 35	240.2
6	Electric power escalation factor for Jan., 1986 from NUREG-1307	114.2
7	Fuel escalation factor for 2018 <sup>36</sup>	223.6
8	Fuel escalation factor for Jan., 1986 from NUREG-1307	82
9	P = #5 divided by #6	2.10
10	F = #7 divided by #8	2.73
11	E = 0.58P(#9) + 0.42F(#10) per NUREG-1307	2.37
12	Value of B from Table 2.1 of NUREG-1307 34	12.853
13	0.65L(#4) + 0.13E(#11) + 0.22B(#12)	5.05
14	1986 minimum-millions of dollars for PWR	105
15	2018 minimum-millions of dollars: #13 times #14	530.4

<sup>&</sup>lt;sup>31</sup> NUREG 1307, Rev 17, Table 3.2

<sup>&</sup>lt;sup>32</sup> NUREG 1307 specified that source is Bureau of Labor Statistics Data, Employment Cost Index, and Series CIU201000000210I (Northeast Region).

<sup>&</sup>lt;sup>33</sup> NUREG 1307 specifies that source is a weighted calculation using Bureau of Labor Statistics Data, Producer Price Index-Commodities, Series wpu0573 (light fuel oils) and wpu0543 (industrial electric power).

<sup>&</sup>lt;sup>34</sup>NUREG 1307 provides a value for B in Table 2.1.

<sup>&</sup>lt;sup>35</sup> December 2018 value is 240.2 (See note #33) Information was preliminary as of 01/15/19.

<sup>&</sup>lt;sup>36</sup> December 2018 value is 223.6 (See note #33) Information was preliminary as of 01/15/19.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 81 Attachment 1 of 1 Page 19 of 26

#### SEABROOK STATION

The Seabrook trusts contain non-earmarked funds for spent fuel management and site restoration purposes collected at the direction of the New Hampshire Decommissioning Financing Committee (NDFC). NextEra understands that under NRC guidance, either an order of the NDFC or an NRC exemption would be necessary to utilize the funds for these non-radiological purposes. For informational purposes only, the data summarized below allocates the trust account amounts by license termination, spent fuel management and site restoration costs based on assumptions from the decommissioning cost study filed in 2015 with the NDFC. Seabrook is utilizing the formula method to demonstrate financial assurance pursuant to 10CFR 50.75(b).

NextEra Energy Seabrook, LLC Decommissioning Trust Fund - License Termination Funds As of December 31, 2018					
TLG Cost Study Scenario 1 (thousands of \$2015)	Seabrook	NextEra	Hudson	MMWEC	Taunton
License Termination	647,542				
Spent Fuel Management	232,292				
Site Restoration	51,564				
Total	931,398				
Component % License Termination	69.52%				
Spent Fuel Management	24.94%				
Site Restoration	5.54%				
Total	100%				
Projected Trust Fund Balance at Shutdown	1,371,884,340	1,246,867,218	1,100,493	122,481,014	1,435,615
Projection at Shutdown - License Termination Portion (Allocation based on TLG Study)	953,784,236	866,867,754	765,103	85,153,287	998,092

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 81 Attachment 1 of 1 Page 20 of 26

None

None

None

#### Point Beach Nuclear Plant – Unit 1 NextEra Energy Point Beach, LLC (NextEra), Decommissioning Funding Status Report

1. The minimum decommissioning fund estimate pursuant to 10 CFR 50.75(b) and (c).

	NRC Minimum (a)
NextEra (100%)	447,277,992
(a) Pofer to Point Reach Unit 1 for calcula	tion

(a) Refer to Point Beach Unit 1 for calculation assumptions.

2. The amount accumulated at the end of the calendar year preceding the date of the report. (Trust fund balance is net of taxes)

	Total
NextEra (100%)	401,729,516

3. Projected Funds at Shutdown (2% real rate of return).

	Total
NextEra (100%) (see note (b))	544,878,255
(b) Projection includes a pro-rata credit during the 10CFR 50.75(e)(1)(ii).	dismantlement period pursuant to
Any contracts upon which the licensee is relying	a pursuant to

- 5. Any modifications to a licensee's method of providing financial assurance occurring since the last submitted report.
- 6. Any material changes to trust agreements.

10 CFR 50.75(e)(1)(v).

4.

Florida Power & Light Company Docket No. 20200257-EI **Staff's First Data Request** Request No. 81 Attachment 1 of 1 Page 21 of 26

#### **POINT BEACH NUCLEAR PLANT - UNIT 1** NRC Minimum Decommissioning Cost Determination

NRC Minimum = \$90.84 million X (0.65L + 0.13E + 0.22B)

Where:

\$90.84 million is value for reference PWR in 1986 dollars L = Labor escalation factor to current year<sup>38</sup>

E = Energy escalation factor to current year<sup>39</sup>

B = LLRW escalation factor to current year<sup>40</sup>

#	Item Description	Value
1	Labor escalation factor for Quarter 4, 2018 44	132.3
2	Base adjustment factor from NUREG-1307 43	2.08
3	Escalation factor from NUREG-1307	100
4	L = #1 times #2 divided by #3	2.75
5	Electric power escalation factor, 2018 41	240.2
6	Electric power escalation factor for Jan., 1986 from NUREG-1307	114.2
7	Fuel escalation factor for 2018 <sup>42</sup>	223.6
8	Fuel escalation factor for Jan., 1986 from NUREG-1307	82
9	P = #5 divided by #6	2.10
10	F = #7 divided by #8	2.73
11	E = 0.58P(#9) + 0.42F(#10) per NUREG-1307	2.37
12	Value of B from Table 2.1 of NUREG-1307 46	12.853
13	0.65L(#4) + 0.13E(#11) + 0.22B(#12)	4.92
14	1986 minimum-millions of dollars for PWR	90.84
15	2018 minimum-millions of dollars: #13 times #14	477.3

<sup>37</sup> NUREG 1307, Rev 17, Table 3.2

<sup>&</sup>lt;sup>38</sup> NUREG 1307 specified that source is Bureau of Labor Statistics Data, Employment Cost Index, Series CIU201000000230I (Midwest Region).

<sup>&</sup>lt;sup>39</sup> NUREG 1307 specifies that source is a weighted calculation using Bureau of Labor Statistics Data, Producer Price Index-Commodities, Series wpu0573 (light fuel oils) and wpu0543 (industrial electric power).

<sup>&</sup>lt;sup>40</sup> NUREG 1307 provides a value for B in Table 2.1.

<sup>&</sup>lt;sup>41</sup> December 2018 value is 240.2 (See note #45) Information was preliminary as of 01/15/19.

<sup>&</sup>lt;sup>42</sup> December 2018 value is 223.6 (See note #45) Information was preliminary as of 01/15/19.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 81 Attachment 1 of 1 Page 22 of 26

None

#### Point Beach Nuclear Plant – Unit 2 NextEra Energy Point Beach, LLC (NextEra), Decommissioning Funding Status Report

1. The minimum decommissioning fund estimate pursuant to 10 CFR 50.75(b) and (c).

	NRC Minimum (a)
NextEra (100%)	447,277,992
(a) Pofor to Point Boach Unit 2 for calculation	

(a) Refer to Point Beach Unit 2 for calculation assumptions.

2. The amount accumulated at the end of the calendar year preceding the date of the report. (Trust fund balance is net of taxes)

	Total
NextEra (100%)	378,522,034

3. Projected Funds at Shutdown (2% real rate of return).

		Total
	NextEra (100%) (see note (b))	538,507,257
	(b) Projection includes a pro-rata credit during the dismantlement period 10CFR 50.75(e)(1)(ii).	d pursuant to
4.	Any contracts upon which the licensee is relying pursuant to 10 CFR 50.75(e)(1)(v).	None
5.	Any modifications to a licensee's method of providing financial assurance occurring since the last submitted report.	None

6. Any material changes to trust agreements.

Florida Power & Light Company Docket No. 20200257-EI **Staff's First Data Request Request No. 81** Attachment 1 of 1 Page 23 of 26

#### **POINT BEACH NUCLEAR PLANT - UNIT 2** NRC Minimum Decommissioning Cost Determination

NRC Minimum = \$90.84 million X (0.65L + 0.13E + 0.22B)

Where:

\$90.84 million is value for reference PWR in 1986 dollars L = Labor escalation factor to current year<sup>44</sup>

E = Energy escalation factor to current year<sup>45</sup>

B = LLRW escalation factor to current year<sup>46</sup>

#	Item Description	Value	
1	Labor escalation factor for Quarter 4, 2018 50	132.3	
2	Base adjustment factor from NUREG-1307 49	2.08	
3	Escalation factor from NUREG-1307		
4	L = #1 times #2 divided by #3		
5	Electric power escalation factor, 2018 47		
6	Electric power escalation factor for Jan., 1986 from NUREG-1307	114.2	
7	Fuel escalation factor for 2018 48		
8	Fuel escalation factor for Jan., 1986 from NUREG-1307		
9	P = #5 divided by #6	2.10	
10	F = #7 divided by #8		
11	E = 0.58P(#9) + 0.42F(#10) per NUREG-1307	2.37	
12	Value of B from Table 2.1 of NUREG-1307 52	12.853	
13	0.65L(#4) + 0.13E(#11) + 0.22B(#12)		
14	1986 minimum-millions of dollars for PWR	90.84	
15	2018 minimum-millions of dollars: #13 times #14	447.3	

1

<sup>43</sup> NUREG 1307, Rev 17, Table 3.2

<sup>44</sup> NUREG 1307 specified that source is Bureau of Labor Statistics Data, Employment Cost Index, Series CIU201000000230I (Midwest Region).

<sup>45</sup> NUREG 1307 specifies that source is a weighted calculation using Bureau of Labor Statistics Data, Producer Price Index-

Commodities, Series wpu0573 (light fuel oils) and wpu0543 (industrial electric power).

<sup>&</sup>lt;sup>46</sup> NUREG 1307 provides a value for B in Table 2.1.

<sup>&</sup>lt;sup>47</sup> December 2018 value is 240.2 (See note #51) Information was preliminary as of 01/15/19.

<sup>&</sup>lt;sup>48</sup> December 2018 value is 223.6 (See note #51) Information was preliminary as of 01/15/19.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 81 Attachment 1 of 1 Page 24 of 26

# Enclosure 2

Independent Spent Fuel Storage Installation (ISFSI) Decommissioning Financial Assurance Update 10 CFR 72.30(c)

٠

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 81 Attachment 1 of 1 Page 25 of 26

#### ISFSI Decommissioning Financial Assurance Update 10 CFR 72.30(c)

Site-specific ISFSI decommissioning cost estimates were submitted with the Decommissioning Funding Status Reports dated March 30, 2017. The site-specific studies remain valid for technological and status changes, but have been escalated to account for inflation. The following table adjusts the current ISFSI Decommissioning Funding Plans to 2018 dollars.

Site	Trust Balance as of 12/31/18 (\$Thousands)	Projected 10 CFR 50.75 Decommissioning Trust Fund Value (\$Thousands)	NRC Minimum Amount per 10 CFR 50.75(b) (\$Thousands)	Decommissioning Trust Fund Value Surplus (\$Thousands)	ISFSI Decommissioning Cost Estimate (\$Thousands)	
St. Lucie Unit 1	1,016,753	1,428,729	491,668	937,060	4,970	
St. Lucie Unit 2 - FPL	860,942	1,392,456	418,432	974,024	4,230	
St. Lucie Unit 2 - FMPA	81,873	132,418	43,296	89,122	438	
St. Lucie Unit 2 - OUC	42,228	68,298	29,940	38,358	303	
Turkey Point Unit 3	839,232	1,097,719	475,653	622,066	4,064	
Turkey Point Unit 4	948,101	1,258,078	475,653	782,425	4,064	
Seabrook - NextEra	625,374	1,246,867	467,982	778,885	5,166	
Seabrook - MMWEC	61,431	122,481	61,493	60,988	679	
Seabrook - Tauton	720	1,436	532	903	6	
Seabrook - Hudson	552	1,100	410	690	5	

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 81 Attachment 1 of 1 Page 26 of 26

The following tables supplement the 2015/2016 ISFSI decommissioning funding plans to address new information that may affect the previously submitted reports in accordance with 10 CFR 72.30(c)(1-4).

Spills of radioactive material producing additional residual			
radioactivity in onsite subsurface material	None		
Facility modifications	None		
Changes in authorized possession limits			
Actual remediation costs that exceed previous cost estimate			
St. Lucie (Florida Power and Light Company)			
Spills of radioactive material producing additional residual			
radioactivity in onsite subsurface material	None		
Facility modifications	None		
Changes in authorized possession limits			
Actual remediation costs that exceed previous cost estimate	None		
Seabrook (NextEra Energy Seabrook, LLC) Spills of radioactive material producing additional residual			
radioactivity in onsite subsurface material	None		
Facility modifications	None		
Changes in authorized possession limits	None		
Actual remediation costs that exceed previous cost estimate	None		

Spills of radioactive material producing additional residual	
radioactivity in onsite subsurface material	None
Facility modifications	None
Changes in authorized possession limits	None
Actual remediation costs that exceed previous cost estimate	None

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 82 Page 1 of 1

<u>QUESTION</u>: <u>Document Requests - Nuclear Decommissioning Trust Fund</u>

Please provide a copy of The U.S. Economy, 30-Year Focus, August 2020, published by Global Insight.

<u>RESPONSE</u>: Please see Attachment No. 1 to this Data Request, No. 82.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 83 Page 1 of 1

<u>QUESTION</u>: <u>Document Requests - Nuclear Decommissioning Trust Fund</u>

If other than August 2020, please provide a copy of the most-recent edition of The U.S. Economy, 30-Year Focus, published by Global Insight.

**<u>RESPONSE</u>**:

Please see Attachment No. 1 to this Data Request, No. 83.

The attachment is the "U.S. Economy, 30-Year Focus, published by Global Insight" as of November 2020.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 84 Page 1 of 1

<u>QUESTION</u>: <u>Document Requests - Nuclear Decommissioning Trust Fund</u>

Please provide an electronic copy of the spreadsheets (in MS Excel format with all formulas intact) of Schedules G, Pages 7-8, for both the 2020 Turkey Point and St. Lucie decommissioning cost estimates.

<u>RESPONSE</u>: Please see Attachment No. 1 to this Data Request, No. 84.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 85 Page 1 of 1

<u>QUESTION</u>: <u>Document Requests - Nuclear Decommissioning Trust Fund</u>

Please refer to the Decommissioning Study for St. Lucie, Section 11, Page 34. Please provide a copy of the local labor rate schedule used for estimating the cost of decommissioning FPL's St. Lucie Nuclear Units.

<u>RESPONSE</u>: Please see confidential Attachment No. 1 for this Data Request, No. 85.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 86 Page 1 of 1

<u>QUESTION</u>: <u>Document Requests - Nuclear Decommissioning Trust Fund</u>

Please refer to the Decommissioning Study for Turkey Point, Section 10, Page 34. Please provide a copy of the local labor rate schedule used for estimating the cost of FPL's Turkey Point Nuclear Units.

<u>RESPONSE</u>: Please see confidential Attachment No. 1 for this Data Request, No. 86.

Florida Power & Light Company Docket No. 20200257-EI Staff's First Data Request Request No. 87 Page 1 of 1

## <u>QUESTION</u>: <u>Document Requests - Nuclear Decommissioning Trust Fund</u>

This request is associated with Data Request No. 58. Please refer to the Decommissioning Cost Study, Page 16, Section 3.6 for both St. Lucie and Turkey Point. If the AIF/NESP-036 study report, "Guidelines for Producing Commercial Nuclear Power Plant Decommissioning Cost Estimates" upon which contingency values were based has been updated or changed since 2015, please provide a copy. If the report has not changed and the version used for this Study is the same version as the one FPL utilized for its 2015 Decommissioning Study, please simply so state and no copy of the report is necessary.

## RESPONSE:

The report used for the 2020 Decommissioning Cost Estimate is the same version as the one utilized for the 2015 Decommissioning Study.