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December 14, 2020

**-VIA ELECTRONIC FILING-**

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

Re: Docket No. _____
Florida Power & Light Company's 2020 Decommissioning Study

Dear Mr. Teitzman:

In compliance with Rule 25-6.04365, F.A.C., I am enclosing for filing on behalf of Florida Power & Light Company ("FPL") the Petition of Florida Power & Light Company for Approval of its 2020 Decommissioning Study. The 2020 Nuclear Decommissioning Study, including its Executive Summary, is attached to the Petition. The study results are based on estimates and assumptions that follow Nuclear Regulatory Commission ("NRC") requirements and industry guidelines for the development of the costs to remove and dismantle nuclear power plants decades into the future. Funds are maintained and interest reinvested in the decommissioning trusts as required by the NRC, Internal Revenue Service, Federal Energy Regulatory Commission and this Commission. Under federal law, these funds may only be used for nuclear decommissioning, are not available for any other use, and do not earn a return or profit for FPL. Key findings:

(1) The trusts remain adequately funded so that FPL customers are not required to bear undue risk of incurring additional costs when the time comes to decommission FPL's nuclear power plants.
(2) FPL customers have not contributed to the decommissioning trusts since 2005, and the study confirms that, as of December 31, 2020, the trusts continue to be adequately funded without FPL customer contributions.

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

Sincerely,

*/s/ William P. Cox*
William P. Cox
Senior Attorney
Florida Bar No. 0093531

Enclosure

**BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

| | | |
|---|---|---|
| In re: Petition of Florida Power & Light Company for Approval of its 2020 Nuclear Decommissioning Study | ) ) ) ) | Docket No. _____ Filed: December 14, 2020 |

**PETITION OF FLORIDA POWER & LIGHT COMPANY FOR APPROVAL OF ITS 2020 NUCLEAR DECOMMISSIONING STUDY**

Florida Power & Light Company ("FPL"), pursuant to Rule 25-6.04365, Florida Administrative Code ("F.A.C."), petitions the Commission to approve FPL's updated study concerning the decommissioning of its nuclear generation units (the "2020 Decommissioning Study"). The 2020 Decommissioning Study is comprised of two separate volumes, for the St. Lucie and Turkey Point plant sites, which are attached hereto and incorporated herein by reference.

1. Pursuant to Rule 25-6.0435, F.A.C., each utility that owns a nuclear generating plant is required to file a Nuclear Decommissioning Study on a regular basis to ensure that there are sufficient funds on hand at the time of decommissioning to meet all required expenses. As shown in the 2020 Decommissioning Study, based on FPL's assumptions such as the rate of burial cost escalation and fund earnings assumptions, maintaining the current annual accrual of $0 will satisfy FPL's retail share of the future cost of total nuclear decommissioning costs. Therefore, FPL requests no change to the accrual for nuclear decommissioning.

2. In addition, as required by the Commission in Order No. PSC-16-0250-PAA-EI, FPL has updated its estimates for the last core of nuclear fuel ("Last Core") and end of life materials and supplies ("EOL M&S") inventories as part of the 2020 Decommissioning Study. FPL requests no change in the accruals for Last Core and EOL M&S at this time. FPL will

address the updated estimates for Last Core and EOL M&S in its accruals as part of FPL's next general base rate proceeding.

WHEREFORE, FPL respectfully requests that the Commission approve its 2020 Decommissioning Study.

Respectfully submitted,

R. Wade Litchfield, Esq.
Vice President and General Counsel
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By: /s/ *William P. Cox*
William P. Cox
Fla. Bar No. 0093531

**CERTIFICATE OF SERVICE**
**Docket No. 2020_____**

**I HEREBY CERTIFY** that a true and correct copy of Florida Power & Light Company's Petition for Approval of its 2020 Nuclear Decommissioning Study has been furnished by electronic service on December 14, 2020 to the following:

| | |
|---|---|
| Mary Anne Helton, Esq.<br>Deputy General Counsel<br>Division of Legal Services<br>Florida Public Service Commission<br>2540 Shumard Oak Blvd<br>Tallahassee, Florida 32399-0850<br>mhelton@psc.state.fl.us | J. R. Kelly, Esq.<br>Office of Public Counsel<br>c/o The Florida Legislature<br>111 West Madison Street, Room 812<br>Tallahassee, Florida 32399<br>Kelly.jr@leg.state.fl.us |

By: /s/ *William P. Cox*
William P. Cox
Fla. Bar No. 0093531

# FLORIDA POWER & LIGHT COMPANY

# 2020 DECOMMISSIONING STUDY

## ST. LUCIE NUCLEAR UNIT
## NOS. 1 & 2

**December 2020**

**Florida Power & Light Company**
**2020 Decommissioning Study**
**St. Lucie Nuclear Units**

**TABLE OF CONTENTS**

**Section Numbers:**

# SECTION 1

# EXECUTIVE SUMMARY

Overview

FPL's 2020 Nuclear Decommissioning Study results are based on estimates and assumptions that follow Nuclear Regulatory Commission ("NRC") requirements and industry guidelines for the development of the costs to remove and dismantle nuclear power plants years into the future. Funds are maintained and interest is reinvested in the decommissioning trusts as required by the NRC, Internal Revenue Service, Federal Energy Regulatory Commission ("FERC") and Florida Public Service Commission ("FPSC" or the "Commission"). Under federal law, these funds may only be used for nuclear decommissioning, are not available for any other use and do not earn a return or profit for FPL. The study is essentially a snapshot, which shows that based on current assumptions FPL's nuclear decommissioning trust funds are appropriately funded, i.e., the current fund balances exceed the expected costs of decommissioning on a present value basis. Compared to 2015, the currently calculated funding position has improved due in part to the Turkey Point license extension which will allow funds to grow for an additional twenty years as well as a slight decrease in future decommissioning costs. FPL customers have not contributed to the decommissioning trusts since 2005, and the study confirms that, as of December 31, 2020, the trusts continue to be adequately funded without additional FPL customer contributions.

Decommissioning studies represent the aggregation of numerous estimates for activities and costs that will not be incurred for at least 15 years. As such, they are highly dependent upon input assumptions that can and will change over time, such that future funding positions could differ from today's position. The 2020 Nuclear Decommissioning Study was prepared by EnergySolutions, LLC ("EnergySolutions"). As such adjustments to the underlying assumptions referenced above netted an overall reduction in cost of 23.5% for Turkey Point and 3.4% for St. Lucie between the 2020 and 2015 studies. The decrease in cost for Turkey Point is primarily a result of the license extension. A detailed analysis of the changes in assumptions is provided in the last section (Section 11 and 12) of each site reports. The current assumed long-term fund earnings rate of 4.0 percent is 0.3 percent higher than the assumption utilized in the 2015 study due to changes in the allocations in the investment portfolio plus the impact of the Turkey Point license extension. Such changes, regardless of direction, reaffirm the importance of maintaining adequate funding and the value of the periodic review of these studies as required by FPSC rule.

2020 Study Approach

The information contained in this 2020 Decommissioning Study is presented in compliance with Rule 25-6.04365, Florida Administrative Code, and prior Commission Orders. FPL contracted EnergySolutions, a company experienced in managing nuclear decommissioning activities and a leader in radioactive waste management and disposal, to prepare its 2020 site-specific nuclear decommissioning cost analysis and comparison reports, which are estimated based on NRC requirements, industry guidelines, and prior experience. EnergySolutions includes the most up-to-date actual decommissioning information available to ensure the methodology used to prepare the cost analysis is reasonable.

FPL selected the DECON (immediate dismantlement) decommissioning option for its units. The DECON method provides not only a lower cost, but also enables a coordinated sequence of decommissioning events, which allows for a one-time mobilization of contractor personnel and equipment. FPL's choice of the DECON method is consistent with the method in prior studies approved by the Commission for purposes of determining FPL's appropriate accrual and funding requirements.

Escalation Rate

The 2020 Decommissioning Study assumes that future decommissioning costs grow at an average rate of approximately 3.15 percent per year. This is a small decrease over the average escalation rate of 3.19 percent assumed in the 2015 study. While FPL believes that the current escalation rates are reasonable for the purpose of the 2020 Decommissioning Study, it should be noted that subsequent changes in the assumed escalation rate could increase, which would result in higher projected future decommissioning costs.

Spent Fuel Management

Consistent with prior studies and assumptions approved by the Commission, the decommissioning cost estimates include the cost associated with interim storage of spent nuclear fuel ("SNF") on site until such time the Department of Energy ("DOE") is able to remove SNF from the site. Consistent with the 2015 study, FPL reflects the reimbursements from the US. Government to cover the cost incurred for managing and storing SNF that would not have been incurred but for DOE's delay in SNF disposal. As such and for purposes of this study, the DOE is expected to make payments to FPL to cover spent fuel management costs incurred by FPL prior to 2063 for St. Lucie and 2059 for Turkey Point. The ultimate timing and amount of reimbursements will depend on many factors, including but not limited to, the DOE's ability to receive SNF and the Government's compliance with the terms of the Settlement Agreement.

Conclusion

The 2020 Decommissioning Study indicates that the trusts are at an adequate funding level given current assumptions and projections. FPL has earned its customers' trust by using careful, prudent investment strategies in all facets of its business including the management of its nuclear decommissioning trusts. Despite market volatility, the funds remain secure. As a result, FPL's current annual expense accrual requirements for decommissioning costs presented in this study support a zero accrual and funding requirement as of December 31, 2020.

In addition, as required by the Commission in Order Nos. FPSC-02-0055-PAA-EI and FPSC-10-0153-FOF-EI, FPL has updated its estimates for End-of-Life Nuclear Fuel Last Core and End-of-Life Materials and Supplies Inventory balances for each of its nuclear sites. This information is provided for informational purposes with this study. FPL is not requesting a change in accruals at this time. Rather, FPL believes that the results of these updated values should be addressed in FPL's next base rate proceeding and that the appropriate changes in accruals, if any, should be made at that time.

# SECTION 2

# ASSUMPTIONS

**Florida Power & Light Company**
**2020 Decommissioning Study**
**St. Lucie Nuclear Units**
**Assumptions**



Assumptions Summary

Following is a summary of the assumptions used to derive the annual accrual, and funding and revenue requirements. These assumptions are more fully developed on the following pages.

| | Unit No. 1 | Unit No. 2 |
|---|---|---|
| Decommissioning Method | SAFSTOR/ Integrated DECON (Prompt Removal/ Dismantling | DECON (Prompt Removal/ Dismantling) |
| Total Decommissioning Cost Per EnergySolutions, LLC *(Current cost estimate in 2020 $)* | $923,401,000 | $822,060,000 |
| FPL's Cost of Decommissioning - Jurisdictional & net of Unit No. 2 Participants' obligation *(Current cost estimate in 2020 $)* | $884,079,000 | $680,377,000 |
| Method of Funding (2020 – End) | Qualified/ Nonqualified | Qualified/ Nonqualified |
| Funding Periods (Years to License Expiration) | 15.21 | 22.29 |
| Assumed Fund Earnings rate | 4.0% | 4.0% |
| Average Escalation Rate for Decommissioning Costs (2020 – End) | 3.15% | 3.19% |
| FPL Ownership Allocation (%) | 100% | 86.45% |
| FPSC Jurisdictional Separation Factor (%) | 95.74% | 95.74% |
| Estimated Fund Balance: Qualified Fund (As of 12/31/20) | $682,354,000 | $623,913,000 |
| Estimated Fund Balance: Nonqualified Fund (As of 12/31/20) | $188,063,000 | $91,606,000 |

| | Unit No. 1 | Unit No. 2 |
|---|---|---|
| End of Life M & S Inventory Value: Net of Participants' obligation (As of 12/31/20) | N/A | $30,746,340 |
| End of Life Nuclear Fuel Last Core Value: Net of Participants' obligation (As of 12/31/20) | $56,900,000 | $55,700,000 |
| Year of Last Pick Up of Spent Fuel | 2071 | 2071 |
| Expected DOE Reimbursement *(Current cost estimate in 2020 $)* | $207,268,000 | $150,174,000 |

Decommissioning Methods

For purposes of this analysis, decommissioning is defined as the activity whereby nuclear facilities are removed safely from service and residual radioactivity is reduced to a level that permits release of the property for unrestricted use and termination of the operating license granted under Title 10 CFR Part 50. 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.

The Nuclear Regulatory Commission (NRC) has defined three acceptable decommissioning methods: Prompt Removal/Dismantling (DECON); Safe Storage/Deferred Decontamination (SAFSTOR); and Entombment (ENTOMB). The study utilizes the NRC terminology, but also includes the additional activities required to accommodate the non-contaminated portion of the facilities.

The DECON and SAFSTOR alternatives were both examined and are presented in the EnergySolutions Decommissioning Cost Analysis (Section 11) of this filing. The ENTOMB alternative was not considered, because it is considered impractical for a facility which generates significant amounts of long-lived radioactive material due to neutron activation. FPL selected an integrated DECON decommissioning option for St. Lucie Units 1 and 2. Due to the difference in the operating license period of Units 1 and 2, this option entails approximately 7 years of dormancy (SAFSTOR) for Unit 1 followed by prompt dismantlement (DECON) of both Units 1 and 2. The integrated DECON method provides not only a lower cost, but also enables a sequence of events, which allows for a one-time mobilization of contractor personnel and equipment. This method is consistent with the method in prior studies approved by the Commission for purposes of determining the appropriate accrual and funding requirements.

Total Decommissioning Costs

Below are the total estimated costs of decommissioning the St. Lucie facility as provided by FPL's consultant, EnergySolutions, LLC in 2020 dollars.

| St. Lucie Unit No. 1 | |
|---|---|
| Labor | $443,308,000 |
| Equip & Materials | 143,311,000 |
| Transportation | 56,142,000 |
| Burial | 193,616,000 |
| Other | 87,025,000 |
| **Total** | **$923,401,000** |

| St. Lucie Unit No. 2 | |
|---|---|
| Labor | $406,964,000 |
| Equip & Materials | 111,197,000 |
| Transportation | 54,503,000 |
| Burial | 185,856,000 |
| Other | 63,540,000 |
| **Total** | **$822,060,000** |

Funding Method

In Docket No. 810100-EU, Order No. 10987 issued July 13, 1982, the FPSC ordered FPL to establish a funded reserve. Beginning in 1983 FPL began making contributions, on a net of tax basis, to an externally funded reserve. In 1986, the Treasury Department issued temporary regulations under Internal Revenue Code Section 468A relating to the deductibility of contributions made to a qualified decommissioning fund. These regulations, which were finalized in March of 1988, provide for an annual election by the taxpayer to make tax-deductible contributions to a qualified nuclear decommissioning fund. Qualified nuclear decommissioning funds have been established by FPL for each of the four nuclear units. FPL elected to make contributions to the qualified funds, to the maximum allowed, for the years 1984 through 1987, 1992 through 2004 and for the year to date period ended August 31, 2005. Per the Stipulation and Settlement Agreement approved by the Commission in FPSC Order No. FPSC-05-0902-S-EI, FPL suspended accruals effective September 1, 2005, and as such, no additional contributions to the funds have been made subsequent to that date.

The funding analysis presented in Schedule G of this study indicates that no additional contributions to the qualified and nonqualified funds are projected to be required through the remainder of the funding period that ends with the expiration of the unit's operating license. Only the after-tax earnings of the trust fund investments are assumed to continue to be reinvested and accumulated in the respective funds. Future decommissioning expenditures are assumed to be distributed from the qualified and nonqualified funds in proportion to the balance accumulated at the time of expenditure.

Funding Period

The funding period, to the extent funding is required, is that period over which revenues are collected from ratepayers for purposes of decommissioning the St. Lucie Units. Funding periods for both units end on the last day of the month in which the operating license for the unit is due to expire. The operating license expiration dates for the St. Lucie units are as follows.

- St. Lucie Unit No. 1 - March 1, 2036
- St. Lucie Unit No. 2 - April 6, 2043

Based on the results of the funding analysis presented in Support Schedule G, no additional funding is required at this time.

Fund Earnings Rate

For purposes of this 2020 study update and funding analysis, the projected annual funds earnings rate, net of taxes and all other administrative costs charged to the trust funds, for Units 1 and 2 qualified and nonqualified fund investments, is assumed to be 4.0%. This assumption is based on a projected real long-term, after tax and net of fees, earnings rate of 2.0% plus an estimated long term average inflation rate of 2.0%. The long-term, after tax and net of fees earnings rate reflects the projection of continued adequacy of the funds and assumes a conservative investment strategy where the funds are moved to 100% fixed income prior to the first year of decommissioning and a more conservative all bonds & cash asset mix in the final years of decommissioning. FPL recognizes that over the long-term period there will likely be periods when the earned return may be greater or less than the assumed 4.0%. Consistent with prior Commission practice and Rule 25-6.04365 F.A.C. the assumptions presented in this 2020 study will be reviewed and updated as appropriate “at least once every five years”.

The annual rates of change in CPI were taken from “The U. S. Economy, The 30 – Year Outlook, August 2020”, published by Global Insight.

Escalation Rate

The annual escalation rates used to estimate total future dismantlement costs from 2020 through the final year of decommissioning are as follows:

| | Average Annual Escalation Rate |
|---|---|
| St. Lucie Unit No. 1 | 3.15% |
| St. Lucie Unit No. 2 | 3.19% |

The above rates were derived by applying separate inflation indices to each of the major cost components of Labor, Materials and Equipment, Transportation, Burial, and Other.

| Cost Component | Inflation Index |
|---|---|
| Labor | Compensation per Hour (Nonfarm) |
| Materials and Equipment | PPI - Intermediate Materials, Supplies, and Components |
| Transportation | GDP Deflator – Transportation Services |
| Burial | FPL Analysis & CPI |
| Other | GDP (Implicit) |

For purposes of this 2020 study update, the inflation indices were obtained from "The U.S. Economy, The 30 – Year Outlook, August 2020", published by Global Insight except for the burial index.

The burial cost estimates are assumed to escalate at an average annual rate of 2.0%. This is a decrease of 1.2% from the rate assumed in the 2015 study. FPL has an agreement with EnergySolutions which provides for the long-term disposal of Class A waste generated during decommissioning. As such, burial costs for disposal of Class A waste is estimated based on the EnergySolutions agreement. In addition, the cost estimates for processed/conditioned (at off-site recycling center) disposal of Class A waste is assumed to be at a competitive rate comparable to the EnergySolutions pricing. Burial cost rates for Class B and Class C waste, not covered by the EnergySolutions Agreement, are less certain and based on rates equivalent to published Low Level Waste (LLW) Burial Site rates. The escalation rate applicable to Class B and C waste is assumed to be 1.5% which approximates the historical rate of change of the most recently published NRC NUREG 1307, Revision 17 which assumes the cost for disposal of Class B and C is the same as that for the Texas disposal facility located in states not affiliated with the Texas Compact. The resulting annual escalation rate of 2.0% is a weighted average rate for both St. Lucie and Turkey Point.

For a more detail calculation of the overall weighted average escalation rate and annual rate of change for each component please refer to Support Schedule G ("Inflation and Funding Analysis").

FPL/Participant Ownership Share of Nuclear Units

The participants and their ownership interests in the St. Lucie facility are as follows:

| | St. Lucie Unit No. 1 | St. Lucie Unit No. 2 |
|---|---|---|
| Florida Power & Light Company | 100.0% | 85.10449% |
| Orlando Utilities Commission | 0.0 | 6.08951% |
| Florida Municipal Power Agency | 0.0 | 8.80600% |
| Total | 100.0% | 100.00000% |

For purposes of allocating decommissioning costs between FPL and Participants in the St. Lucie Unit No. 2, an adjustment was made to the ownership percentages to reflect the appropriate Common Facility cost obligation of participants.

This adjustment was necessary because the decommissioning cost study attributes common facility costs to St. Lucie No. 2. Because the Participants contractual obligation currently provides that they pay for only their ownership share times one-half of the common facility costs, to apply their ownership share to the total cost of decommissioning Unit No. 2 would overstate the Participants' cost obligation. This adjustment to the ownership percentage is reflected in what is termed a "Cost Allocation Factor" and represents the cost obligation of FPL and Participants as a percentage of the total costs of decommissioning. The "Cost Allocation Factor" calculation is given in Support Schedule H "Cost Allocation Analysis".

The Cost Allocation Factors for St. Lucie Unit No. 2 are:

| | St. Lucie No. 2 |
|---|---|
| Florida Power & Light Company | 86.44612% |
| Participants | 13.55388% |
| Total | 100.00000% |

**St. Lucie Unit No. 2**
**Participant Owners Funding Status**

| | | $ thousands | | |
|---|---|---|---|---|
| **Participant** | **Allocated Share** | **Allocated Costs 2020$'s** | **Required at 12/31/2020 [(a)]** | **Amount Funded at 10/31/2020 [(b)]** |
| Orlando Utilities Commission (OUC) | 5.54103% | $45,551 | $28,241 | $39,398 |
| Florida Municipal Power Agency (FMPA) | 8.01285% | 65,870 | 40,840 | 56,973 |
| Participant's Total | 13.55388% | $111,421 | $69,081 | $96,371 |
| Florida Power and Light | 86.44612% | 710,639 | | |
| Total | 100.00000% | $822,060 | | |

**Notes:**
(a) - At December 31, 2020, the funded balance should approximate 62% (37 yrs. / 60 yrs.) of decommissioning costs.
(b) - Excluding unrealized market gains/losses

FPSC Jurisdictional Factor

The factor applicable to both units is 95.7416%.

Fund Balances

Estimated/actual fund balances (qualified and nonqualified) at December 31, 2020[(a)] for each of the two St. Lucie Units are as Follows:

| | Qualified | Nonqualified |
|---|---|---|
| Unit No. 1 | $682,354,000 | $188,063,000 |
| Unit No. 2 | $623,913,000 | $91,606,000 |

(a) Excluding unrealized market gains/losses.

See support Schedule C ("Projected Fund and Reserve Balances") for detail composition and adjustments to the qualified and nonqualified fund balances.

End of Life Materials and Supplies Inventory Values

The decommissioning cost estimates contained in the EnergySolutions Decommissioning Cost Analysis (Section 11) of this study and in the funding analysis contained in Support Schedule G of this filing do not take into consideration the unrecovered value of any Materials and Supplies Inventories that will ultimately exist at the site following shut down of both units. Both FPL and this Commission have previously recognized that there will be a level of inventories that will remain at the end of life of Unit No. 2, the last unit to reach end of license, which must be recovered prior to the end of site operations. These inventories are unique and will have little value other than scrap value when the units are decommissioned. In Order No. FPSC-02-0055-PAA-EI, the Commission authorized FPL to begin recording the amortization of estimated end of life materials and supplies costs as a base rate fuel expense with a credit to a separate (unfunded) sub-account of Reserve Account 228. Additionally, the Commission directed the Company to address the costs associated with the materials and supplies in subsequent decommissioning studies so that the related annual accruals can be revised, if warranted. The annual expense/reserve accruals associated with End of Life Inventories are being accounted for, as directed by the Commission, in a separate (unfunded) sub-account of Reserve Account 228.

As provided in Support Schedule E of this study, the Materials and Supplies inventory balance, less estimated salvage, that is anticipated to remain at the end of life of Unit No. 2, the last unit to reach end of license, is projected to be $30,746,340 (Net of Participants' obligation). The actual balance accrued as of December 31, 2020 is $9,067,554. FPL is not requesting a change in accruals at this time. Rather, FPL believes that the results of these updated values for End of Life Materials and Supplies should be addressed in FPL's next base rate proceeding and the appropriate changes in accruals, if any, be made at that time.

End of Life Last Core Nuclear Fuel Values

FPL recognizes that there will be unburned fuel that will remain in the fuel assemblies at the end of the last operating cycle of each nuclear unit when it ceases operation. In Docket No 981246-EI the Commission found that the cost associated with the Last Core were costs that should be considered a base rate future obligation and that amortization of this obligation over the remaining life span of each nuclear unit ratably allocates the costs to those customers receiving the benefit of the nuclear generation and avoids a burdensome expense at the time of unit shut down. In Order No. FPSC-02-0055-PAA-EI the Commission authorized FPL to begin recording the amortization of estimated Last Core costs as a base rate fuel expense with a credit to a separate (unfunded) sub-account of Reserve Account 228. Additionally, the Commission directed the Company to address the costs associated with the Last Core in subsequent decommissioning studies so that the related annual accruals can be revised, if warranted. The annual expense/reserve accruals associated with End of Life Nuclear Fuel Last Core values are accounted for, as directed by the Commission, in a separate (unfunded) sub-account of Reserve Account 228.

As provided in Support Schedule F of this study, the estimated cost of unburned fuel remaining in the reactor at the end of life (end of license) for each unit is:

- Unit No. 1 $56,900,000
- Unit No. 2 (net of Participant's costs) $55,700,000

The actual balances accrued as of December 31, 2020 are:

- Unit No. 1 $40,639,303
- Unit No. 2 (net of Participant's costs) $32,439,110

FPL is not requesting a change in accruals at this time. Rather, FPL believes that the results of these updated values for End of Life Nuclear Fuel Last Core should be addressed in FPL's next base rate proceeding and the appropriate changes in accruals, if any, be made at that time.

Spent Nuclear Fuel Storage

The Nuclear Waste Policy Act of 1982 assigns to the Federal Government responsibility to provide for the permanent disposal of spent nuclear fuel (SNF) and high-level radioactive waste (HLW), and committed the DOE to begin acceptance of SNF/HLW not later than January 31, 1998 under terms of its Standard Disposal Contracts with waste generators. The DOE has not yet provided for SNF storage and is not accepting SNF as committed to under the contract.

In Docket No. 941350-EI, and No. 981246-EI, the FPSC recognized the impact on the decommissioning process and the potential costs of on-site dry fuel storage resulting from the inability of the DOE to provide for the timely removal of SNF. In Order Nos. PSC-95-1531-FOF-EI and PSC-02-0055-PAA-EI, the FPSC specifically approved the inclusion of costs associated with the dry storage of spent nuclear fuel following the end of each units operating license which were considered necessary to accommodate the timely decommissioning of each unit.

Consistent with the Commission's prior findings, 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 units. The potential cost impact of extended spent fuel storage that will exist subsequent to the license expiration of the St. Lucie nuclear units is presented in (Section 11) of the 2020 Decommissioning Cost Analysis for the St. Lucie Plant. The decommissioning cost estimates included in this filing are based on the EnergySolutions prepared Decommissioning Cost Analysis for the St. Lucie Plant, Units 1 and 2 dated November 2020.

In addition, FPL and certain nuclear plant joint owners signed a settlement agreement (spent fuel settlement agreement) with the U.S. Government in 2009 agreeing to dismiss with prejudice lawsuits filed against the U.S. Government seeking damages caused by the DOE's failure to dispose of spent nuclear fuel from FPL's nuclear plants. As such, the DOE is expected to continue to make payments to FPL to cover the costs incurred for managing and storing the spent fuel that it would not have incurred but for DOE's delay in performance.

Below are the St. Lucie estimated costs of Decommissioning expected to be recovered from the DOE as provided by FPL's consultant, EnergySolutions, LLC in 2020 dollars.

| | |
|---|---|
| St. Lucie Unit No. 1 | |
| Labor | $125,221,000 |
| Equip & Materials | 57,461,000 |
| Other | 24,585,000 |
| **Total** | **$207,268,000** |

| | |
|---|---|
| St. Lucie Unit No. 2 | |
| Labor | $104,812,000 |
| Equip & Materials | 29,282,000 |
| Other | 16,080,000 |
| **Total** | **$150,174,000** |

Further discussion of the costs and assumptions regarding DOE reimbursement is contained in Section 5.0 of the Decommissioning Cost Analysis for the St. Lucie Plant, Units 1 and 2 dated November 2020. Consistent with prior Commission practice and Rule 25-6.04365 F.A.C., the assumptions presented in this 2020 decommissioning study related to DOE reimbursement will be reviewed and updated as appropriate "at least once every five years".

Annual Decommissioning Accrual Requirements

FPL's current annual expense accrual requirements for St Lucie Nuclear Plant Decommissioning costs presented in this study support a zero accrual and funding requirement as of December 31, 2020. The decommissioning costs estimates, funding analysis, and supporting assumptions presented in this study were prepared in a manner consistent with prior Commission approved studies, methodologies and practices.

SECTION 3

SUPPORT SCHEDULE A
Nuclear Decommissioning Reserve Balance
December 31, 2015 through October 31, 2020

Florida Power & Light Company
2020 Decommissioning Study
Support Schedule: Nuclear Decommissioning Reserve Balances (1)
December 31, 2015 through October 31, 2020
$000

| December 31, 2015 | Beginning Balance | Revenues Collected | Earnings to Reserve | Ending Balance |
|---|---|---|---|---|
| NONQUALIFIED | | | | |
| Turkey Point Unit No. 3 | $284,009 | $0 | $9,261 | $293,270 |
| Turkey Point Unit No. 4 | 304,290 | 0 | 9,925 | 314,215 |
| St. Lucie Unit No. 1 | 255,915 | 0 | 8,344 | 264,259 |
| St. Lucie Unit No. 2 | 124,580 | 0 | 4,077 | 128,658 |
| TOTAL | $968,795 | $0 | $31,607 | $1,000,402 |
| QUALIFIED | | | | |
| Turkey Point Unit No. 3 | $413,367 | $0 | $16,479 | $429,846 |
| Turkey Point Unit No. 4 | 473,635 | 0 | 18,879 | 492,514 |
| St. Lucie Unit No. 1 | 535,493 | 0 | 21,345 | 556,838 |
| St. Lucie Unit No. 2 | 489,737 | 0 | 19,499 | 509,236 |
| TOTAL | $1,912,231 | $0 | $76,202 | $1,988,434 |
| TOTAL RESERVES | | | | |
| Turkey Point Unit No. 3 | $697,375 | $0 | $25,740 | $723,116 |
| Turkey Point Unit No. 4 | 777,925 | 0 | 28,804 | 806,729 |
| St. Lucie Unit No. 1 | 791,408 | 0 | 29,689 | 821,097 |
| St. Lucie Unit No. 2 | 614,317 | 0 | 23,576 | 637,894 |
| TOTAL | $2,881,026 | $0 | $107,810 | $2,988,836 |
| December 31, 2016 | | | | |
| NONQUALIFIED | | | | |
| Turkey Point Unit No. 3 | $293,270 | $0 | $11,772 | $305,041 |
| Turkey Point Unit No. 4 | 314,215 | 0 | 12,615 | 326,831 |
| St. Lucie Unit No. 1 | 264,259 | 0 | 10,606 | 274,866 |
| St. Lucie Unit No. 2 | 128,658 | 0 | 5,183 | 133,840 |
| TOTAL | $1,000,402 | $0 | $40,176 | $1,040,578 |
| QUALIFIED | | | | |
| Turkey Point Unit No. 3 | $429,846 | $0 | $16,640 | $446,486 |
| Turkey Point Unit No. 4 | 492,514 | 0 | 19,057 | 511,571 |
| St. Lucie Unit No. 1 | 556,838 | 0 | 21,541 | 578,379 |
| St. Lucie Unit No. 2 | 509,236 | 0 | 19,685 | 528,921 |
| TOTAL | $1,988,434 | $0 | $76,923 | $2,065,357 |
| TOTAL RESERVES | | | | |
| Turkey Point Unit No. 3 | $723,116 | $0 | $28,411 | $751,527 |
| Turkey Point Unit No. 4 | 806,729 | 0 | 31,672 | 838,402 |
| St. Lucie Unit No. 1 | 821,097 | 0 | 32,148 | 853,245 |
| St. Lucie Unit No. 2 | 637,894 | 0 | 24,868 | 662,761 |
| TOTAL | $2,988,836 | $0 | $117,099 | $3,105,935 |

Note 1: Balances exclude unrealized market gains/losses.

Florida Power & Light Company
2020 Decommissioning Study
Support Schedule: Nuclear Decommissioning Reserve Balances (1)
December 31, 2015 through October 31, 2020
$000

| December 31, 2017 | Beginning Balance | Revenues Collected | Earnings to Reserve | Ending Balance |
|---|---|---|---|---|
| NONQUALIFIED | | | | |
| Turkey Point Unit No. 3 | $305,041 | $0 | $7,893 | $312,934 |
| Turkey Point Unit No. 4 | 326,831 | 0 | 8,459 | 335,289 |
| St. Lucie Unit No. 1 | 274,866 | 0 | 7,112 | 281,978 |
| St. Lucie Unit No. 2 | 133,840 | 0 | 3,475 | 137,316 |
| TOTAL | $1,040,578 | $0 | $26,939 | $1,067,517 |
| QUALIFIED | | | | |
| Turkey Point Unit No. 3 | $446,486 | $0 | $21,023 | $467,509 |
| Turkey Point Unit No. 4 | 511,571 | 0 | 24,078 | 535,649 |
| St. Lucie Unit No. 1 | 578,379 | 0 | 27,221 | 605,600 |
| St. Lucie Unit No. 2 | 528,921 | 0 | 24,871 | 553,792 |
| TOTAL | $2,065,357 | $0 | $97,193 | $2,162,550 |
| TOTAL RESERVES | | | | |
| Turkey Point Unit No. 3 | $751,527 | $0 | $28,916 | $780,443 |
| Turkey Point Unit No. 4 | 838,402 | 0 | 32,537 | 870,938 |
| St. Lucie Unit No. 1 | 853,245 | 0 | 34,333 | 887,578 |
| St. Lucie Unit No. 2 | 662,761 | 0 | 28,346 | 691,107 |
| TOTAL | $3,105,935 | $0 | $124,132 | $3,230,067 |
| December 31, 2018 | | | | |
| NONQUALIFIED | | | | |
| Turkey Point Unit No. 3 | $312,934 | $0 | $8,190 | $321,124 |
| Turkey Point Unit No. 4 | 335,289 | 0 | 8,777 | 344,066 |
| St. Lucie Unit No. 1 | 281,978 | 0 | 7,379 | 289,357 |
| St. Lucie Unit No. 2 | 137,316 | 0 | 3,606 | 140,921 |
| TOTAL | $1,067,517 | $0 | $27,951 | $1,095,468 |
| QUALIFIED | | | | |
| Turkey Point Unit No. 3 | $467,509 | $0 | $15,703 | $483,212 |
| Turkey Point Unit No. 4 | 535,649 | 0 | 17,986 | 553,635 |
| St. Lucie Unit No. 1 | 605,600 | 0 | 20,335 | 625,935 |
| St. Lucie Unit No. 2 | 553,792 | 0 | 18,576 | 572,367 |
| TOTAL | $2,162,550 | $0 | $72,600 | $2,235,150 |
| TOTAL RESERVES | | | | |
| Turkey Point Unit No. 3 | $780,443 | $0 | $23,892 | $804,336 |
| Turkey Point Unit No. 4 | 870,938 | 0 | 26,763 | 897,701 |
| St. Lucie Unit No. 1 | 887,578 | 0 | 27,714 | 915,292 |
| St. Lucie Unit No. 2 | 691,107 | 0 | 22,181 | 713,289 |
| TOTAL | $3,230,067 | $0 | $100,551 | $3,330,618 |

Note 1: Balances exclude unrealized market gains/losses.

Florida Power & Light Company
2020 Decommissioning Study
Support Schedule: Nuclear Decommissioning Reserve Balances (1)
December 31, 2015 through October 31, 2020
$000

| December 31, 2019 | Beginning Balance | Revenues Collected | Earnings to Reserve | Ending Balance |
|---|---|---|---|---|
| NONQUALIFIED | | | | |
| Turkey Point Unit No. 3 | $321,124 | $0 | $9,206 | $330,331 |
| Turkey Point Unit No. 4 | 344,066 | 0 | 9,866 | 353,932 |
| St. Lucie Unit No. 1 | 289,357 | 0 | 8,295 | 297,652 |
| St. Lucie Unit No. 2 | 140,921 | 0 | 4,053 | 144,975 |
| TOTAL | $1,095,468 | $0 | $31,421 | $1,126,889 |
| QUALIFIED | | | | |
| Turkey Point Unit No. 3 | $483,212 | $0 | $22,002 | $505,214 |
| Turkey Point Unit No. 4 | 553,635 | 0 | 25,198 | 578,833 |
| St. Lucie Unit No. 1 | 625,935 | 0 | 28,486 | 654,421 |
| St. Lucie Unit No. 2 | 572,367 | 0 | 26,028 | 598,395 |
| TOTAL | $2,235,150 | $0 | $101,713 | $2,336,863 |
| TOTAL RESERVES | | | | |
| Turkey Point Unit No. 3 | $804,336 | $0 | $31,208 | $835,544 |
| Turkey Point Unit No. 4 | 897,701 | 0 | 35,064 | 932,765 |
| St. Lucie Unit No. 1 | 915,292 | 0 | 36,781 | 952,073 |
| St. Lucie Unit No. 2 | 713,289 | 0 | 30,081 | 743,370 |
| TOTAL | $3,330,618 | $0 | $133,135 | $3,463,752 |
| October 31, 2020 | | | | |
| NONQUALIFIED | | | | |
| Turkey Point Unit No. 3 | $330,331 | $0 | $3,697 | $334,027 |
| Turkey Point Unit No. 4 | 353,932 | 0 | 3,962 | 357,894 |
| St. Lucie Unit No. 1 | 297,652 | 0 | 3,331 | 300,983 |
| St. Lucie Unit No. 2 | 144,975 | 0 | 1,628 | 146,602 |
| TOTAL | $1,126,889 | $0 | $12,617 | $1,139,506 |
| QUALIFIED | | | | |
| Turkey Point Unit No. 3 | $505,214 | $0 | $17,976 | $523,190 |
| Turkey Point Unit No. 4 | 578,833 | 0 | 20,589 | 599,422 |
| St. Lucie Unit No. 1 | 654,421 | 0 | 23,277 | 677,698 |
| St. Lucie Unit No. 2 | 598,395 | 0 | 21,265 | 619,660 |
| TOTAL | $2,336,863 | $0 | $83,107 | $2,419,970 |
| TOTAL RESERVES | | | | |
| Turkey Point Unit No. 3 | $835,544 | $0 | $21,673 | $857,217 |
| Turkey Point Unit No. 4 | 932,765 | 0 | 24,550 | 957,316 |
| St. Lucie Unit No. 1 | 952,073 | 0 | 26,608 | 978,681 |
| St. Lucie Unit No. 2 | 743,370 | 0 | 22,892 | 766,262 |
| TOTAL | $3,463,752 | $0 | $95,724 | $3,559,476 |

Note 1: Balances exclude unrealized market gains/losses.

SECTION 4

SUPPORT SCHEDULE B
Nuclear Decommissioning Fund Balance
December 31, 2015 through October 31, 2020

Florida Power & Light Company
2020 Decommissioning Study
Support Schedule: Nuclear Decommissioning Fund Balances (1)
December 31, 2015 through October 31, 2020
$000

| | Beginning Balance | Contribution | Fund Earnings | Ending Balance |
|---|---|---|---|---|
| December 31, 2015 | | | | |
| NONQUALIFIED | | | | |
| Turkey Point Unit No. 3 | $174,452 | $0 | $5,689 | $180,141 |
| Turkey Point Unit No. 4 | 186,910 | 0 | 6,096 | 193,006 |
| St Lucie Unit No. 1 | 157,196 | 0 | 5,126 | 162,321 |
| St Lucie Unit No. 2 | 76,524 | 0 | 2,505 | 79,028 |
| Total | $595,081 | $0 | $19,415 | $614,496 |
| QUALIFIED | | | | |
| Turkey Point Unit No. 3 | $413,367 | $0 | $16,479 | $429,846 |
| Turkey Point Unit No. 4 | 473,635 | 0 | 18,879 | 492,514 |
| St Lucie Unit No. 1 | 535,493 | 0 | 21,345 | 556,838 |
| St Lucie Unit No. 2 | 489,737 | 0 | 19,499 | 509,236 |
| Total | $1,912,231 | $0 | $76,202 | $1,988,434 |
| TOTAL | | | | |
| Turkey Point Unit No. 3 | $587,819 | $0 | $22,168 | $609,987 |
| Turkey Point Unit No. 4 | 660,545 | 0 | 24,976 | 685,521 |
| St Lucie Unit No. 1 | 692,689 | 0 | 26,470 | 719,159 |
| St Lucie Unit No. 2 | 566,260 | 0 | 22,004 | 588,264 |
| Total | $2,507,313 | $0 | $95,617 | $2,602,930 |
| December 31, 2016 | | | | |
| NONQUALIFIED | | | | |
| Turkey Point Unit No. 3 | $180,141 | $0 | $7,231 | $187,372 |
| Turkey Point Unit No. 4 | 193,006 | 0 | 7,749 | 200,755 |
| St Lucie Unit No. 1 | 162,321 | 0 | 6,515 | 168,836 |
| St Lucie Unit No. 2 | 79,028 | 0 | 3,183 | 82,212 |
| Total | $614,496 | $0 | $24,678 | $639,175 |
| QUALIFIED | | | | |
| Turkey Point Unit No. 3 | $429,846 | $0 | $16,640 | $446,486 |
| Turkey Point Unit No. 4 | 492,514 | 0 | 19,057 | 511,571 |
| St Lucie Unit No. 1 | 556,838 | 0 | 21,541 | 578,379 |
| St Lucie Unit No. 2 | 509,236 | 0 | 19,685 | 528,921 |
| Total | $1,988,434 | $0 | $76,923 | $2,065,357 |
| TOTAL | | | | |
| Turkey Point Unit No. 3 | $609,987 | $0 | $23,871 | $633,857 |
| Turkey Point Unit No. 4 | 685,521 | 0 | 26,806 | 712,327 |
| St Lucie Unit No. 1 | 719,159 | 0 | 28,056 | 747,215 |
| St Lucie Unit No. 2 | 588,264 | 0 | 22,868 | 611,132 |
| Total | $2,602,930 | $0 | $101,601 | $2,704,531 |

Note 1: Balances exclude unrealized market gains/losses.

Florida Power & Light Company
2020 Decommissioning Study
Support Schedule: Nuclear Decommissioning Fund Balances (1)
December 31, 2015 through October 31, 2020
$000

| | Beginning Balance | Contribution | Fund Earnings | Ending Balance |
|---|---|---|---|---|
| December 31, 2017 | | | | |
| NONQUALIFIED | | | | |
| Turkey Point Unit No. 3 | $187,372 | $0 | $4,848 | $192,220 |
| Turkey Point Unit No. 4 | 200,755 | 0 | 5,196 | 205,951 |
| St Lucie Unit No. 1 | 168,836 | 0 | 4,368 | 173,205 |
| St Lucie Unit No. 2 | 82,212 | 0 | 2,135 | 84,346 |
| Total | $639,175 | $0 | $16,547 | $655,722 |
| QUALIFIED | | | | |
| Turkey Point Unit No. 3 | $446,486 | $0 | $21,023 | $467,509 |
| Turkey Point Unit No. 4 | 511,571 | 0 | 24,078 | 535,649 |
| St Lucie Unit No. 1 | 578,379 | 0 | 27,221 | 605,600 |
| St Lucie Unit No. 2 | 528,921 | 0 | 24,871 | 553,792 |
| Total | $2,065,357 | $0 | $97,193 | $2,162,550 |
| TOTAL | | | | |
| Turkey Point Unit No. 3 | $633,857 | $0 | $25,872 | $659,729 |
| Turkey Point Unit No. 4 | 712,327 | 0 | 29,274 | 741,600 |
| St Lucie Unit No. 1 | 747,215 | 0 | 31,590 | 778,805 |
| St Lucie Unit No. 2 | 611,132 | 0 | 27,005 | 638,138 |
| Total | $2,704,531 | $0 | $113,740 | $2,818,272 |
| December 31, 2018 | | | | |
| NONQUALIFIED | | | | |
| Turkey Point Unit No. 3 | $192,220 | $0 | $6,255 | $198,475 |
| Turkey Point Unit No. 4 | 205,951 | 0 | 6,704 | 212,655 |
| St Lucie Unit No. 1 | 173,205 | 0 | 5,636 | 178,841 |
| St Lucie Unit No. 2 | 84,346 | 0 | 2,754 | 87,100 |
| Total | $655,722 | $0 | $21,349 | $677,071 |
| QUALIFIED | | | | |
| Turkey Point Unit No. 3 | $467,509 | $0 | $15,703 | $483,212 |
| Turkey Point Unit No. 4 | 535,649 | 0 | 17,986 | 553,635 |
| St Lucie Unit No. 1 | 605,600 | 0 | 20,335 | 625,936 |
| St Lucie Unit No. 2 | 553,792 | 0 | 18,576 | 572,367 |
| Total | $2,162,550 | $0 | $72,600 | $2,235,150 |
| TOTAL | | | | |
| Turkey Point Unit No. 3 | $659,729 | $0 | $21,958 | $681,687 |
| Turkey Point Unit No. 4 | 741,600 | 0 | 24,690 | 766,290 |
| St Lucie Unit No. 1 | 778,805 | 0 | 25,971 | 804,776 |
| St Lucie Unit No. 2 | 638,138 | 0 | 21,330 | 659,467 |
| Total | $2,818,272 | $0 | $93,948 | $2,912,220 |

Note 1: Balances exclude unrealized market gains/losses.

Florida Power & Light Company
2020 Decommissioning Study
Support Schedule: Nuclear Decommissioning Fund Balances (1)
December 31, 2015 through October 31, 2020
$000

| | Beginning Balance | Contribution | Fund Earnings | Ending Balance |
|---|---|---|---|---|
| December 31, 2019 | | | | |
| NONQUALIFIED | | | | |
| Turkey Point Unit No. 3 | $198,475 | $0 | $6,888 | $205,363 |
| Turkey Point Unit No. 4 | 212,655 | 0 | 7,382 | 220,037 |
| St Lucie Unit No. 1 | 178,841 | 0 | 6,207 | 185,047 |
| St Lucie Unit No. 2 | 87,100 | 0 | 3,033 | 90,133 |
| Total | $677,071 | $0 | $23,510 | $700,580 |
| QUALIFIED | | | | |
| Turkey Point Unit No. 3 | $483,212 | $0 | $22,002 | $505,214 |
| Turkey Point Unit No. 4 | 553,635 | 0 | 25,198 | 578,833 |
| St Lucie Unit No. 1 | 625,936 | 0 | 28,486 | 654,421 |
| St Lucie Unit No. 2 | 572,367 | 0 | 26,028 | 598,395 |
| Total | $2,235,150 | $0 | $101,713 | $2,336,863 |
| TOTAL | | | | |
| Turkey Point Unit No. 3 | $681,687 | $0 | $28,890 | $710,577 |
| Turkey Point Unit No. 4 | 766,290 | 0 | 32,580 | 798,870 |
| St Lucie Unit No. 1 | 804,776 | 0 | 34,692 | 839,469 |
| St Lucie Unit No. 2 | 659,467 | 0 | 29,060 | 688,528 |
| Total | $2,912,220 | $0 | $125,223 | $3,037,443 |
| October 31, 2020 | | | | |
| NONQUALIFIED | | | | |
| Turkey Point Unit No. 3 | $205,363 | $0 | $2,789 | $208,153 |
| Turkey Point Unit No. 4 | 220,037 | 0 | 2,989 | 223,026 |
| St Lucie Unit No. 1 | 185,047 | 0 | 2,513 | 187,561 |
| St Lucie Unit No. 2 | 90,133 | 0 | 1,228 | 91,361 |
| Total | $700,580 | $0 | $9,520 | $710,100 |
| QUALIFIED | | | | |
| Turkey Point Unit No. 3 | $505,214 | $0 | $17,976 | $523,190 |
| Turkey Point Unit No. 4 | 578,833 | 0 | 20,589 | 599,422 |
| St Lucie Unit No. 1 | 654,421 | 0 | 23,277 | 677,699 |
| St Lucie Unit No. 2 | 598,395 | 0 | 21,265 | 619,660 |
| Total | $2,336,863 | $0 | $83,107 | $2,419,970 |
| TOTAL | | | | |
| Turkey Point Unit No. 3 | $710,577 | $0 | $20,765 | $731,343 |
| Turkey Point Unit No. 4 | 798,870 | 0 | 23,578 | 822,448 |
| St Lucie Unit No. 1 | 839,469 | 0 | 25,790 | 865,259 |
| St Lucie Unit No. 2 | 688,528 | 0 | 22,493 | 711,021 |
| Total | $3,037,443 | $0 | $92,627 | $3,130,070 |

Note 1: Balances exclude unrealized market gains/losses.

SECTION 5

SUPPORT SCHEDULE C
Projected Fund and Reserve Balance at December 31, 2020

Florida Power & Light Company
2020 Decommissioning Study
Support Schedule: Projected Fund and Reserve Balance at December 31, 2020 [(a)]
$000

| | TURKEY POINT UNIT 3 | TURKEY POINT UNIT 4 | ST. LUCIE UNIT 1 | ST. LUCIE UNIT 2 | TOTALS |
|---|---|---|---|---|---|
| NON-QUALIFIED FUND | | | | (Note 1) | |
| Actual Fund Balance @ 10/31/2020 | $208,153 | $223,026 | $187,561 | $91,361 | $710,100 |
| Add: Estimate Income Nov. & Dec. 2020 (after-tax) | 558 | 598 | 503 | 246 | 1,904 |
| Est/Actual Fund Balance @ 12/31/2020 | $208,711 | $223,624 | $188,063 | $91,606 | $712,004 |
| QUALIFIED FUND | | | | | |
| Actual Fund Balance @ 10/31/2020 | $523,190 | $599,422 | $677,699 | $619,660 | $2,419,970 |
| Add: Estimate Income Nov. & Dec. 2020 (after-tax) | 3,595 | 4,118 | 4,655 | 4,253 | 16,621 |
| Est/Actual Fund Balance @ 12/31/2020 | $526,785 | $603,540 | $682,354 | $623,913 | $2,436,591 |
| TOTAL FUND | | | | | |
| Actual Fund Balance @ 10/31/2020 | $731,343 | $822,448 | $865,259 | $711,021 | $3,130,070 |
| Add: Estimate Income Nov. & Dec. 2020 (after-tax) | 4,153 | 4,716 | 5,158 | 4,499 | 18,525 |
| Est/Actual Fund Balance @ 12/31/2020 | $735,496 | $827,163 | $870,417 | $715,519 | $3,148,595 |
| NON-QUALIFIED RESERVE | | | | | |
| Actual Reserve Balance @ 10/31/2020 | $334,027 | $357,894 | $300,983 | $146,602 | $1,139,506 |
| Add: Estimate Income Nov. & Dec. 2020 | 739 | 792 | 666 | 325 | 2,522 |
| Est/Actual Reserve Balance@12/31/2020 | $334,766 | $358,686 | $301,649 | $146,928 | $1,142,029 |
| QUALIFIED RESERVE | | | | | |
| Actual Reserve Balance @ 10/31/2020 | $523,190 | $599,422 | $677,698 | $619,660 | $2,419,970 |
| Add: Estimate Income Nov. & Dec. 2020 | 3,595 | 4,118 | 4,655 | 4,253 | 16,621 |
| Est/Actual Reserve Balance@12/31/2020 | $526,785 | $603,539 | $682,354 | $623,913 | $2,436,591 |
| TOTAL RESERVE | | | | | |
| Actual Reserve Balance @ 10/31/2020 | $857,217 | $957,316 | $978,681 | $766,262 | $3,559,476 |
| Add: Estimate Income Nov. & Dec. 2020 | 4,334 | 4,910 | 5,321 | 4,578 | 19,144 |
| Est/Actual Reserve Balance@12/31/2020 | $861,551 | $962,225 | $984,003 | $770,841 | $3,578,620 |

[(a)] Balances exclude unrealized market gains/losses.

Note 1: Amounts for St Lucie Common are included with Unit No. 2

SECTION 6

# SUPPORT SCHEDULE D
# Reconciliation of Projected Fund and Reserve Balance at December 31, 2020

Florida Power & Light Company
2020 Decommissioning Study
Support Schedule: Reconciliation of Projected Fund and Reserve Balance at December 31, 2020 [(a)]
$000

**RECONCILIATION FUND/RESERVE**
**Projected 12/31/2020**

| | TURKEY POINT UNIT 3 | TURKEY POINT UNIT 4 | ST. LUCIE UNIT 1 | ST. LUCIE UNIT 2 | TOTALS |
|---|---|---|---|---|---|
| **NON-QUALIFIED** | | | | (Note 1) | |
| Projected Fund Balance @12/31/2020 | $208,711 | $223,624 | $188,063 | $91,606 | $712,004 |
| Remeasurement of Deferred Tax - Federal (Note 2) | $41,402 | $44,359 | $37,305 | $18,166 | $141,232 |
| Remeasurement of Deferred Tax - State (Note 3) | ($193) | ($206) | ($172) | ($84) | ($654) |
| Deferred Tax @ 12/31/2020 | $84,847 | $90,909 | $76,453 | $37,239 | $289,447 |
| Projected Reserve Balance @ 12/31/2020 | $334,766 | $358,686 | $301,649 | $146,928 | $1,142,029 |
| **QUALIFIED** | | | | | |
| Projected Fund Balance @12/31/2020 | $526,785 | $603,540 | $682,354 | $623,913 | $2,436,591 |
| Deferred Tax @ 12/31/2020 | 0 | 0 | 0 | 0 | 0 |
| Projected Reserve Balance @ 12/31/2020 | $526,785 | $603,540 | $682,354 | $623,913 | $2,436,591 |
| **TOTAL** | | | | | |
| Projected Fund Balance @12/31/2020 | $735,496 | $827,163 | $870,417 | $715,519 | 3,148,595 |
| Re-measurement of Deferred Tax - Federal | $41,402 | $44,359 | $37,305 | $18,166 | 141,232 |
| Re-measurement of Deferred Tax - State | (193) | (206) | (172) | (84) | (654) |
| Deferred Tax @ 12/31/2020 | 84,847 | 90,909 | 76,453 | 37,239 | 289,447 |
| Projected Reserve Balance @ 12/31/2020 | $861,551 | $962,226 | $984,003 | $770,840 | $3,578,620 |

**DEFERRED TAXES**
**Projected balance @ 12/31/2020**

| | | | | | |
|---|---|---|---|---|---|
| **NON-QUALIFIED FUND** | | | | | |
| Balance @ 10/31/2020 (Fed & State) | $84,659 | $90,708 | $76,284 | $37,156 | $288,808 |
| Add: Tax on Earnings - November & December | 187 | 201 | 169 | 82 | 639 |
| Balance @ 12/31/2020 (Fed & State) | $84,847 | $90,909 | $76,453 | $37,239 | $289,447 |

(a) Balances exclude unrealized market gains/losses.

Note (1): Amounts for St Lucie Common are included with Unit No. 2

Note (2): In December 2017, new tax reform legislation was signed into law which reduced the federal corporate income tax rate from 35% to 21% effective January 1, 2018. As a result, 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. This amount was recorded as a regulatory asset.

Note (3): In 2019 the Florida corporate income tax rate was changed from 5.5% to 4.458%. The tax rate change was retroactive to Jan 1, 2018 and is for the periods of 2018 through 2021. The rate reverts back to 5.5% in 2022. Trust 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.

SECTION 7

SUPPORT SCHEDULE E
End-of-Life Materials and Supplies Inventory
Expense Accrual Calculation

**Florida Power and Light Company**
**2020 Decommissioning Study**
**Support Schedule: End-of-Life Materials and Supplies Inventory**

| Line Number | | St. Lucie Unit 2 |
|---|---|---|
| 1 | Adjusted Ending Inventory Value @ End of License | $ 33,928,292 |
| 2 | Estimated Salvage | (707,768) |
| 3 | **Inventory Subject to Write-off** | **$ 33,220,523** |
| 4 | | |
| 5 | **FPL's Ownership Share Net of Participants [(1)]** | **$ 30,746,340** |
| 6 | | |
| 7 | Actual Reserve Balance Accrued as of 12/31/20 | 9,067,554 |
| 8 | | |
| 9 | **Remaining Amount to be Recovered as of 12/31/20** | **$ 21,678,786** |
| 10 | | |
| 11 | | |
| 12 | Total Number of Months From: | |
| 13 | 12/31/20 to End of License 4/6/2043 | 267.5 |
| 14 | | |
| 15 | | |
| 16 | Note: | |
| 17 | [(1)] The Participants' obligation is assumed to be treated the same as "Common Facility Cost" | |
| 18 | which is calculated at one-half their ownership percentage. (0.5 * 14.89551% = 7.447755%) | |
| 19 | Therefore, FPL's ownership share is 92.552245%. | |

SECTION 8

SUPPORT SCHEDULE F
End-of-Life Unamortized Nuclear Fuel
Expense Accrual Calculation

**Florida Power and Light Company**
**2020 Decommissioning Study**
**Support Schedule: End-of-Life Unamortized Nuclear Fuel**

| Line Number | | St. Lucie Unit 1 | St. Lucie Unit 2 |
|---|---|---|---|
| 1 | **Estimated Cost of Unburned Fuel @ End of License** | | |
| 2 | **FPL's Ownership Share Net of Participants** | **$ 56,900,000** | **$ 55,700,000** |
| 3 | | | |
| 4 | Actual Reserve Balance at 12/31/2020 | 40,639,303 | 32,439,890 |
| 5 | | | |
| 6 | **Remaining Amount to be Recovered as of 12/31/2020** | **$ 16,260,697** | **$ 23,260,110** |
| 7 | | | |
| 8 | | | |
| 9 | Total Number of Months From: | | |
| 10 | **12/31/20 to End of License:** | 182.5 | 267.5 |

SECTION 9

SUPPORT SCHEDULE G
Inflation and Funding Analysis

**INFLATION FORECAST**

The U.S. Economy
30 Year Outlook **(AUGUST 2020)**
GLOBAL INSIGHT

| | PCJPGDP | PCJWSSNF | PCWPISOP2000 | PCCSVTS | FPL (INTERNAL) | CPI | |
|---|---|---|---|---|---|---|---|
| YEAR | GDP | HRLY COMP | PPI INT M&S | GDP Transport | Burial | CPI | CPI MULTIPLIER |
| 2020 | 0.9% | 5.9% | -4.1% | -22.2% | 2.0% | 1.0% | 1.000 |
| 2021 | 1.1% | 0.5% | 2.3% | 18.0% | 2.0% | 1.7% | 1.017 |
| 2022 | 1.2% | 1.8% | 2.5% | 11.9% | 2.0% | 1.7% | 1.034 |
| 2023 | 1.5% | 2.2% | 1.7% | 9.6% | 2.0% | 0.8% | 1.042 |
| 2024 | 1.8% | 2.7% | 1.8% | 8.7% | 2.0% | 1.3% | 1.056 |
| 2025 | 2.1% | 3.3% | 1.4% | 6.2% | 2.0% | 2.0% | 1.076 |
| 2026 | 2.3% | 3.7% | 1.3% | 4.9% | 2.0% | 2.3% | 1.101 |
| 2027 | 2.4% | 4.0% | 1.2% | 4.3% | 2.0% | 2.5% | 1.129 |
| 2028 | 2.5% | 4.1% | 1.1% | 4.1% | 2.0% | 2.4% | 1.156 |
| 2029 | 2.4% | 4.1% | 0.9% | 4.4% | 2.0% | 2.3% | 1.183 |
| 2030 | 2.4% | 4.1% | 0.8% | 4.7% | 2.0% | 2.2% | 1.210 |
| 2031 | 2.3% | 4.0% | 0.8% | 4.3% | 2.0% | 2.1% | 1.235 |
| 2032 | 2.3% | 4.0% | 1.1% | 3.9% | 2.0% | 2.1% | 1.261 |
| 2033 | 2.2% | 4.0% | 0.9% | 3.8% | 2.0% | 2.0% | 1.286 |
| 2034 | 2.2% | 4.0% | 1.0% | 3.7% | 2.0% | 2.0% | 1.312 |
| 2035 | 2.2% | 4.0% | 1.1% | 3.5% | 2.0% | 2.0% | 1.338 |
| 2036 | 2.1% | 3.9% | 1.1% | 3.4% | 2.0% | 2.0% | 1.365 |
| 2037 | 2.1% | 3.9% | 1.4% | 3.2% | 2.0% | 2.0% | 1.393 |
| 2038 | 2.1% | 3.9% | 1.5% | 3.1% | 2.0% | 2.1% | 1.421 |
| 2039 | 2.1% | 3.9% | 1.3% | 3.1% | 2.0% | 2.0% | 1.450 |
| 2040 | 2.1% | 3.9% | 1.4% | 3.1% | 2.0% | 2.1% | 1.480 |
| 2041 | 2.2% | 3.9% | 1.4% | 3.1% | 2.0% | 2.1% | 1.511 |
| 2042 | 2.2% | 3.9% | 1.4% | 3.0% | 2.0% | 2.1% | 1.542 |
| 2043 | 2.2% | 3.9% | 1.3% | 3.0% | 2.0% | 2.1% | 1.574 |
| 2044 | 2.2% | 3.8% | 1.4% | 3.0% | 2.0% | 2.1% | 1.607 |
| 2045 | 2.2% | 3.8% | 1.5% | 3.0% | 2.0% | 2.1% | 1.642 |
| 2046 | 2.2% | 3.8% | 1.5% | 3.0% | 2.0% | 2.1% | 1.677 |
| 2047 | 2.2% | 3.8% | 1.5% | 3.0% | 2.0% | 2.2% | 1.713 |
| 2048 | 2.3% | 3.8% | 1.6% | 3.1% | 2.0% | 2.2% | 1.750 |
| 2049 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 1.788 |
| 2050 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 1.828 |
| 2051 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 1.868 |
| 2052 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 1.909 |
| 2053 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 1.951 |
| 2054 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 1.994 |
| 2055 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 2.038 |
| 2056 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 2.083 |
| 2057 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 2.129 |
| 2058 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 2.176 |
| 2059 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 2.223 |
| 2060 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 2.272 |
| 2061 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 2.322 |
| 2062 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 2.374 |
| 2063 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 2.426 |
| 2064 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 2.479 |
| 2065 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 2.534 |
| 2066 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 2.590 |
| 2067 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 2.647 |
| 2068 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 2.705 |
| 2069 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 2.764 |
| 2070 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 2.825 |
| 2071 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 2.887 |
| 2072 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 2.951 |
| 2073 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 3.016 |
| 2074 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 3.082 |
| 2075 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 3.150 |

2.11% = AVERAGE COMPOUND CPI INFLATION MULTILPLIER 2021-2074

**GENERAL ASSUMPTIONS**

| | |
|---|---|
| JURISDICTIONAL FACTOR = | 95.7416% |
| FPL'S SHARE OF ST. LUCIE 2 COST (NET OF PARTICIPANTS) | 86.44612% |
| CORPORATE TAX RATE | 24.522% |

| | ANNUAL | MONTHLY |
|---|---|---|
| EARNINGS RATE QUALIFIED FUND | 4.000% | 0.327374% |
| EARNINGS RATE NON-QUALIFIED FUND | 4.000% | 0.327374% |

| | **TP3** | **TP4** | **SL1** | **SL2** |
|---|---|---|---|---|
| Adjusted QUALIFIED FUNDING % (at 12/31/20) | 61.144% | 62.723% | 69.345% | 80.939% |
| FUND BALANCES ($000's) | | | | |
| A. QUALIFIED FUND BALANCE 10/31/20 | 523,190 | 599,422 | 677,699 | 619,660 |
| B. CONTRIBUTIONS - Nov. & Dec. 2020 | - | - | - | - |
| C. EARNINGS - Nov. & Dec. 2020 | 3,595 | 4,118 | 4,655 | 4,253 |
| **D. QUALIFIED FUND BALANCE 12/31/20** | **526,785** | **603,540** | **682,354** | **623,913** |
| E. JURISDICTIONAL FACTOR | 95.7416% | 95.7416% | 95.7416% | 95.7416% |
| **F. JURIS. QUAL. FUND BAL. 12/31/20** | **504,352** | **577,838** | **653,297** | **597,344** |
| A. NON-QUALIFIED FUND BALANCE 10/31/20 | 208,153 | 223,026 | 187,561 | 91,361 |
| B. CONTRIBUTIONS - Nov. & Dec. 2020 | - | - | - | - |
| C. EARNINGS - Nov. & Dec. 2020 | 558 | 598 | 503 | 246 |
| **D. NON-QUALIFIED FUND BALANCE 12/31/20** | **208,711** | **223,624** | **188,063** | **91,606** |
| E. JURISDICTIONAL FACTOR | 95.7416% | 95.7416% | 95.7416% | 95.7416% |
| **F. JURIS. NON-QUAL. FUND BAL. 12/31/20** | **199,823** | **214,101** | **180,055** | **87,705** |
| Juris. Est/Actual Fund Balance | 704,175 | 791,939 | 833,351 | 685,049 |
| Juris. Est/Actual Reserve Balance | 824,863 | 921,250 | 942,100 | 738,015 |

**Florida Power & Light Company**
**2020 Decommissioning Study**
**St. Lucie Nuclear Units**
**Support Schedule : Inflation and Funding Analysis**

| St. Lucie Nuclear Plant, Unit 1 Integrated DECON - Total Decommissioning Cost (thousands, 2020 dollars) | | | | | | | St. Lucie Nuclear Plant, Unit 1 Integrated DECON - Total Decommissioning Cost (thousands, Future dollars) | | | | | | | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Labor | Equipment & Materials | Transportation | LLRW Disposal | Other | Yearly Totals | Year | Labor | Equipment & Materials | Transportation | Burial | Other | Yearly Totals | Inflation Rate |
| 2036 | 32,205 | 3,115 | - | - | 3,628 | 38,948 | 2036 | 54,892 | 3,840 | - | - | 5,035 | 63,768 | 3.13% |
| 2037 | 34,682 | 2,930 | - | - | 4,408 | 42,020 | 2037 | 61,430 | 3,663 | - | - | 6,248 | 71,341 | 3.16% |
| 2038 | 23,684 | 2,195 | - | - | 4,292 | 30,171 | 2038 | 43,588 | 2,784 | - | - | 6,214 | 52,586 | 3.13% |
| 2039 | 19,676 | 1,812 | - | - | 4,265 | 25,754 | 2039 | 37,620 | 2,329 | - | - | 6,307 | 46,256 | 3.13% |
| 2040 | 7,003 | 417 | - | - | 2,287 | 9,706 | 2040 | 13,908 | 543 | - | - | 3,454 | 17,905 | 3.11% |
| 2041 | 7,003 | 417 | - | - | 2,287 | 9,706 | 2041 | 14,447 | 551 | - | - | 3,529 | 18,526 | 3.13% |
| 2042 | 7,003 | 417 | - | - | 2,287 | 9,706 | 2042 | 15,005 | 558 | - | - | 3,605 | 19,169 | 3.14% |
| 2043 | 7,003 | 417 | - | - | 2,287 | 9,706 | 2043 | 15,583 | 566 | - | - | 3,684 | 19,833 | 3.16% |
| 2044 | 7,003 | 417 | - | - | 2,287 | 9,706 | 2044 | 16,180 | 574 | - | - | 3,765 | 20,518 | 3.17% |
| 2045 | 29,380 | 15,987 | 4,353 | - | 6,012 | 55,732 | 2045 | 70,473 | 22,325 | 14,853 | - | 10,116 | 117,767 | 3.04% |
| 2046 | 35,615 | 25,881 | 1,204 | - | 8,663 | 71,364 | 2046 | 88,679 | 36,684 | 4,231 | - | 14,902 | 144,496 | 2.75% |
| 2047 | 35,910 | 27,744 | 1,789 | 3,792 | 8,747 | 77,982 | 2047 | 92,803 | 39,929 | 6,482 | 6,553 | 15,383 | 161,150 | 2.72% |
| 2048 | 48,878 | 19,397 | 3,474 | 11,058 | 5,815 | 88,622 | 2048 | 131,096 | 28,355 | 12,973 | 19,502 | 10,457 | 202,384 | 2.99% |
| 2049 | 53,729 | 21,876 | 4,844 | 14,371 | 4,452 | 99,273 | 2049 | 149,555 | 32,508 | 18,645 | 25,864 | 8,188 | 234,760 | 3.01% |
| 2050 | 25,364 | 13,037 | 12,839 | 64,383 | 3,705 | 119,326 | 2050 | 73,264 | 19,709 | 50,966 | 118,245 | 6,969 | 269,153 | 2.75% |
| 2051 | 14,411 | 3,465 | 14,219 | 49,451 | 3,506 | 85,052 | 2051 | 43,198 | 5,329 | 58,218 | 92,681 | 6,747 | 206,172 | 2.90% |
| 2052 | 4,617 | 857 | 11,250 | 33,750 | 2,048 | 52,521 | 2052 | 14,362 | 1,341 | 47,509 | 64,548 | 4,031 | 131,791 | 2.92% |
| 2053 | 2,442 | 204 | - | - | 885 | 3,531 | 2053 | 7,883 | 325 | - | - | 1,781 | 9,989 | 3.20% |
| 2054 | 2,295 | 79 | - | - | 822 | 3,196 | 2054 | 7,688 | 128 | - | - | 1,692 | 9,509 | 3.26% |
| 2055 | 2,295 | 79 | - | - | 822 | 3,196 | 2055 | 7,978 | 130 | - | - | 1,731 | 9,840 | 3.27% |
| 2056 | 2,295 | 79 | - | - | 822 | 3,196 | 2056 | 8,280 | 133 | - | - | 1,771 | 10,183 | 3.27% |
| 2057 | 2,295 | 79 | - | - | 822 | 3,196 | 2057 | 8,592 | 135 | - | - | 1,812 | 10,539 | 3.28% |
| 2058 | 2,295 | 79 | - | - | 822 | 3,196 | 2058 | 8,916 | 137 | - | - | 1,853 | 10,907 | 3.28% |
| 2059 | 2,295 | 79 | - | - | 822 | 3,196 | 2059 | 9,253 | 140 | - | - | 1,896 | 11,288 | 3.29% |
| 2060 | 2,295 | 79 | - | - | 822 | 3,196 | 2060 | 9,602 | 142 | - | - | 1,939 | 11,683 | 3.29% |
| 2061 | 2,295 | 79 | - | - | 822 | 3,196 | 2061 | 9,964 | 145 | - | - | 1,983 | 12,092 | 3.30% |
| 2062 | 2,295 | 79 | - | - | 822 | 3,196 | 2062 | 10,340 | 147 | - | - | 2,029 | 12,516 | 3.30% |
| 2063 | 2,295 | 79 | - | - | 822 | 3,196 | 2063 | 10,731 | 150 | - | - | 2,075 | 12,956 | 3.31% |
| 2064 | 2,295 | 79 | - | - | 822 | 3,196 | 2064 | 11,136 | 152 | - | - | 2,123 | 13,411 | 3.31% |
| 2065 | 2,295 | 79 | - | - | 822 | 3,196 | 2065 | 11,556 | 155 | - | - | 2,172 | 13,882 | 3.32% |
| 2066 | 2,295 | 79 | - | - | 822 | 3,196 | 2066 | 11,992 | 158 | - | - | 2,221 | 14,371 | 3.32% |
| 2067 | 2,295 | 79 | - | - | 822 | 3,196 | 2067 | 12,444 | 160 | - | - | 2,272 | 14,877 | 3.33% |
| 2068 | 2,295 | 79 | - | - | 822 | 3,196 | 2068 | 12,914 | 163 | - | - | 2,324 | 15,402 | 3.33% |
| 2069 | 2,295 | 79 | - | - | 822 | 3,196 | 2069 | 13,401 | 166 | - | - | 2,378 | 15,945 | 3.33% |
| 2070 | 2,580 | 79 | 1,085 | 8,406 | 894 | 13,043 | 2070 | 15,633 | 169 | 7,994 | 23,152 | 2,646 | 49,595 | 2.71% |
| 2071 | 2,580 | 79 | 1,085 | 8,406 | 894 | 13,043 | 2071 | 16,223 | 172 | 8,246 | 23,626 | 2,706 | 50,974 | 2.71% |
| 2072 | 1,498 | - | - | - | 171 | 1,669 | 2072 | 9,773 | - | - | - | 529 | 10,302 | 3.56% |
| 2073 | 4,321 | 1,302 | - | - | 60 | 5,684 | 2073 | 29,263 | 2,926 | - | - | 191 | 32,380 | 3.34% |
| 2074 | - | - | - | - | - | - | 2074 | - | - | - | - | - | - | |
| **Total** | **443,308** | **143,311** | **56,142** | **193,616** | **87,025** | **923,401** | **Total** | **1,179,647** | **207,521** | **230,117** | **374,171** | **158,760** | **2,150,216** | **3.15%** |

NOTE: The 2020 cash flows are inflated to the year of expenditure based on the indices provided on Support Schedule G, page 1 of 8

**Florida Power & Light Company**
**2020 Decommissioning Study**
**St. Lucie Nuclear Units**
**Support Schedule : Inflation and Funding Analysis**

| St. Lucie Nuclear Plant, Unit 2 DECON - Total Decommissioning Cost (thousands, 2020 dollars) | | | | | | | St. Lucie Nuclear Plant, Unit 2 DECON - Total Decommissioning Cost (thousands, Future dollars) | | | | | | | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Labor | Equipment & Materials | Transportation | LLRW Disposal | Other | Yearly Totals | Year | Labor | Equipment & Materials | Transportation | Burial | Other | Yearly Totals | Inflation Rate |
| 2043 | 31,403 | 1,570 | - | - | 3,214 | 36,186 | 2043 | 69,880 | 2,130 | - | - | 5,178 | 77,189 | 3.35% |
| 2044 | 47,799 | 1,603 | - | - | 4,354 | 53,755 | 2044 | 110,439 | 2,205 | - | - | 7,167 | 119,812 | 3.40% |
| 2045 | 33,461 | 21,237 | 1,197 | - | 5,314 | 61,209 | 2045 | 80,261 | 29,657 | 4,085 | - | 8,942 | 122,945 | 2.83% |
| 2046 | 42,655 | 5,768 | 6,960 | - | 8,581 | 63,964 | 2046 | 106,206 | 8,175 | 24,468 | - | 14,760 | 153,609 | 3.43% |
| 2047 | 42,907 | 10,087 | 578 | 3,504 | 7,738 | 64,814 | 2047 | 110,886 | 14,518 | 2,093 | 6,055 | 13,609 | 147,160 | 3.08% |
| 2048 | 47,539 | 20,614 | 1,166 | 6,843 | 6,226 | 82,388 | 2048 | 127,504 | 30,135 | 4,354 | 12,068 | 11,196 | 185,257 | 2.94% |
| 2049 | 55,330 | 16,061 | 4,959 | 15,996 | 3,967 | 96,312 | 2049 | 154,011 | 23,866 | 19,086 | 28,788 | 7,295 | 233,047 | 3.09% |
| 2050 | 32,115 | 13,708 | 10,414 | 41,796 | 3,077 | 101,109 | 2050 | 92,765 | 20,724 | 41,340 | 76,761 | 5,788 | 237,378 | 2.89% |
| 2051 | 18,373 | 13,749 | 16,365 | 65,674 | 2,678 | 116,838 | 2051 | 55,073 | 21,147 | 67,005 | 123,085 | 5,153 | 271,463 | 2.76% |
| 2052 | 7,815 | 4,726 | 10,695 | 35,232 | 2,375 | 60,842 | 2052 | 24,309 | 7,395 | 45,164 | 67,383 | 4,675 | 148,925 | 2.84% |
| 2053 | 2,321 | 147 | - | - | 855 | 3,323 | 2053 | 7,492 | 234 | - | - | 1,722 | 9,448 | 3.22% |
| 2054 | 2,214 | 59 | - | - | 824 | 3,096 | 2054 | 7,417 | 95 | - | - | 1,696 | 9,209 | 3.26% |
| 2055 | 2,214 | 59 | - | - | 824 | 3,096 | 2055 | 7,697 | 97 | - | - | 1,735 | 9,529 | 3.26% |
| 2056 | 2,214 | 59 | - | - | 824 | 3,096 | 2056 | 7,987 | 99 | - | - | 1,775 | 9,861 | 3.27% |
| 2057 | 2,214 | 59 | - | - | 824 | 3,096 | 2057 | 8,289 | 100 | - | - | 1,816 | 10,205 | 3.28% |
| 2058 | 2,214 | 59 | - | - | 824 | 3,096 | 2058 | 8,602 | 102 | - | - | 1,857 | 10,561 | 3.28% |
| 2059 | 2,214 | 59 | - | - | 824 | 3,096 | 2059 | 8,926 | 104 | - | - | 1,900 | 10,930 | 3.29% |
| 2060 | 2,214 | 59 | - | - | 824 | 3,096 | 2060 | 9,263 | 106 | - | - | 1,943 | 11,312 | 3.29% |
| 2061 | 2,214 | 59 | - | - | 824 | 3,096 | 2061 | 9,613 | 108 | - | - | 1,988 | 11,708 | 3.30% |
| 2062 | 2,214 | 59 | - | - | 824 | 3,096 | 2062 | 9,975 | 109 | - | - | 2,033 | 12,118 | 3.30% |
| 2063 | 2,214 | 59 | - | - | 824 | 3,096 | 2063 | 10,352 | 111 | - | - | 2,080 | 12,543 | 3.31% |
| 2064 | 2,214 | 59 | - | - | 824 | 3,096 | 2064 | 10,742 | 113 | - | - | 2,128 | 12,983 | 3.31% |
| 2065 | 2,214 | 59 | - | - | 824 | 3,096 | 2065 | 11,148 | 115 | - | - | 2,176 | 13,440 | 3.32% |
| 2066 | 2,214 | 59 | - | - | 824 | 3,096 | 2066 | 11,569 | 117 | - | - | 2,226 | 13,912 | 3.32% |
| 2067 | 2,214 | 59 | - | - | 824 | 3,096 | 2067 | 12,005 | 119 | - | - | 2,277 | 14,402 | 3.32% |
| 2068 | 2,214 | 59 | - | - | 824 | 3,096 | 2068 | 12,458 | 121 | - | - | 2,330 | 14,909 | 3.33% |
| 2069 | 2,214 | 59 | - | - | 824 | 3,096 | 2069 | 12,928 | 124 | - | - | 2,383 | 15,435 | 3.33% |
| 2070 | 2,499 | 59 | 1,085 | 8,406 | 896 | 12,944 | 2070 | 15,141 | 126 | 7,995 | 23,153 | 2,651 | 49,066 | 2.70% |
| 2071 | 2,499 | 59 | 1,085 | 8,406 | 896 | 12,944 | 2071 | 15,713 | 128 | 8,246 | 23,627 | 2,712 | 50,425 | 2.70% |
| 2072 | 2,892 | - | - | - | 194 | 3,086 | 2072 | 18,869 | - | - | - | 602 | 19,471 | 3.61% |
| 2073 | 1,935 | 867 | - | - | - | 2,802 | 2073 | 13,101 | 1,949 | - | - | - | 15,050 | 3.22% |
| 2074 | - | - | - | - | - | - | 2074 | - | - | - | - | - | - | |
| **Total** | **406,964** | **111,197** | **54,503** | **185,856** | **63,540** | **822,060** | **Total** | **1,160,622** | **164,132** | **223,835** | **360,920** | **123,793** | **2,033,302** | **3.19%** |

NOTE: The 2020 cash flows are inflated to the year of expenditure based on the indices provided on Support Schedule G, page 1 of 8

**Florida Power & Light Company**
**2020 Decommissioning Study**
**St. Lucie Nuclear Units**
**Support Schedule : Inflation and Funding Analysis**

**St. Lucie Nuclear Plant, Unit 1**
**Integrated DECON**
**Costs Recovered for Spent Fuel Management**
**(thousands, 2020 dollars)**

| Year | Labor | Equipment & Materials | Energy | LLRW Disposal | Other | Yearly Totals |
|---|---|---|---|---|---|---|
| 2036 | - | - | - | - | - | - |
| 2037 | 12,314 | 2,431 | - | - | 631 | 15,376 |
| 2038 | 11,687 | 2,366 | - | - | 768 | 14,821 |
| 2040 | 6,321 | 1,567 | - | - | 740 | 8,628 |
| 2041 | 4,896 | 312 | - | - | 1,187 | 6,395 |
| 2042 | 4,896 | 312 | - | - | 1,187 | 6,395 |
| 2043 | 4,896 | 312 | - | - | 1,187 | 6,395 |
| 2044 | 4,896 | 312 | - | - | 1,187 | 6,395 |
| 2045 | 4,896 | 312 | - | - | 1,187 | 6,395 |
| 2046 | 7,396 | 22,812 | - | - | 1,187 | 31,395 |
| 2047 | 18,225 | 23,615 | - | - | 1,435 | 43,275 |
| 2048 | 2,295 | 79 | - | - | 822 | 3,196 |
| 2049 | 2,295 | 79 | - | - | 822 | 3,196 |
| 2050 | 2,295 | 79 | - | - | 822 | 3,196 |
| 2051 | 2,295 | 79 | - | - | 822 | 3,196 |
| 2052 | 2,295 | 79 | - | - | 822 | 3,196 |
| 2053 | 2,295 | 79 | - | - | 822 | 3,196 |
| 2054 | 2,295 | 79 | - | - | 822 | 3,196 |
| 2055 | 2,295 | 79 | - | - | 822 | 3,196 |
| 2056 | 2,295 | 79 | - | - | 822 | 3,196 |
| 2057 | 2,295 | 79 | - | - | 822 | 3,196 |
| 2058 | 2,295 | 79 | - | - | 822 | 3,196 |
| 2059 | 2,295 | 79 | - | - | 822 | 3,196 |
| 2060 | 2,295 | 79 | - | - | 822 | 3,196 |
| 2061 | 2,295 | 79 | - | - | 822 | 3,196 |
| 2062 | 2,295 | 79 | - | - | 822 | 3,196 |
| 2063 | 2,295 | 79 | - | - | 822 | 3,196 |
| 2064 | - | - | - | - | - | - |
| **Total** | **125,221** | **57,461** | **-** | **-** | **24,585** | **207,268** |

**St. Lucie Nuclear Plant, Unit 1**
**Integrated DECON**
**Costs Recovered for Spent Fuel Management**
**(thousands, Future dollars)**

| Year | Labor | Equipment & Materials | Transport | Burial | Other | Yearly Totals |
|---|---|---|---|---|---|---|
| 2036 | - | - | - | - | - | - |
| 2037 | 21,811 | 3,039 | - | - | 894 | 25,744 |
| 2038 | 21,509 | 3,001 | - | - | 1,112 | 25,622 |
| 2040 | 12,554 | 2,042 | - | - | 1,118 | 15,714 |
| 2041 | 10,101 | 413 | - | - | 1,831 | 12,344 |
| 2042 | 10,491 | 418 | - | - | 1,871 | 12,780 |
| 2043 | 10,895 | 424 | - | - | 1,912 | 13,231 |
| 2044 | 11,312 | 430 | - | - | 1,953 | 13,696 |
| 2045 | 11,744 | 436 | - | - | 1,997 | 14,177 |
| 2046 | 18,416 | 32,334 | - | - | 2,041 | 52,791 |
| 2047 | 47,099 | 33,987 | - | - | 2,524 | 83,609 |
| 2048 | 6,156 | 116 | - | - | 1,478 | 7,749 |
| 2049 | 6,388 | 118 | - | - | 1,511 | 8,017 |
| 2050 | 6,630 | 120 | - | - | 1,546 | 8,295 |
| 2051 | 6,880 | 122 | - | - | 1,581 | 8,583 |
| 2052 | 7,139 | 124 | - | - | 1,618 | 8,881 |
| 2053 | 7,409 | 126 | - | - | 1,655 | 9,189 |
| 2054 | 7,688 | 128 | - | - | 1,692 | 9,509 |
| 2055 | 7,978 | 130 | - | - | 1,731 | 9,840 |
| 2056 | 8,280 | 133 | - | - | 1,771 | 10,183 |
| 2057 | 8,592 | 135 | - | - | 1,812 | 10,539 |
| 2058 | 8,916 | 137 | - | - | 1,853 | 10,907 |
| 2059 | 9,253 | 140 | - | - | 1,896 | 11,288 |
| 2060 | 9,602 | 142 | - | - | 1,939 | 11,683 |
| 2061 | 9,964 | 145 | - | - | 1,983 | 12,092 |
| 2062 | 10,340 | 147 | - | - | 2,029 | 12,516 |
| 2063 | 10,731 | 150 | - | - | 2,075 | 12,956 |
| 2064 | - | - | - | - | - | - |
| **Total** | **323,319** | **81,002** | **-** | **-** | **46,523** | **450,844** |

NOTE: The 2020 cash flows are inflated to the year of expenditure based on the indices provided on Support Schedule G, page 1 of 8

**St. Lucie Nuclear Plant, Unit 2**
**DECON**
**Costs Recovered for Spent Fuel Management**
**(thousands, 2020 dollars)**

| Year | Labor | Equipment & Materials | Energy | LLRW Disposal | Other | Yearly Totals |
|---|---|---|---|---|---|---|
| 2043 | - | - | - | - | - | - |
| 2044 | 14,986 | 1,457 | - | - | 540 | 16,983 |
| 2045 | 20,763 | 1,452 | - | - | 734 | 22,949 |
| 2046 | 13,757 | 21,070 | - | - | 716 | 35,542 |
| 2047 | 19,882 | 4,361 | - | - | 913 | 25,156 |
| 2048 | 2,214 | 59 | - | - | 824 | 3,096 |
| 2049 | 2,214 | 59 | - | - | 824 | 3,096 |
| 2050 | 2,214 | 59 | - | - | 824 | 3,096 |
| 2051 | 2,214 | 59 | - | - | 824 | 3,096 |
| 2052 | 2,214 | 59 | - | - | 824 | 3,096 |
| 2053 | 2,214 | 59 | - | - | 824 | 3,096 |
| 2054 | 2,214 | 59 | - | - | 824 | 3,096 |
| 2055 | 2,214 | 59 | - | - | 824 | 3,096 |
| 2057 | 2,214 | 59 | - | - | 824 | 3,096 |
| 2058 | 2,214 | 59 | - | - | 824 | 3,096 |
| 2059 | 2,214 | 59 | - | - | 824 | 3,096 |
| 2060 | 2,214 | 59 | - | - | 824 | 3,096 |
| 2061 | 2,214 | 59 | - | - | 824 | 3,096 |
| 2062 | 2,214 | 59 | - | - | 824 | 3,096 |
| 2063 | 2,214 | 59 | - | - | 824 | 3,096 |
| 2064 | - | - | - | - | - | - |
| **Total** | **104,812** | **29,282** | **-** | **-** | **16,080** | **150,174** |

**St. Lucie Nuclear Plant, Unit 2**
**DECON**
**Costs Recovered for Spent Fuel Management**
**(thousands, Future dollars)**

| Year | Labor | Equipment & Materials | Transport | Burial | Other | Yearly Totals |
|---|---|---|---|---|---|---|
| 2043 | - | - | - | - | - | - |
| 2044 | 34,624 | 2,005 | - | - | 889 | 37,519 |
| 2045 | 49,803 | 2,028 | - | - | 1,235 | 53,066 |
| 2046 | 34,253 | 29,864 | - | - | 1,232 | 65,349 |
| 2047 | 51,381 | 6,277 | - | - | 1,605 | 59,263 |
| 2048 | 5,938 | 86 | - | - | 1,481 | 7,505 |
| 2049 | 6,163 | 87 | - | - | 1,515 | 7,765 |
| 2050 | 6,395 | 89 | - | - | 1,549 | 8,034 |
| 2051 | 6,637 | 91 | - | - | 1,585 | 8,312 |
| 2052 | 6,887 | 92 | - | - | 1,621 | 8,601 |
| 2053 | 7,147 | 94 | - | - | 1,658 | 8,899 |
| 2054 | 7,417 | 95 | - | - | 1,696 | 9,209 |
| 2055 | 7,697 | 97 | - | - | 1,735 | 9,529 |
| 2057 | 8,289 | 100 | - | - | 1,816 | 10,205 |
| 2058 | 8,602 | 102 | - | - | 1,857 | 10,561 |
| 2059 | 8,926 | 104 | - | - | 1,900 | 10,930 |
| 2060 | 9,263 | 106 | - | - | 1,943 | 11,312 |
| 2061 | 9,613 | 108 | - | - | 1,988 | 11,708 |
| 2062 | 9,975 | 109 | - | - | 2,033 | 12,118 |
| 2063 | 10,352 | 111 | - | - | 2,080 | 12,543 |
| 2064 | - | - | - | - | - | - |
| **Total** | **297,350** | **41,744** | **-** | **-** | **33,194** | **372,288** |

NOTE: The 2020 cash flows are inflated to the year of expenditure based on the indices provided on Support Schedule G, page 1 of 8

## ST. LUCIE UNIT 1

| | NOMINAL ANNUAL | NOMINAL MONTHLY |
|---|---|---|
| EARNINGS RATE QUALIFIED FUND | 4.000% | 0.327374% |
| EARNINGS RATE NON-QUALIFIED FUND | 4.000% | 0.327374% |

CORPORATE TAX RATE 24.522%

FPL'S SHARE OF COST (NET OF PARTICIPANTS) 100.000%
JURISDICTIONAL FACTOR 95.7416%

Adjusted QUALIFIED % 69.345%

LICENSE ENDS 03/01/2036

| YEAR | SPENDING CURVE | ESTIMATED COST IN ($2020) | ESTIMATED COST IN NOMINAL $ | ESTIMATED DOE RECOVERY NOMINAL $ | NET NOMINAL $ | JURISDICTIONAL AMOUNT | QUALIFIED AMOUNT | NON-QUAL AMOUNT | TAX SAVINGS | PV @ 4.0% QUALIFIED AMOUNT | PV @ 4.0% NON-QUAL AMOUNT |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2036 | 4.2178% | $ 38,947,602 | $ 63,767,767 | $ - | $ 63,767,767 | $ 61,052,280 | $ 42,336,537 | $ 14,126,302 | $ 4,589,441 | $ 22,603,823 | $ 7,542,148 |
| 2037 | 4.5506% | 42,020,015 | $ 71,341,062 | $ 25,743,818 | 45,597,243 | 43,655,530 | 30,272,808 | 10,101,035 | 3,281,687 | 15,541,250 | 5,185,601 |
| 2038 | 3.2674% | 30,170,914 | $ 52,586,444 | $ 25,621,745 | 26,964,699 | 25,816,434 | 17,902,336 | 5,973,417 | 1,940,681 | 8,837,096 | 2,948,647 |
| 2039 | 2.7890% | 25,753,545 | $ 46,256,097 | $ 18,908,639 | 27,347,458 | 26,182,894 | 18,156,456 | 6,058,209 | 1,968,229 | 8,617,824 | 2,875,483 |
| 2040 | 1.0512% | 9,706,429 | $ 17,905,395 | $ 15,713,994 | 2,191,401 | 2,098,082 | 1,454,910 | 485,455 | 157,718 | 664,002 | 221,555 |
| 2041 | 1.0512% | 9,706,429 | $ 18,526,232 | $ 12,344,478 | 6,181,754 | 5,918,510 | 4,104,175 | 1,369,427 | 444,908 | 1,801,050 | 600,951 |
| 2042 | 1.0512% | 9,706,429 | $ 19,168,826 | $ 12,780,338 | 6,388,488 | 6,116,441 | 4,241,429 | 1,415,225 | 459,787 | 1,789,694 | 597,162 |
| 2043 | 1.0512% | 9,706,429 | $ 19,833,054 | $ 13,230,957 | 6,602,097 | 6,320,953 | 4,383,248 | 1,462,545 | 475,161 | 1,778,399 | 593,393 |
| 2044 | 1.0512% | 9,706,429 | $ 20,518,130 | $ 13,695,797 | 6,822,333 | 6,531,811 | 4,529,466 | 1,511,333 | 491,011 | 1,767,042 | 589,604 |
| 2045 | 6.0355% | 55,732,234 | $ 117,767,302 | $ 14,177,020 | 103,590,282 | 99,178,994 | 68,775,402 | 22,948,078 | 7,455,514 | 25,798,809 | 8,608,210 |
| 2046 | 7.7283% | 71,363,697 | $ 144,495,814 | $ 52,790,958 | 91,704,856 | 87,799,696 | 60,884,459 | 20,315,131 | 6,600,106 | 21,960,369 | 7,327,449 |
| 2047 | 8.4451% | 77,982,124 | $ 161,149,613 | $ 83,609,463 | 77,540,150 | 74,238,180 | 51,480,263 | 17,177,262 | 5,580,655 | 17,854,208 | 5,957,359 |
| 2048 | 9.5974% | 88,622,437 | $ 202,383,708 | $ 7,748,971 | 194,634,737 | 186,346,411 | 129,221,409 | 43,116,912 | 14,008,090 | 43,092,429 | 14,378,519 |
| 2049 | 10.7508% | 99,272,829 | $ 234,760,224 | $ 8,017,185 | 226,743,039 | 217,087,413 | 150,538,673 | 50,229,778 | 16,318,962 | 48,270,439 | 16,106,249 |
| 2050 | 12.9225% | 119,326,450 | $ 269,152,547 | $ 8,294,955 | 260,857,592 | 249,749,233 | 173,187,923 | 57,787,083 | 18,774,227 | 53,397,070 | 17,816,837 |
| 2051 | 9.2107% | 85,051,774 | $ 206,172,266 | $ 8,582,652 | 197,589,614 | 189,175,458 | 131,183,204 | 43,771,498 | 14,220,756 | 38,890,606 | 12,976,509 |
| 2052 | 5.6878% | 52,521,270 | $ 131,791,113 | $ 8,880,639 | 122,910,473 | 117,676,454 | 81,602,415 | 27,228,028 | 8,846,011 | 23,261,416 | 7,761,566 |
| 2053 | 0.3824% | 3,530,775 | $ 9,989,296 | $ 9,189,292 | 800,004 | 765,937 | 531,137 | 177,223 | 57,577 | 145,582 | 48,576 |
| 2054 | 0.3461% | 3,195,920 | $ 9,509,000 | $ 9,509,000 | (0) | (0) | (0) | (0) | (0) | (0) | (0) |
| 2055 | 0.3461% | 3,195,920 | $ 9,840,166 | $ 9,840,166 | (0) | (0) | (0) | (0) | (0) | (0) | (0) |
| 2056 | 0.3461% | 3,195,920 | $ 10,183,210 | $ 10,183,210 | (0) | (0) | (0) | (0) | (0) | (0) | (0) |
| 2057 | 0.3461% | 3,195,920 | $ 10,538,565 | $ 10,538,565 | (0) | (0) | (0) | (0) | (0) | (0) | (0) |
| 2058 | 0.3461% | 3,195,920 | $ 10,906,683 | $ 10,906,683 | (0) | (0) | (0) | (0) | (0) | (0) | (0) |
| 2059 | 0.3461% | 3,195,920 | $ 11,288,029 | $ 11,288,029 | (0) | (0) | (0) | (0) | (0) | (0) | (0) |
| 2060 | 0.3461% | 3,195,920 | $ 11,683,090 | $ 11,683,090 | (0) | (0) | (0) | (0) | (0) | (0) | (0) |
| 2061 | 0.3461% | 3,195,920 | $ 12,092,365 | $ 12,092,365 | (0) | (0) | (0) | (0) | (0) | (0) | (0) |
| 2062 | 0.3461% | 3,195,920 | $ 12,516,378 | $ 12,516,378 | (0) | (0) | (0) | (0) | (0) | (0) | (0) |
| 2063 | 0.3461% | 3,195,920 | $ 12,955,667 | $ 12,955,667 | (0) | (0) | (0) | (0) | (0) | (0) | (0) |
| 2064 | 0.3461% | 3,195,920 | $ 13,410,793 | $ - | 13,410,793 | 12,839,708 | 8,903,660 | 2,970,857 | 965,190 | 1,585,264 | 528,950 |
| 2065 | 0.3461% | 3,195,920 | $ 13,882,337 | $ - | 13,882,337 | 13,291,171 | 9,216,726 | 3,075,317 | 999,128 | 1,577,889 | 526,489 |
| 2066 | 0.3461% | 3,195,920 | $ 14,370,901 | $ - | 14,370,901 | 13,758,930 | 9,541,093 | 3,183,547 | 1,034,291 | 1,570,596 | 524,056 |
| 2067 | 0.3461% | 3,195,920 | $ 14,877,110 | $ - | 14,877,110 | 14,243,583 | 9,877,174 | 3,295,686 | 1,070,723 | 1,563,384 | 521,650 |
| 2068 | 0.3461% | 3,195,920 | $ 15,401,613 | $ - | 15,401,613 | 14,745,750 | 10,225,400 | 3,411,878 | 1,108,472 | 1,556,252 | 519,270 |
| 2069 | 0.3461% | 3,195,920 | $ 15,945,081 | $ - | 15,945,081 | 15,266,075 | 10,586,218 | 3,532,271 | 1,147,586 | 1,549,199 | 516,916 |
| 2070 | 1.4125% | 13,043,482 | $ 49,594,842 | $ - | 49,594,842 | 47,482,895 | 32,926,884 | 10,986,612 | 3,569,399 | 4,633,228 | 1,545,955 |
| 2071 | 1.4125% | 13,043,482 | $ 50,973,540 | $ - | 50,973,540 | 48,802,883 | 33,842,226 | 11,292,032 | 3,668,625 | 4,578,873 | 1,527,819 |
| 2072 | 0.1807% | 1,668,500 | $ 10,301,967 | $ - | 10,301,967 | 9,863,268 | 6,839,657 | 2,282,167 | 741,445 | 889,817 | 296,902 |
| 2073 | 0.6155% | 5,683,500 | $ 32,379,547 | $ - | 32,379,547 | 31,000,696 | 21,497,348 | 7,172,954 | 2,330,394 | 2,689,168 | 897,286 |
| 2074 | 0.0000% | - | $ - | $ - | - | - | - | - | - | - | - |
| | **100.0000%** | **$ 923,401,492** | **$ 2,150,215,772** | **$ 450,844,054** | **$ 1,699,371,718** | **$ 1,627,005,673** | **$ 1,128,242,635** | **$ 376,457,263** | **$ 122,305,774** | **$ 358,264,778** | **$ 119,541,111** |

| | QUALIFIED | NON-QUAL | TOTAL |
|---|---|---|---|
| NPV @12/31/20 | $ 358,264,778 | $ 119,541,111 | $ 477,805,889 |
| LESS BALANCE @ 12/31/20 | 653,296,604 | 180,054,702 | 833,351,306 |
| PV OF FUNDING REQUIREMENTS | $ (295,031,826) | $ (60,513,591) | $ (355,545,417) |
| MONTHLY FUNDING REQUIREMENT | - | - | - |
| ANNUAL FUNDING REQUIREMENT | - | - | - |
| MONTHLY ACCRUAL | - | - | - |
| ANNUAL ACCRUAL | - | - | - |

## ST. LUCIE UNIT 2

| | NOMINAL ANNUAL | NOMINAL MONTHLY |
|---|---|---|
| EARNINGS RATE QUALIFIED FUND | 4.000% | 0.327374% |
| EARNINGS RATE NON-QUALIFIED FUND | 4.000% | 0.327374% |
| CORPORATE TAX RATE | 24.522% | |
| FPL'S SHARE OF COST (NET OF PARTICIPANTS) | 86.446% | |
| JURISDICTIONAL FACTOR | 95.7416% | |
| Adjusted QUALIFIED % | 80.939% | |
| LICENSE ENDS | 04/06/2043 | |

| YEAR | SPENDING CURVE | ESTIMATED COST IN ($2020) | ESTIMATED COST IN NOMINAL $ | ESTIMATED DOE RECOVERY NOMINAL $ | NET NOMINAL $ | JURISDICTIONAL AMOUNT | QUALIFIED AMOUNT | NON-QUAL AMOUNT | TAX SAVINGS | PV @ 4.0% QUALIFIED AMOUNT | PV @ 4.0% NON-QUAL AMOUNT |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2043 | 4.4019% | $ 36,186,421 | $ 77,188,824 | $ - | $ 77,188,824 | $ 63,885,252 | $ 51,708,261 | $ 9,190,972 | $ 2,986,020 | $ 20,979,403 | $ 3,729,019 |
| 2044 | 6.5391% | 53,755,259 | $ 119,812,104 | $ 37,518,536 | 82,293,568 | 68,110,189 | 55,127,894 | 9,798,800 | 3,183,495 | 21,506,575 | 3,822,722 |
| 2045 | 7.4458% | 61,208,918 | $ 122,944,513 | $ 53,065,880 | 69,878,633 | 57,834,980 | 46,811,214 | 8,320,538 | 2,703,228 | 17,559,673 | 3,121,174 |
| 2046 | 7.7809% | 63,963,685 | $ 153,609,279 | $ 65,348,547 | 88,260,732 | 73,048,905 | 59,125,255 | 10,509,318 | 3,414,332 | 21,325,843 | 3,790,598 |
| 2047 | 7.8843% | 64,814,029 | $ 147,160,353 | $ 59,263,396 | 87,896,957 | 72,747,827 | 58,881,565 | 10,466,003 | 3,400,260 | 20,421,102 | 3,629,783 |
| 2048 | 10.0221% | 82,388,064 | $ 185,257,096 | $ 7,505,355 | 177,751,741 | 147,116,049 | 119,074,665 | 21,165,126 | 6,876,258 | 39,708,718 | 7,058,093 |
| 2049 | 11.7160% | 96,312,381 | $ 233,047,214 | $ 7,764,939 | 225,282,275 | 186,454,647 | 150,915,042 | 26,824,647 | 8,714,958 | 48,391,122 | 8,601,361 |
| 2050 | 12.2994% | 101,108,688 | $ 237,377,637 | $ 8,033,752 | 229,343,885 | 189,816,235 | 153,635,887 | 27,308,268 | 8,872,080 | 47,368,812 | 8,419,649 |
| 2051 | 14.2129% | 116,838,439 | $ 271,463,260 | $ 8,312,164 | 263,151,096 | 217,796,739 | 176,283,104 | 31,333,736 | 10,179,899 | 52,260,934 | 9,289,207 |
| 2052 | 7.4011% | 60,841,783 | $ 148,925,243 | $ 8,600,525 | 140,324,718 | 116,139,611 | 94,002,560 | 16,708,643 | 5,428,408 | 26,796,176 | 4,762,931 |
| 2053 | 0.4042% | 3,322,784 | $ 9,447,522 | $ 8,899,199 | 548,323 | 453,819 | 367,318 | 65,290 | 21,212 | 100,680 | 17,895 |
| 2054 | 0.3767% | 3,096,480 | $ 9,208,560 | $ 9,208,560 | (0) | (0) | (0) | (0) | (0) | (0) | (0) |
| 2055 | 0.3767% | 3,096,480 | $ 9,529,000 | $ 9,529,000 | (0) | (0) | (0) | (0) | (0) | (0) | (0) |
| 2056 | 0.3767% | 3,096,480 | $ 9,860,923 | $ 9,860,923 | (0) | (0) | (0) | (0) | (0) | (0) | (0) |
| 2057 | 0.3767% | 3,096,480 | $ 10,204,749 | $ 10,204,749 | (0) | (0) | (0) | (0) | (0) | (0) | (0) |
| 2058 | 0.3767% | 3,096,480 | $ 10,560,912 | $ 10,560,912 | (0) | (0) | (0) | (0) | (0) | (0) | (0) |
| 2059 | 0.3767% | 3,096,480 | $ 10,929,864 | $ 10,929,864 | (0) | (0) | (0) | (0) | (0) | (0) | (0) |
| 2060 | 0.3767% | 3,096,480 | $ 11,312,073 | $ 11,312,073 | (0) | (0) | (0) | (0) | (0) | (0) | (0) |
| 2061 | 0.3767% | 3,096,480 | $ 11,708,024 | $ 11,708,024 | (0) | (0) | (0) | (0) | (0) | (0) | (0) |
| 2062 | 0.3767% | 3,096,480 | $ 12,118,219 | $ 12,118,219 | (0) | (0) | (0) | (0) | (0) | (0) | (0) |
| 2063 | 0.3767% | 3,096,480 | $ 12,543,182 | $ 12,543,182 | (0) | (0) | (0) | (0) | (0) | (0) | (0) |
| 2064 | 0.3767% | 3,096,480 | $ 12,983,453 | $ - | 12,983,453 | 10,745,742 | 8,697,525 | 1,545,956 | 502,260 | 1,548,563 | 275,252 |
| 2065 | 0.3767% | 3,096,480 | $ 13,439,593 | $ - | 13,439,593 | 11,123,265 | 9,003,090 | 1,600,269 | 519,905 | 1,541,315 | 273,964 |
| 2066 | 0.3767% | 3,096,480 | $ 13,912,184 | $ - | 13,912,184 | 11,514,405 | 9,319,676 | 1,656,541 | 538,187 | 1,534,148 | 272,690 |
| 2067 | 0.3767% | 3,096,480 | $ 14,401,830 | $ - | 14,401,830 | 11,919,660 | 9,647,686 | 1,714,844 | 557,129 | 1,527,060 | 271,430 |
| 2068 | 0.3767% | 3,096,480 | $ 14,909,156 | $ - | 14,909,156 | 12,339,548 | 9,987,541 | 1,775,252 | 576,755 | 1,520,051 | 270,184 |
| 2069 | 0.3767% | 3,096,480 | $ 15,434,813 | $ - | 15,434,813 | 12,774,607 | 10,339,675 | 1,837,843 | 597,090 | 1,513,120 | 268,952 |
| 2070 | 1.5746% | 12,944,042 | $ 49,065,690 | $ - | 49,065,690 | 40,609,168 | 32,868,767 | 5,842,314 | 1,898,087 | 4,625,050 | 822,087 |
| 2071 | 1.5746% | 12,944,042 | $ 50,425,210 | $ - | 50,425,210 | 41,734,374 | 33,779,500 | 6,004,194 | 1,950,680 | 4,570,386 | 812,371 |
| 2072 | 0.3754% | 3,086,000 | $ 19,471,265 | $ - | 19,471,265 | 16,115,373 | 13,043,666 | 2,318,468 | 753,238 | 1,696,938 | 301,625 |
| 2073 | 0.3409% | 2,802,000 | $ 15,050,458 | $ - | 15,050,458 | 12,456,496 | 10,082,198 | 1,792,077 | 582,221 | 1,261,212 | 224,176 |
| 2074 | 0.0000% | - | $ - | $ - | - | - | - | - | - | - | - |
| | **100.0000%** | **$ 822,060,215** | **$ 2,033,302,201** | **$ 372,287,799** | **$ 1,661,014,402** | **$ 1,374,736,891** | **$ 1,112,702,089** | **$ 197,779,100** | **$ 64,255,703** | **$ 337,756,882** | **$ 60,035,164** |

| | QUALIFIED | NON-QUAL | TOTAL |
|---|---|---|---|
| NPV @12/31/20 | $ 337,756,882 | $ 60,035,164 | $ 397,792,046 |
| LESS BALANCE @ 12/31/20 | 597,344,034 | 87,705,435 | $ 685,049,470 |
| PV OF FUNDING REQUIREMENTS | $ (259,587,152) | $ (27,670,272) | $ (287,257,423) |
| MONTHLY FUNDING REQUIREMENT | - | - | - |
| ANNUAL FUNDING REQUIREMENT | - | - | - |
| MONTHLY ACCRUAL | - | - | - |
| ANNUAL ACCRUAL | - | - | - |

SECTION 10

SUPPORT SCHEDULE H
St Lucie Unit No 2 - FPL Ownership Percentage
Cost Allocation Analysis

**Florida Power & Light Company**
**2020 Decommissioning Study**
**St. Lucie Unit No. 2 - FPL Ownership Percentage**
**Support Schedule : Cost Allocation Analysis**
**(thousands 2020 Dollars)**

| | | | **2020** |
|---|---|---|---|
| | | | **Base Case** |
| 1 | St. Lucie Unit No. 2 | | $822,060 |
| 2 | St. Lucie Unit No. 2 Common Facilities (Note 1) | | 148,085 |
| 3 | St. Lucie Unit No. 2 Excluding Costs of Common Facilities | (L.1 - L.2) | $673,975 |
| 4 | St. Lucie Unit No. 2 Share of Costs of Common Facilities (Note 2) | | 74,043 |
| 5 | Total costs Upon Which Allocation to Participants is Computed | (L. 3 + L. 4) | $748,018 |
| 6 | Participants Share of Total Costs (Note 3) | | 14.89551% |
| 7 | Total Costs Allocated to Participants | (L. 5 x L. 6) | $111,421 |
| 8 | Total Costs (line 1 above) | | $822,060 |
| 9 | Percent of Total Applicable to Participants | (L. 7 / L. 8) | 13.55388% |
| 10 | Percent of Total Applicable to FPL Ownership | 100% - L. 9 | **86.44612%** |

Note:

1 Common (shared) facilities that are expected to be decommissioned at the same time as St. Lucie Unit No. 2 and are included with the decommissioning costs of Unit No. 2.

2 The Participants share of the common facilities has been calculated in compliance with the Participation Agreement which provides that the Participants pay for only their ownership share times one-half of the common facility costs.

3 Allocation is based on ownership share of 8.80600% for Florida Municipal Power Agency and 6.08951% for Orlando Utilities Commission. (Total = 14.89551%)

**Appendix G**

# Summary of Costs Shared Structures

(thousands, 2020 dollars)

| | Unit 1 | Unit 2 | Total |
|---|---|---|---|
| **Structures** | | | |
| Contaminated Soil | 68,949 | 63,636 | 132,585 |
| Site Paving | 1,299 | 1,299 | 2,598 |
| Clean Concrete Processing | 1,928 | 2,792 | 4,720 |
| Security Improvements | 1,144 | 1,144 | 2,288 |
| Shared Miscellaneous Site Structures | - | 5,063 | 5,063 |
| Steam Generator Blowdown Facility | - | 831 | 831 |
| | **73,320** | **74,765** | **148,085** |

# SECTION 11

# DECOMMISSIONING COST ANALYSIS:
# ST LUCIE NUCLEAR PLANT UNITS 1 AND 2
Prepared by EnergySolutions, LLC

ENERGYSOLUTIONS

Document No. 164086-DCE-01

# 2020 Decommissioning Cost Estimate of the St. Lucie Nuclear Plant, Units 1 and 2

**Project No. 164086-01** **Rev. 1**

**Prepared for:**
Florida Power & Light Company


**Prepared by:**
Energy*Solutions*, LLC
121 W. Trade Street, Suite 2700
Charlotte, NC 28202


Authored By: Kevin M. Kirkley, Sr. Estimator — Date: 11/19/2020

Approved By: Jake H. Oleksiak, Project Controls Manager — Date: 11/19/20

- [X] New Report
- [ ] Title Change
- [ ] Report Revision
- [ ] Report Rewrite

Effective Date: November 19, 2020


Electronic documents, once printed, are uncontrolled and may become outdated.
Refer to Document Control authority for the correct revision

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# Tables



# Appendices

# Acronyms and Abbreviations

| | |
|---|---|
| AIF | Atomic Industrial Forum |
| ALARA | As Low As Reasonably Achievable |
| BWR | Boiling Water Reactor |
| CFR | Code of Federal Regulations |
| CWS | Circulating Water System |
| DAW | Dry Active Waste |
| DCE | Decommissioning Cost Estimate |
| DGC | Decommissioning General Contractor |
| DOE | U.S. Department of Energy |
| DSC | Dry Storage Canister |
| ES | Energy*Solutions* |
| EPRI | Electric Power Research Institute |
| FPL | Florida Power & Light |
| FEMA | Federal Emergency Management Agency |
| FSS | Final Status Survey |
| GSA | U.S. General Services Administration |
| GTCC | Greater Than Class C |
| HP | Health Physics |
| HSM | Horizontal Storage Module |
| INPO | Institute of Nuclear Power Operations |
| ISFSI | Independent Spent Fuel Storage Installation |
| LLRW | Low-Level Radioactive Waste |
| LOP | Life-of-Plant |
| MARSSIM | Multi-Agency Radiation Survey and Site Investigation Manual |
| MWt | Megawatt thermal |
| NRC | Nuclear Regulatory Commission |
| ORISE | Oak Ridge Institute for Science and Education |
| PCB | Polychlorinated Biphenyl |
| PSDAR | Post-Shutdown Decommissioning Activities Report |
| PWR | Pressurized Water Reactor |
| St. Lucie | St. Lucie Nuclear Plant |
| WBS | Work Breakdown Structure |
| WCS | Waste Control Specialists LLC |
| UCF | Unit Cost Factor |

# 1.0 EXECUTIVE SUMMARY

This report presents the 2020 Decommissioning Cost Estimate (DCE) Study of the St. Lucie Nuclear Plant, Units 1 and 2, hereinafter referred to as the 2020 Cost Study. The St. Lucie Nuclear Plant (St. Lucie) is owned and operated by Florida Power & Light Company (FPL). Unit 2 is jointly owned with Florida Municipal Power Agency and Orlando Utilities Commission.

This DCE has been performed to furnish an estimate, for financial planning purposes, of the costs for decommissioning St. Lucie Units 1 and 2 to the extent required to terminate the plant's operating license pursuant to 10 CFR 50.75(c), post-shutdown management of spent fuel until acceptance by the U.S. Department of Energy (DOE) pursuant to 10 CFR 50.54(bb), clean demolition of structures and restoration of the site, and Independent Spent Fuel Storage Installation (ISFSI) decommissioning pursuant to 10 CFR 72.30.

The study methodology follows the basic approach originally presented in the Atomic Industrial Forum/National Environmental Studies Project Report AIF/NESP-036, "Guidelines for Producing Commercial Nuclear Power Plant Decommissioning Cost Estimates," (Ref. No. 1). The report was prepared in accordance with Nuclear Regulatory Commission (NRC) Regulatory Guide 1.202, "Standard Format and Content of Decommissioning Cost Estimates for Nuclear Power Reactors," (Ref. No. 2). The estimate is based on compliance with current regulatory requirements and proven decommissioning technologies.

NRC requirements, set forth in Title 10 of the Code of Federal Regulations (CFR), differentiate between the post-shutdown costs associated with storage of spent fuel on site and those associated with the decommissioning of the facility. 10 CFR 50.75(c) requires funding by the licensee of the facility for the decommissioning program, but specifically excludes the cost of removal and disposal of spent fuel and the removal of clean structures. 10 CFR 50.75(c) also excludes the cost of site restoration activities that do not involve the removal of residual radioactivity necessary to terminate the NRC license, which restore the site to either "Brownfield" or "Greenfield" conditions depending on the desired end state. 10 CFR 50.54 (bb) requires funding by the licensee "for the management of all irradiated fuel at the reactor upon expiration of the reactor operating license until title to the irradiated fuel and possession of the fuel is transferred to the Secretary of Energy for its ultimate disposal in a repository."

Accordingly, the costs and schedules for all activities are segregated for regulatory purposes as follows: costs for "License Termination" (10 CFR 50.75(c)), costs for "Spent Fuel Management" (10 CFR 50.54(bb)), and costs for "Site Restoration".

This study analyzes two DCE scenarios, defined by FPL, as follows:

**Scenario 1 – Unit 1 SAFSTOR, DECON both following Unit 2 Shutdown**

- SAFSTOR Unit 1 when it is permanently shutdown in 2036
- DOE starts accepting fuel from the site in 2033
- Unit 1 transfers spent fuel from pool to DOE prior to shutdown beginning in 2033
- Unit 1 Fuel pool empty by 2046
- DECON methodology for Units 1 and 2 after Unit 2 is permanently shutdown in 2043
- Unit 2 transfers spent fuel from pool to DOE prior to shutdown beginning in 2034
- Unit 2 Fuel pool empty by 2046

- All Dry Fuel transferred from ISFSI to DOE by 2071
- Decommissioning will be performed by FPL and a Decommissioning General Contractor (DGC)
- Class A LLRW will be disposed of at the ES Clive UT burial site
- Class B and Class C LLRW will be shipped and buried at the WCS Andrews County, TX burial site

**Scenario 2 – SAFSTOR**

- SAFSTOR Unit 1 when it is permanently shutdown in 2036
- DOE starts accepting fuel from the site in 2033
- Unit 1 transfers spent fuel from pool to DOE prior to shutdown beginning in 2033
- Unit 1 Fuel pool empty by 2046
- SAFSTOR Unit 2 after shutdown in 2043
- Unit 2 transfers spent fuel from pool to DOE prior to shutdown beginning in 2034
- Unit 2 Fuel pool empty by 2046
- All Dry Fuel transferred from ISFSI to DOE by 2071
- Decommissioning will be performed by FPL and a Decommissioning General Contractor (DGC)
- SAFSTOR period to end in 2089
- Decommissioning activities to complete by 2096 (excludes ISFSI decommissioning – ISFSI decommissioning and demolition to complete by 2097)
- Class A LLRW will be disposed of at the ES Clive UT burial site
- Class B and Class C LLRW will be shipped and buried at the WCS Andrews, TX burial site

The cost estimate results are provided for each scenario in 2020 dollars and summarized in Table 1-1 below. This table provides License Termination costs (corresponding to 10 CFR 50.75(c) requirements), Spent Fuel Management costs (corresponding to 10 CFR 50.54(bb) requirements), and Site Restoration costs including activities such as clean building demolition and site grading etc.

**Table 1-1**

**FPL St. Lucie Units 1 and 2**
**Decommissioning Cost Summary**
(thousands of 2020 dollars)

| Scenario | License Termination | Spent Fuel | Site Restoration | Total |
|---|---|---|---|---|
| 1 | 1,254,740 | 427,313 | 63,409 | 1,745,462 |
| 2 | 1,319,504 | 473,029 | 62,101 | 1,854,633 |

Table 1-2 below provides the cost estimate results for Scenario 1 separated into Unit 1, Unit 2 and Total.

**Table 1-2**

| **FPL St. Lucie Units 1 and 2<br>Scenario 1 Cost Summary by Unit**<br>(thousands of 2020 dollars) | | | |
|---|---|---|---|
| | Unit 1 | Unit 2 | Total |
| License Termination | 651,106 | 603,633 | 1,254,740 |
| Spent Fuel | 243,383 | 183,930 | 427,313 |
| Site Restoration | 28,912 | 34,497 | 63,409 |
| Total | 923,401 | 822,060 | 1,745,462 |

Table 1-3 below provides the cost estimate results for Scenario 2 separated into Unit 1, Unit 2 and Total.

**Table 1-3**

| **FPL St. Lucie Units 1 and 2<br>Scenario 2 Cost Summary by Unit**<br>(thousands of 2020 dollars) | | | |
|---|---|---|---|
| | Unit 1 | Unit 2 | Total |
| License Termination | 677,793 | 641,710 | 1,319,504 |
| Spent Fuel | 266,544 | 206,485 | 473,029 |
| Site Restoration | 28,188 | 33,913 | 62,101 |
| Total | 972,525 | 882,108 | 1,854,633 |

The estimate is based on site-specific plant systems and buildings inventories. These inventories, Energy*Solutions*' (ES) proprietary Unit Cost Factors (UCFs), historical data and execution strategy were used to generate required man-hours, waste volumes and classification, and estimated costs. Detailed project estimates are included in Appendix C.

The schedule reflects Energy*Solutions'* historical execution strategy and experience to sequence activity-dependent or distributed decommissioning elements such as planning and preparations, major component removal, building decontamination, building demolition, etc. A schedule for each scenario is summarized in Tables 1-4 and 1-5 below. Detailed project schedules are included in Appendix B.

Table 1-4 below provides a schedule summary for Scenario 1 based on a DECON scenario with Unit 1 Shutdown March 1, 2036 and Unit 2 Shutdown April 6, 2043.

**Table 1-4**

| FPL DCE-01 St. Lucie Units 1 and 2<br>Scenario 1 Schedule Summary | |
|---|---|
| **Year** | **Item** |
| 2033 | DOE starts accepting fuel from spent fuel pool |
| 2036 | Unit 1 Shutdown |
| 2040 | Unit 1 SAFSTOR period begins |
| 2043 | Unit 2 Shutdown |
| 2046 | Unit 1 Fuel Pool Empty |
| 2046 | Unit 2 Fuel Pool Empty |
| 2046 | Unit 1 SAFSTOR period ends |
| 2047 | Start Demolition |
| 2053 | Decommissioning and Site Restoration Complete |
| 2071 | ISFSI Empty |
| 2073 | ISFSI Decommissioning and Site Restoration Complete |

Table 1-5 below provides a schedule summary for Scenario 2 based on a SAFSTOR scenario with Unit 1 Shutdown March 1, 2036 and Unit 2 Shutdown April 6, 2043.

**Table 1-5**

| FPL DCE-01 St. Lucie Units 1 and 2<br>Scenario 2 Schedule Summary | |
|---|---|
| **Year** | **Item** |
| 2033 | DOE starts accepting fuel from spent fuel pool |
| 2036 | Unit 1 Shutdown |
| 2040 | Unit 1 SAFSTOR period begins |
| 2043 | Unit 2 Shutdown |
| 2046 | Unit 1 Fuel Pool Empty |
| 2046 | Unit 2 Fuel Pool Empty |
| 2047 | Unit 2 SAFSTOR period begins |
| 2071 | ISFSI Empty |
| 2089 | SAFSTOR Period ends |
| 2090 | Start Demolition |
| 2096 | Decommissioning and Site Restoration Complete |
| 2097 | ISFSI Decommissioning and Site Restoration Complete |

# 2.0 INTRODUCTION

## 2.1 Study Objective

This report presents the 2020 Decommissioning Cost Estimate (DCE) Study of the St. Lucie Nuclear Plant, Units 1 and 2, hereinafter referred to as the 2020 Cost Study. The St. Lucie Nuclear Plant (St. Lucie) is owned and operated by FPL.

This DCE has been performed to furnish an estimate, for financial planning purposes, of the costs for decommissioning St. Lucie Units 1 and 2 to the extent required to terminate the plant's operating license pursuant to 10 CFR 50.75(c), post-shutdown management of spent fuel until acceptance by the U.S. Department of Energy (DOE) pursuant to 10 CFR 50.54(bb), clean demolition of structures and restoration of the site.

The study methodology follows the basic approach originally presented in the Atomic Industrial Forum/National Environmental Studies Project Report AIF/NESP-036, "Guidelines for Producing Commercial Nuclear Power Plant Decommissioning Cost Estimates," (Ref. No. 1). The report was prepared in accordance with Nuclear Regulatory Commission (NRC) Regulatory Guide 1.202, "Standard Format and Content of Decommissioning Cost Estimates for Nuclear Power Reactors," (Ref. No. 2). The estimate is based on compliance with current regulatory requirements and proven decommissioning technologies.

## 2.2 Regulatory Framework

Provisions of current laws and regulations affecting decommissioning, waste management and spent fuel management are as follows:

1. NRC regulations require a license for on-site storage of spent fuel. Wet storage in a spent fuel pool is authorized by a facility's 10 CFR Part 50 license (Ref. No. 3). On-site dry storage of spent fuel at an Independent Spent Fuel Storage Installation (ISFSI) is licensed by either: (a) the general license set forth in 10 CFR 72.210, which requires that a Part 50 license be in place; or (b) a site-specific ISFSI license issued pursuant to 10 CFR Part 72.

2. 10 CFR 50.75(c) requires funding by the licensee of the facility for the decommissioning program, but specifically excludes the cost of removal and disposal of spent fuel and the removal of clean structures.

3. 10 CFR 50.54 (bb) requires the licensee, within two years following permanent cessation of operation of the reactor or five years before expiration of the operating license, whichever occurs first, to submit written notification to the NRC for its review and preliminary approval of the program by which the licensee intends to manage and provide funding "for the management of all irradiated fuel at the reactor upon expiration of the reactor operating license until title to the irradiated fuel and possession of the fuel is transferred to the Secretary of Energy for its ultimate disposal in a repository." However, the NRC does not currently consider post-shutdown spent fuel management costs to be decommissioning costs.

4. 10 CFR 72.30(b) requires that a licensee under Part 72 must submit a decommissioning funding plan that contains information that provides assurance that funds will be available to decommission the ISFSI.

5. 10 CFR Part 961, Appendix E (Ref. No. 4), requires spent fuel to be cooled in the spent fuel pool for at least five years before it can be accepted by DOE.

Decommissioning Alternatives

The three basic methods for decommissioning are DECON, SAFSTOR, and ENTOMB, which are summarized as follows:

1. DECON: The equipment, structures, and portions of the facility and site that contain radioactive contaminants are promptly removed or decontaminated to a level that permits termination of the license after cessation of operations.

2. SAFSTOR: The facility is placed in a safe, stable condition and maintained in that state (safe storage). The facility is decontaminated and dismantled at the end of the storage period to levels that permit license termination. NRC regulations require decommissioning to be completed within 60 years of cessation of operation. Durations less than the regulatory-allowed maximum may be referred to as Modified SAFSTOR.

3. ENTOMB: Radioactive structures, systems, and components are encased in a structurally long-lived substance, such as concrete. The entombed structure is appropriately maintained and monitored until radioactivity decays to a level that permits termination of the license. Since entombment will exceed the requirement for decommissioning to be completed within 60 years of cessation of operation, NRC handles entombment requests on a case-by-case basis.

The selection of a preferred decommissioning alternative is influenced by a number of factors pertinent at the time of final plant shutdown. These factors include the cost of each decommissioning alternative, minimization of occupational radiation exposure, availability of a low-level waste disposal facility, availability of a high-level waste (spent fuel) repository, regulatory requirements, and public concerns.

Post-Shutdown Spent Fuel Management Alternatives

Selection of a decommissioning strategy and the associated schedule for completion is in part contingent upon an assumed start date for DOE acceptance of spent fuel and an assumed end date for completion of the transfer of all spent fuel assemblies projected to be generated during a power reactor's operating life. The basic options for long-term post-shutdown spent fuel management currently available to power plant operators are (1) wet storage consisting of continued maintenance and operation of the spent fuel pool, and (2) dry storage consisting of transfer of spent fuel from the fuel pool to on-site dry storage modules after a cooling period. Maintaining the spent fuel pool for an extended duration following cessation of operations prevents termination of the Part 50 license and typically has a higher annual maintenance and operating cost than the dry storage alternative. Transfer of spent fuel to an ISFSI requires additional capital expenditures for purchase and construction of the ISFSI and dismantlement and disposal of the ISFSI following completion of spent fuel transfer to DOE. In both cases the decommissioning and spent fuel management costs are significantly affected by the assumed start and end dates for DOE acceptance of spent fuel.

In January 2013, DOE released its "Strategy for Management and Disposal of Used Nuclear Fuel and High-Level Radioactive Waste" (Ref. No. 5). The DOE strategy contemplates building the capability to begin executing DOE's commitment to address waste disposal within the next ten years. Under this strategy, by 2021, operation would begin of a "pilot storage facility" with an "initial focus on accepting spent fuel from shutdown reactor sites." By 2025, a "larger interim storage facility" would be available and by 2048 a geologic repository would commence operations.

For purposes of this estimate, FPL has assumed the DOE pickup of commercial fuel to begin in 2030. The DOE starts accepting spent fuel from the St. Lucie facility in 2033 and the acceptance rate is consistent with the 2004 "Acceptance Priority Ranking & Annual Capacity Report" (Ref. No. 6), which is the most current information regarding the acceptance of spent fuel.

Note that nothing in this update, or in the assumptions and information provided by FPL, should be construed as any sort of admission or concession regarding the legal obligations of DOE. For example, and without limitation, the assumptions for DOE performance after 2021 utilized in this update do not include consolidation or acceleration via exchanges of acceptance allocations with other utilities, and DOE is also assumed to accept loaded and canistered fuel, although the government's stated positions with respect to such acceptance, including assertions in legal proceedings, have been inconsistent.

# 3.0 STUDY METHODOLOGY

## 3.1 General Description

Energy*Solutions* maintains a proprietary decommissioning cost model based upon the fundamental technical approach established in AIF/NESP-036, "Guidelines for Producing Commercial Nuclear Power Plant Decommissioning Cost Estimates," dated May 1986 (Ref. No. 1). The cost model has been continuously updated in accordance with regulatory requirements, Energy*Solutions'* actual project experience, and the latest industry technologies. The cost model includes elements for estimating distributed (direct costs) and undistributed costs. Distributed costs are activity specific and include planning and preparation costs as well as the decontamination, packaging, disposal, and removal of major components and systems. For example, the segmentation, packaging, and disposal of the reactor internals is a distributed cost. Undistributed costs, sometimes referred to as collateral costs, are typically time dependent costs such as utility and decommissioning general contractor staff, property taxes, insurance, regulatory fees and permits, energy costs, and security staff.

The methodology for preparing cost estimates for a selected decommissioning alternative requires development of a site-specific detailed work-activity sequence based upon the plant inventory. The activity sequence is used to define the labor, material, equipment, energy resources, and duration required for each activity. In the case of major components, individual work-activity sequence analyses are performed based on the physical and radiological characteristics of the component and the packaging, transportation, and disposal options available.

In addition to actual costs and UCF models the study also relies on information obtained for earlier decommissioning estimates from across the industry and from cost information derived for submitted proposals and bid results.

## 3.2 Schedule Analysis

Energy*Solutions* has established a Work Breakdown Structure (WBS) that typically defines decommissioning costs and the schedule into six primary periods to define the scope of work. Those periods are:

- Period 1 – Shutdown and Transition
- Period 2 – SAFSTOR
- Period 3 – Decommissioning and License Termination
- Period 4 – Site Restoration
- Period 5 – Dry Fuel / GTCC Storage and Transfer
- Period 6 – ISFSI Decommissioning

The work is broken down further into sub-periods as defined in Section 4.2 below.

Once the work activity durations are established, a time-phased schedule and cash-flow analysis are performed using Energy*Solutions'* integrated HardDollar estimating and scheduling tools to generate annual spending.

The schedule accounts for constraints such as spent fuel cooling periods and regulatory reviews. The schedule is typically delineated into periods that differentiate manpower requirements and undistributed costs.

### 3.3 Decommissioning Staff

Energy*Solutions*' philosophy towards decommissioning is to assume that the project will be performed in an efficiently planned and executed manner using project personnel experienced in decommissioning. These DCE scenarios assume that the decommissioning will be performed by a highly experienced and qualified DGC, with oversight and management of the decommissioning operations performed by the utility staff. It is also assumed that the utility staff will be supplemented by professional consulting engineering, particularly in the planning and preparation phase.

Staffing levels for each project period are based on the Atomic Industrial Forum (AIF) guidelines, Energy*Solutions'* project experience and industry practice. The sizes of the staffs are varied in each period in accordance with the requirements of the work activities. Staffing has been organized into the following departments or functional groups:

- Administration
- Engineering
- Health Physics / Radiation Protection
- Management
- Maintenance and Operations
- Quality Assurance
- Security Administration
- Security Guard Force
- Waste Operations
- DGC Staff

### 3.4 Waste Disposal

Waste management costs comprise a significant portion of the decommissioning cost estimate. Additionally, limited future access to disposal sites licensed for receipt of Class B and C wastes introduces a significant level of uncertainty with respect to the appropriateness of using existing rate structures to estimate disposal costs of these wastes. Energy*Solutions*' approach to estimating waste disposal costs is discussed in the following paragraphs.

<u>Waste Classification</u>

Regulations governing disposal of radioactive waste are stringent in order to ensure control of the waste and preclude adverse impact on public health and safety. At present, low-level radioactive waste (LLRW) disposal is controlled by NRC Regulation 10 CFR 61, which went into effect in December 1983. This regulation stipulates the criteria for the establishment and operation of shallow-land LLRW burial facilities. Embodied within this regulation are criteria and classifications for packaging LLRW such that it is acceptable for burial at licensed LLRW disposal sites.

For each waste classification, 10 CFR 61 stipulates specific criteria for physical and chemical properties that the LLRW must meet in order to be accepted at a licensed disposal site. The LLRW disposal criteria of 10 CFR 61 require that LLRW generators determine the proportional amount of a number of specific radioactive

isotopes present in each container of disposable LLRW. This requirement for isotopic analysis of each waste stream of disposable LLRW is met by employing a combination of analytical techniques such as computerized analyses based upon scaling factors, sample laboratory analyses, and direct assay methods. Having performed an isotopic analysis of each container of disposable LLRW, the waste must then be classified according to one of the classifications (Class A, B, C or Greater Than Class C (GTCC)) as defined in 10 CFR 61.

Energy*Solutions*' classification of LLRW resulting from decommissioning activities is based on AIF/NESP-036 (Ref. No. 1), NUREG/CR-0130 (Ref. No. 7), NUREG/CR-0672 (Ref. No. 8), and recent industry experience. The estimated curie content of the reactor vessel and internals at shutdown is derived from NUREG/CR-0130 for Pressurized Water Reactors (PWRs) and NUREG/CR-0672 for Boiling Water Reactors (BWRs) and adjusted for the different mass of components and period of decay.

Packaging

Selection of the type and quantity of containers required for Class B and C wastes is based on the most restrictive of either curie content, dose rate, container weight limit, or container volume limit. GTCC wastes from segmentation of the reactor vessel internals is packaged in fuel canisters. The selection of container type for Class A waste is based on the transportation mode (rail, truck, barge, etc.) and waste form. The quantity of Class A waste containers is determined by the most restrictive of either container weight limit or container volume limit. Large components, such as pressurizers, and reactor recirculation pumps, are shipped as their own container with shielding as required.

Custom container costs are obtained from manufacturers. Shielded transport cask and liner costs are obtained from Energy*Solutions* or other cask owners and operators.

Transportation

Transportation routes to processing and disposal facilities are determined based on available transportation modes (truck, rail, barge or combinations). Transportation costs for the selected routes and modes are obtained from vendor quotes or published tariffs whenever possible.

Class A Disposal Options and Rates

In accordance with the existing Life-of-Plant (LOP) Disposal Agreement (Ref. No. 9), all Class A waste that meets the Clive facility waste acceptance criteria may be disposed of at Clive. All reported waste disposal costs include packaging, transportation, and any applicable surcharges.

Class B and C Disposal Options and Rates

Currently, within the United States, there are only three operational commercial disposal facilities licensed to accept Class B and C LLRW: the Barnwell facility, operated by Energy*Solutions* in Barnwell, South Carolina, the U.S. Ecology facility in Richland, Washington, and the licensed facility in Andrews County, Texas operated by Waste Control Specialists (WCS). Barnwell only accepts waste from states within the Atlantic Compact, U.S. Ecology only accepts waste from states within the Northwest and Rocky Mountain Compacts. However, the WCS facility will accept waste from the Texas Compact (comprised of Texas and Vermont) and non-Compact generators. The Texas Compact Commission on March 23, 2012, approved amendments to rules allowing the import of non-compact generator LLRW for disposal at the Andrews County facility.

In accordance with the existing Life-of-Plant (LOP) Disposal Agreement, all Class B and C waste that meets the WCS facility waste acceptance criteria is to be disposed of at WCS, Andrews County, TX facility. All reported waste disposal costs include packaging, transportation, and any applicable surcharges.

Greater Than Class C (GTCC)

Wastes identified as 10 CFR 61 Class A, B, and C may be disposed of at a near-surface disposal facility. Certain components are highly activated and may exceed the radionuclide concentration limitations for 10 CFR 61 Class C waste. In accordance with 10 CFR 61, these components cannot be disposed of in a near-surface LLRW disposal facility and must be transferred to a geologic repository or a similar site approved by the NRC.

Highly activated sections of the reactor vessel internals will result in GTCC waste. Presently, a facility does not exist for the disposal of wastes exceeding 10 CFR 61 Class C limitations. Energy*Solutions* assumes that the DOE will accept this waste along with spent fuel. Although courts have held that DOE is obligated to accept and dispose of GTCC, issues regarding potential costs remain potentially unsettled. Therefore, Energy*Solutions* conservatively estimates a GTCC waste disposal cost. Energy*Solutions* assumes that the GTCC waste will be packaged in dry storage containers, and be shipped to a storage or disposal facility by DOE along with the spent fuel.

Additionally, Energy*Solutions* assumes shipping costs for GTCC waste to be equivalent to the commercial cost of shipping a Type B licensed, shielded cask such as the CNS 8-120B cask, which is owned and operated by Energy*Solutions*.

LLRW Volume Reduction

Based on current Class A LLRW disposal rates, Energy*Solutions* does not assume on-site volume reduction techniques such as waste compaction or an aggressive decontamination, survey and release effort. These activities are not currently considered to be cost effective over disposal.

Non-Radioactive Non-Hazardous Waste Disposal

Energy*Solutions* assumes that recyclable, non-radioactive scrap metal resulting from the decommissioning program will be transported to a scrap metal dealer. Concrete debris is assumed to be processed by size reduction, with removal of structural reinforcing steel, and used on site as engineered fill for voids. Asphalt from parking lots and roadways is assumed to be stockpiled on site and removed, at no cost to the project, by a recycler. All other demolition debris is removed from the site and disposed of at a local construction debris landfill.

Hazardous and Industrial Waste Disposal

Uncontaminated lead shielding remaining after shutdown is assumed to be removed from its installed locations and shipped off site by entities having a need for the material. The entities receive the lead at no charge in return for providing the removal and shipping services. Non-radioactive contaminated surfaces coated with lead-based paint will be removed as non-hazardous building demolition debris. All other chemicals and hazardous materials present at shutdown will be removed and properly disposed of during decommissioning.

### 3.5 Final Status Survey

The cost of performing a final status survey (FSS) is based on NUREG-1575, “Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM)” (Ref. No. 10). Estimates of MARSSIM Class I, II, and III survey designations are based on information furnished by FPL, radiological assumptions regarding contamination resulting from historic plant operations and from small and large component removal activities. The FSS activity cost calculation includes the in-place remote survey of underground metal and concrete pipe, soil, and groundwater sampling and analysis. Estimated costs for NRC and Oak Ridge Institute for Science and Education (ORISE) verification are also included, and the NRC review period is incorporated into the project schedule.

### 3.6 Contingency

Contingencies are applied to cost estimates primarily to allow for unknown or unplanned occurrences during the actual program, e.g., increased radioactive contamination over that expected, equipment breakdowns, weather delays, and labor strikes. This is consistent with the definition provided in the DOE Cost Estimating Guide, DOE G 430.1-1, 3-28-97 (DOE G) (Ref. No. 11). Contingency "covers costs that may result from incomplete design, unforeseen and unpredictable conditions, or uncertainties within the defined project scope. The amount of contingency will depend on the status of design, procurement, and construction; and the complexity and uncertainties of the component parts of the project. Contingency is not to be used to avoid making an accurate assessment of expected costs." EnergySolutions determines site-specific contingency factors to be applied to each estimate based on industry practices and actual project experience.

The DOE has established a recommended range of contingencies as a function of completeness of program design, DOE G. The ranges are:

| Type of Estimate | Contingency Range as a % of Total Estimate |
|---|---|
| Planning Phase Estimate | 20-30 |
| Budget Estimate | 15-25 |
| Title I (Preliminary Design Estimate) | 10-20 |
| Title II (Definitive Design Estimate) | 5-15 |

The approach in this estimate to assigning appropriate contingency rates is based upon adaptations of published values for the specific decommissioning activities as well as project experience and current industry practices. One source for such published information is AIF/NESP-036 “Guidelines for Producing Nuclear Plant Decommissioning Cost Estimates” (Ref. No. 1). The AIF guideline identifies contingencies for activities specific to a nuclear power plant decommissioning, such as reactor internals removal. The contingencies presented in the AIF guideline are based on the assumption that the estimated costs are not well known; therefore, the recommended contingencies are greater than they would be if the estimated costs were well known. With the exception of the system decontamination, reactor vessel and reactor internals removal, and disposal, the contingencies presented in the AIF guideline are consistent with the values for a Budget/Title I estimate. The system decontamination, reactor vessel and reactor internals removal, and disposal contingencies recommended in the AIF guideline are significantly higher than the ranges identified by the DOE, even for a planning phase document. This is due to the unique nature of these activities and the relatively small amount of historical data available at the time the AIF document was written.

The application of contingency rates in this estimate are consistent with information presented in AIF guideline and DOE G. The decommissioning costs generated in the estimate are considered well known and, as such, the contingencies presented in AIF guideline were reduced for each category of costs. There have also been a number of large-scale decommissioning projects since AIF was published, including by Energy*Solutions,* providing substantial historical information that has been used in preparing this estimate, allowing for additional reduction in contingency costs.

The following table provides a summary of contingency values included in the Decommissioning Cost Estimate:

- 10% contingency on SAFSTOR staff and undistributed costs
- 15% contingency on non-rad build demolition and site restoration activities
- 15% contingency on dry fuel storage & ISFSI operations activities
- 15% contingency on dry fuel transfer to DOE
- 15% contingency on staff and undistributed costs
- 15% contingency on GTCC transportation and disposal
- 20% contingency on reactor vessel segmentation
- 20% contingency on large component and system removal
- 20% contingency on rad building interior and exterior demolition
- 20% contingency on final status surveys
- 20% contingency on wet fuel transfer to the DOE
- 20% contingency on remediation and disposal of contaminated soils
- 25% contingency on asbestos abatement

A reactor decommissioning program will be conducted under an NRC-approved Quality Assurance Program which meets the requirements of 10 CFR 50, Appendix B. However, the development of the Quality Assurance Program, the performance of work under that program, and the effort required to ensure compliance with the program, is already included in the detailed cost estimate. Therefore, Energy*Solutions* does not include quality assurance as an element of the contingency allowance. The same is true where radioactive contamination or activated materials are dealt with. The cost factors and associated calculations fully reflect the cost impact of that material, and a separate contingency is not required specifically due to working with contamination.

### 3.7 Cost Reporting

Total project costs are aggregated from the distributed activities (direct costs) and undistributed costs into the following categories:

- Labor
- Materials and Equipment
- Waste Transportation and Disposal
- Other Direct Costs

Other costs include property taxes, insurance, license fees, permits, and energy. Waste disposal costs are the summation of packaging, transportation, base disposal rate, and any applicable surcharges. Health physics (HP) supplies and small tool costs are calculated as a component of each distributed activity cost and included in the category of Material and Equipment, except for HP supplies for utility HP staff are calculated and reported as an undistributed line item. A contingency is then applied to each activity.

# 4.0 SITE-SPECIFIC TECHNICAL APPROACH

## 4.1 Facility Description

The St. Lucie Nuclear Plant is a nuclear-powered electrical generating facility consisting of two PWRs. St. Lucie is located on Hutchinson Island, midway between the Florida cities of Fort Pierce and Stuart. The plant site comprises approximately 1,132 acres, and approximately one quarter of the site is used for generating electricity.

Both Unit 1 and Unit 2 are two-loop Combustion Engineering PWRs with a current thermal output of 3,020 MWt and a design electrical rating of 1,062 MWe and 1,074 MWe, respectively. The current license expiration dates for Units 1 and 2 are in 2036 and 2043, respectively.

St. Lucie has an existing ISFSI supporting Units 1 and 2. The ISFSI is operated under the 10 CFR Part 72 general license using the manufacturer's Certificate of Compliance.

A list of the St. Lucie Unit 1 and 2 systems and structures included in the material inventory for this study is provided in Appendix A.

## 4.2 Decommissioning Periods

Energy*Solutions* has established a Work Breakdown Structure (WBS) that typically defines decommissioning cost estimates with six primary periods to define the scope of work. Those periods are:

- Period 1 – Shutdown and Transition
- Period 2 – SAFSTOR
- Period 3 – Decommissioning and License Termination
- Period 4 – Site Restoration
- Period 5 – Dry Fuel / GTCC Storage and Transfer
- Period 6 – ISFSI Decommissioning

The work is broken down further into sub-periods.

The project periods defined for this site-specific study and a summary of activities performed during each period are listed below.

**SCENARIO 1 – Unit 1 SAFSTOR, DECON both following Unit 2 Shutdown**

**Period 1 – Shutdown and Transition:**

Period 1a – Planning Prior to Shutdown (by Plant Operations)

Period 1b – Unit 1 Post-Shutdown Planning and Engineering:

- Administrative Activities in Preparation for SAFSTOR
- Prepare PSDAR and License Documents
- Engineering Activities in Preparation for SAFSTOR

Period 1c – Unit 1 Post-Shutdown Deactivation and Modifications:

- Defuel Reactor Unit 1 (by Plant Operations)
- Fuel Sampling and Inspections (by Plant Operations)
- Spent Fuel Pool System Modifications
- Implement Cold and Dark
- Flush and Drain Non-Essential Systems
- Perform Pre-SAFSTOR Baseline Radiation Survey

Period 1d – Unit 1 Wet Fuel Transfer to DOE prior to SAFSTOR:

- Provide Transfer Casks (supplied by DOE)
- Procure Spent Fuel Loading and Transfer Equipment
- Procedures and Dry Runs
- Remove Fuel Assemblies from Pool and Load DOE Casks
- Dry, Close and Inspect DOE-supplied Casks
- Load Out Casks to DOE Transport
- Spent Fuel Transportation and Disposal (by DOE)

Period 1e – Unit 2 Post-Shutdown Planning and Engineering:

- Administrative Activities in Preparation for Decommissioning
- Preparation of PSDAR and Licensing Documents
- Engineering Activities in Preparation for Decommissioning

Period 1f – Unit 2 Post-Shutdown Preparations and Deactivation:

- Defuel Reactor Unit 2 (by Plant Operations)
- Fuel Sampling and Inspections (by Plant Operations)
- Spent Fuel Pool System Modifications

Period 1g – Unit 2 Wet Fuel Transfer to DOE prior to DECON:

- Provide Transfer Casks (supplied by DOE)
- Procure Spent Fuel Loading and Transfer Equipment
- Procedures and Dry Runs
- Remove Fuel Assemblies from Pool and Load DOE Casks
- Dry, Close and Inspect DOE-supplied Casks
- Load Out Casks to DOE Transport
- Spent Fuel Transportation and Disposal (by DOE)

Period 1h – Unit 2 Wet Fuel Transfer to ISFSI prior to DECON:

- Provide Transfer Casks
- Procedures and Dry Runs
- Remove Fuel Assemblies from Pool and Load Casks
- Dry, Close and Inspect Casks
- Load Out Casks to Transport

Period 1i – Undistributed Costs for Shutdown and Transition:

- Utility Staff
- Security Guard Force
- Property Taxes
- Insurance
- Corporate Support
- Utility Staff HP Supplies
- NRC Inspection Fees
- Licensing Fees
- Materials and Services
- Energy
- County Fees
- FEMA Fees
- ISFSI Operating Costs
- Spent Fuel Maintenance

**Period 2 – SAFSTOR (Unit 1)**:

Period 2a – Wet Fuel Transfer to DOE during SAFSTOR:

- Provide Transfer Casks (supplied by DOE)
- Procure Spent Fuel Loading and Transfer Equipment (in Period 1)
- Procedures and Dry Runs (in Period 1)
- Remove Fuel Assemblies from Pool and Load Casks
- Dry, Close and Inspect Casks
- Load Out Casks to Transport

Period 2b – Wet Fuel Transfer to ISFSI during SAFSTOR:

- Purchase Transfer Casks
- Procure Spent Fuel Loading and Transfer Equipment (in Period 1)
- Procedures and Dry Runs
- Remove Fuel Assemblies from Pool and Load Casks
- Dry, Close and Inspect Casks
- Load Out Casks to Transport

Period 2c – Unit 1 Dormancy during Wet Fuel Transfer to DOE:

- Utility Staff
- Security Guard Force
- Property Taxes
- Insurance
- Corporate Support
- Utility Staff HP Supplies
- NRC Inspection Fees
- Licensing Fees
- County Fees

- FEMA Fees
- Emergency Planning Fees
- ISFSI Operating Costs
- Energy

**Period 3 – Decommissioning and License Termination**:

Period 3a – Decommissioning Planning:

- Decommissioning Planning and Design
- Prepare Integrated Work Sequence and Schedule
- Site Characterization
- Prepare Decommissioning Activity Specifications
- Prepare Detailed Work Procedures
- Prepare License Termination Plan
- Design Containment and Miscellaneous System Modifications
- Purchase Dry Storage Modules for GTCC Waste

Period 3b – Decommissioning Transition and Preparations:

- Mobilize Decommissioning General Contractor
- Flush and Drain Non-Essential Systems – Unit 2
- Perform Asbestos Abatement of Pipe Insulation
- Implement Temporary Power Upgrades – Unit 1
- Implement Cold and Dark and Install Temporary Power – Unit 2
- Construct Miscellaneous Building Modifications, In-Plant Laydown Areas
- Modify Containment Access
- Transportation Infrastructure Modifications
- Procure Waste Handling and Processing Tents

Period 3c – Reactor Vessel Removal:

- Design and Procure Special Equipment
- Test Special Cutting and Handling Equipment and Train Operators
- Finalize Internals and Vessel Segmentation Details
- Segment, Package and Ship Reactor Internals
- Package and Ship Reactor Pressure Vessels

Period 3d – Large Component Removal:

- Heavy Lift / Transfer Equipment
- Remove and Dispose of Steam Generators
- Remove and Dispose of Pressurizer
- Remove and Dispose of Reactor Coolant Pipe
- Remove and Dispose of Reactor Coolant Pumps
- Large Component Disposal

Period 3e – Plant Decontamination and Interior Rad Demolition:

- Remove and Dispose of Spent Fuel Storage Racks
- Segment, Package and Dispose of Spent Fuel Pool Island Equipment
- Decon/Surgical Removal Containment Buildings
- Decon/Surgical Removal Fuel Buildings
- Decon/Surgical Removal Auxiliary Buildings
- Oversize Debris/Containerized/Processed Debris Disposal

Period 3f – Rad Building Demolition:

- Demolish Fuel Buildings
- Demolish Auxiliary Buildings
- Demolish Containment Buildings
- Contaminated Soil
- Debris Disposal

Period 3g – License Termination Activities:

- Final Status Survey for Structures
- Final Status Survey for Land Areas (included with Structures)

Period 3h – Undistributed Costs for Decommissioning and License Termination:

- Utility Staff
- Security Guard Force
- General Contractor Staff
- Property Taxes
- Insurance
- Corporate Support
- Utility Staff HP Supplies
- NRC Inspection Fees
- Licensing Fees
- Florida LLRW Inspection Fee
- Materials and Services
- Energy
- DGC HP Supplies

**Period 4 – Site Restoration**:

Period 4a – Clean Building and Site Demolition:

- Demolish Turbine Pedestal and Turbine Deck
- Demolish Intake and Circulating Water System (CWS)
- Demolish Tank Foundations
- Demolish Miscellaneous Site Structures
- Demolish Security Improvements
- Demolish Steam Generator Blowdown Treatment
- Clean Concrete Processing
- Demolish Site Paving
- Clean Debris Disposal / Recycle

Period 4b – Site Restoration:

- Procure Site Restoration Equipment
- Finish Grading and Re-Vegetate Site

Period 4c – Undistributed Costs for Site Restoration:

- Utility Staff
- Security Guard Force
- General Contractor Staff
- Property Taxes
- Insurance
- Corporate Support
- Energy
- Materials and Services

**Period 5 – Dry Fuel / GTCC Storage and Transfer**:

Period 5a – Dry Fuel Transfer to DOE during and after DECON:

- Procure Loading and Transfer Equipment (included in Period 1)
- Procedures and Dry Runs (included in Period 1)
- Remove Fuel Casks from ISFSI and Load DOE Transport
- Spent Fuel Transportation and Disposal (by DOE)

Period 5b – GTCC Waste Disposition:

- Remove GTCC Casks from ISFSI and Load Out
- GTCC Transportation and Disposal

Period 5c – Undistributed Costs for Dry Fuel / GTCC Storage and Transfer:

- Utility Staff
- Security Guard Force
- Property Taxes
- Insurance
- NRC Inspection Fees
- Licensing Fees
- ISFSI Operating Costs

**Period 6 –ISFSI Decommissioning**:

Period 6a – ISFSI D&D Planning and Preparations:

- Preparation and NRC Review of License Termination Plan

Period 6b – ISFSI and Support Structure Clean Demolition:

- Clean Demolition of ISFSI
- Demolition of ISFSI Support Structures

Period 6c – ISFSI Final Status Surveys:

- Verification Surveys
- Preparation of Final Report on Decommissioning and NRC Review

Period 6d – Undistributed Costs for ISFSI Decommissioning:

- Utility Staff
- Security Guard Force
- General Contractor Staff
- Property Taxes
- Insurance
- Energy
- County Fees
- FEMA Fees (Emergency Preparedness)

**SCENARIO 2 – SAFSTOR**

**Period 1 – Shutdown and Transition:**

Period 1a – Planning Prior to Shutdown (by Plant Operations)

Period 1b – Unit 1 Post-Shutdown Planning and Engineering:

- Administrative Activities in Preparation for SAFSTOR
- Prepare PSDAR and License Documents
- Engineering Activities in Preparation for SAFSTOR

Period 1c – Unit 1 Post-Shutdown Deactivation and Modifications:

- Defuel Reactor Unit 1 (by Plant Operations)
- Fuel Sampling and Inspections (by Plant Operations)
- Spent Fuel Pool System Modifications
- Implement Cold and Dark
- Flush and Drain Non-Essential Systems
- Perform Pre-SAFSTOR Baseline Radiation Survey

Period 1d – Unit 1 Wet Fuel Transfer to DOE prior to SAFSTOR:

- Provide Transfer Casks (supplied by DOE)
- Procure Spent Fuel Loading and Transfer Equipment
- Procedures and Dry Runs
- Remove Fuel Assemblies from Pool and Load DOE Casks
- Dry, Close and Inspect DOE-supplied Casks
- Load Out Casks to DOE Transport
- Spent Fuel Transportation and Disposal (by DOE)

Period 1e – Unit 2 Post-Shutdown Planning and Engineering:

- Administrative Activities in Preparation for Decommissioning
- Preparation of PSDAR and Licensing Documents
- Engineering Activities in Preparation for Decommissioning

Period 1f – Unit 2 Post-Shutdown Preparations and Deactivation:

- Defuel Reactor Unit 2 (by Plant Operations)
- Fuel Sampling and Inspections (by Plant Operations)
- Spent Fuel Pool System Modifications
- Implement Cold and Dark
- Perform Pre-SAFSTOR Baseline Radiation Survey

Period 1g – Unit 2 Wet Fuel Transfer to DOE prior to SAFSTOR:

- Provide Transfer Casks (supplied by DOE)
- Procure Spent Fuel Loading and Transfer Equipment
- Procedures and Dry Runs
- Remove Fuel Assemblies from Pool and Load DOE Casks
- Dry, Close and Inspect DOE-supplied Casks
- Load Out Casks to DOE Transport
- Spent Fuel Transportation and Disposal (by DOE)

Period 1h – Unit 2 Wet Fuel Transfer to ISFSI prior to SAFSTOR:

- Provide Transfer Casks
- Procedures and Dry Runs
- Remove Fuel Assemblies from Pool and Load Casks
- Dry, Close and Inspect Casks
- Load Out Casks to Transport

Period 1i – Undistributed Costs for Shutdown and Transition:

- Utility Staff
- Security Guard Force
- Property Taxes
- Insurance
- Corporate Support
- Utility Staff HP Supplies
- NRC Inspection Fees
- Licensing Fees
- Materials and Services
- Energy
- County Fees
- FEMA Fees
- ISFSI Operating Costs
- Spent Fuel Maintenance

**Period 2 – SAFSTOR**:

Period 2a – Unit 1 Wet Fuel Transfer to DOE during SAFSTOR:

- Provide Transfer Casks (supplied by DOE)
- Remove Fuel Assemblies from Pool and Load Casks
- Dry, Close and Inspect Casks
- Load Out Casks to Transport
- Spent Fuel Transportation and Disposal (by DOE)

Period 2b – Unit 1 Wet Fuel Transfer to ISFSI during SAFSTOR:

- Provide Transfer Casks
- Procedures and Dry Runs
- Remove Fuel Assemblies from Pool and Load Casks
- Dry, Close and Inspect Casks
- Load Out Casks to Transport
- Spent Fuel Transportation and Disposal (by DOE)

Period 2c – Unit 1 Dormancy during Dry Fuel Storage:

- Utility Staff
- Security Guard Force
- Property Taxes
- Insurance
- Corporate Support
- Utility Staff HP Supplies
- NRC Inspection Fees
- Licensing Fees
- County Fees
- FEMA Fees
- Materials and Services
- Roof Replacement
- Energy

Period 2d – Unit 2 Dormancy during Dry Fuel Storage:

- Utility Staff
- Security Guard Force
- Property Taxes
- Insurance
- Corporate Support
- Utility Staff HP Supplies
- NRC Inspection Fees
- Licensing Fees
- Materials and Services
- Energy

Period 2e – Dormancy Only:

- Utility Staff
- Security Guard Force
- Property Taxes
- Insurance
- Corporate Support
- Utility Staff HP Supplies
- NRC Inspection Fees
- Licensing Fees
- Materials and Services
- Roof Replacement
- Energy

**Period 3 – Decommissioning and License Termination**:

Period 3a – Decommissioning Planning:

- Decommissioning Planning and Design
- Prepare Integrated Work Sequence and Schedule
- Planning and Design of Site Characterization
- Prepare Decommissioning Activity Specifications
- Prepare Detailed Work Procedures
- Prepare License Termination Plan
- Design Containment and Miscellaneous System Modifications
- Purchase Dry Storage Modules for GTCC Waste

Period 3b – Decommissioning Transition and Preparations:

- Mobilize Decommissioning General Contractor
- Perform Asbestos Abatement of Pipe Insulation
- Implement Temporary Power Upgrades – Unit 1
- Construct Misc. Building Modifications, In-Plant Laydown Areas
- Modify Containment Access
- Transportation Infrastructure Modifications
- Procure Waste Handling and Processing Tents

Period 3c – Reactor Vessel Removal:

- Design and Procure Special Equipment
- Test Special Cutting and Handling Equipment and Train Operators
- Finalize Internals and Vessel Segmentation Details
- Segment, Package and Ship Reactor Internals
- Segment, Package and Ship Reactor Pressure Vessels

Period 3d – Large Component Removal:

- Heavy Lift / Transfer Equipment
- Remove and Dispose of Steam Generators

- Remove and Dispose of Pressurizer
- Remove and Dispose of Reactor Coolant Pipe
- Remove and Dispose of Reactor Coolant Pumps
- Large Component Disposal

Period 3e – Plant Decontamination and Interior Rad Demolition:

- Remove and Dispose of Spent Fuel Storage Racks
- Segment, Package and Dispose of Spent Fuel Pool Island Equipment
- Decon/Surgical Removal Containment Buildings
- Decon/Surgical Removal Fuel Buildings
- Decon/Surgical Removal Auxiliary Buildings
- Oversize Debris/Containerized/Processed Debris Disposal

Period 3f – Rad Building Demolition:

- Demolish Fuel Buildings
- Demolish Auxiliary Buildings
- Demolish Containment Buildings
- Contaminated Soil
- Debris Disposal

Period 3g – License Termination Activities:

- Final Status Survey for Structures
- Final Status Survey for Land Areas (included with Structures)

Period 3h – Undistributed Costs for Decommissioning and License Termination:

- Utility Staff
- Security Guard Force
- General Contractor Staff
- Property Taxes
- Insurance
- Corporate Support
- Utility Staff HP Supplies
- NRC Inspection Fees
- Licensing Fees
- Materials and Services
- Energy
- DGC HP Supplies

**Period 4 – Site Restoration**:

Period 4a – Clean Building and Site Demolition:

- Demolish Turbine Pedestal and Turbine Deck
- Demolish Intake and CWS
- Demolish Tank Foundations
- Demolish Miscellaneous Site Structures

- Demolish Security Improvements
- Demolish Steam Generator Blowdown Treatment
- Clean Concrete Processing
- Demolish Site Paving
- Clean Debris Disposal / Recycle

Period 4b – Site Restoration:

- Procure Site Restoration Equipment
- Finish Grading and Re-Vegetate Site

Period 4c – Undistributed Costs for Site Restoration:

- Utility Staff
- Security Guard Force
- General Contractor Staff
- Property Taxes
- Insurance
- Corporate Support
- Energy
- Materials and Services

**Period 5 – Dry Fuel / GTCC Storage and Transfer**:

Period 5a – Unit 1 - Dry Fuel Transfer to DOE during SAFSTOR:

Period 5a – Unit 2 - Dry Fuel Transfer to DOE during and after DECON:

- Procure Loading and Transfer Equipment (included in Period 1)
- Procedures and Dry Runs (included in Period 1)
- Remove Fuel Casks from ISFSI and Load DOE Transport
- Spent Fuel Transportation and Disposal (by DOE)

Period 5b – GTCC Waste Disposition:

- Remove GTCC Casks from ISFSI and Load Out
- GTCC Transportation and Disposal

Period 5c – Undistributed Costs for Dry Fuel / GTCC Storage and Transfer:

- Utility Staff
- Security Guard Force
- ISFSI Operating Costs

**Period 6 –ISFSI Decommissioning**:

Period 6a – ISFSI D&D Planning and Preparations:

- Preparation and NRC Review of License Termination Plan

Period 6b – ISFSI and Support Structure Clean Demolition:

- Clean Demolition of ISFSI

- Demolition of ISFSI Support Structures

Period 6c – ISFSI Final Status Surveys:

- Verification Surveys
- Preparation of Final Report on Decommissioning and NRC Review

Period 6d – Undistributed Costs for ISFSI Decommissioning:

- Utility Staff
- Security Guard Force
- General Contractor Staff
- Property Taxes
- Insurance
- Energy

### 4.3 Decommissioning Staff

Energy*Solutions* developed staffing based on the assumption that decommissioning will be performed by an experienced and qualified Decommissioning General Contractor (DGC), with oversight, management and security of the decommissioning operations performed by the utility staff. It is also assumed that the utility staff will be supplemented by professional consulting engineering, particularly in the planning and preparation period.

The sizes of the staffs are varied in each period in accordance with the requirements of the work activities. Details on the staff levels, by functional group, during each period are provided in detail in Appendix D.

### 4.4 Spent Fuel Management Staff

The largest spent fuel staff and security is in place while the spent fuel pool is operational during the minimum cooling period and the fuel assemblies are being transferred to either a DOE facility or dry storage. Once all spent fuel has been removed from the spent fuel pool, the staff and security levels are reduced. Details on the staff levels, by functional group, during each period are provided in Appendix D.

### 4.5 Spent Fuel Shipments

The spent fuel shipment schedules for this estimate are based on information from FPL regarding existing fuel inventory, planned transfers to dry storage and a projected date of 2033 for DOE's acceptance of spent fuel.

## 5.0 BASES OF ESTIMATE AND KEY ASSUMPTIONS

The bases of, and key assumptions for, this site-specific decommissioning estimate are presented below:

1. All cost data used in this study are in 2020 dollars.

2. Total and subtotal amounts are rounded.

3. The decommissioning will be performed under the current regulations. These regulations require a Post-Shutdown Decommissioning Activities Report (PSDAR) to be submitted prior to, or within, two years after permanent shutdown. Other revisions will be required for other licensing basis documents (e.g., Security, Emergency Planning, Fire Protection, Nuclear Safety, Quality Assurance Program, Fuel Debris issues, Spent Fuel Storage options).

4. The decommissioning will be performed using currently available technologies.

5. Fuel transfer operations are based on the DOE beginning to accept spent fuel starting in 2033.

6. All transformers on site following shutdown are assumed to be PCB-free; therefore, this study does not include costs for disposition of PCB contaminated transformers.

7. Cost for transportation of clean scrap metal to a recycler is included in the estimate; however, no credit is taken for the value of the scrap metal. Clean concrete debris is assumed to be processed by size reduction, with removal of structural reinforcing steel, and used on site as engineered fill for voids.

8. DGC staff salaries, including overhead and profit, were determined by using Energy*Solutions*' project experience and standard assumptions for these rates.

9. Certain professional personnel used for the planning and preparation activities, and DGC personnel, that are not based in the local economy, are assumed to be paid per diem based on area per diem rates from U.S. General Services Administration (GSA).

10. This study follows the occupational exposure principles of As Low As Reasonably Achievable (ALARA) through the use of productivity loss factors that incorporate such items as the use of respiratory protection and personnel protective clothing. These factors increase the work duration and cost.

11. The costs of all required safety analyses and safety measures for the protection of the general public, the environment, and decommissioning workers are included in the cost estimates. This reflects the requirements of:

| | |
|---|---|
| 10 CFR 20 | Standards for Protection Against Radiation |
| 10 CFR 50 | Domestic Licensing of Production and Utilization Facilities |
| 10 CFR 61 | Licensing Requirements for Land Disposal of Radioactive Waste |

| | |
|---|---|
| 10 CFR 71 | Packaging of Radioactive Material for Transport |
| 10 CFR 72 | Licensing Requirements for the Independent Storage of Spent Nuclear Fuel and High-Level Radioactive Waste |
| 29 CFR 1910 | Occupational Safety and Health Standards |
| 49 CFR 170-189 | Department of Transportation Regulations Governing the Transport of Hazardous Materials |
| Reg. Guide 1.159 | Assuring the Availability of Funds for Decommissioning Nuclear Reactors |

12. Energy*Solutions* developed project schedules based on Unit 1 and Unit 2 shutdown dates of March 1, 2036, and April 6, 2043, respectively, and fuel shipping schedules provided by FPL.

13. Spent fuel in the fuel pools at the time of shutdown will be transferred directly to the DOE-provided transfer/shipping casks from 2033 through 2046. The 2020 Cost Analysis includes costs for transfer to the DOE beginning in 2036 for Unit 1 and 2043 for Unit 2. Costs prior to these dates are assumed to be paid from the plant operations budget. Remaining spent fuel in 2046 will be transferred from the spent fuel pool to the on-site ISFSI. The estimate includes purchase of transfer/shipping casks of the remaining spent fuel to be moved to the ISFSI.

14. Spent fuel canisters in the ISFSI at the time of shutdown will remain in dry storage until transfer to the DOE. The estimate includes transferring fuel from the existing ISFSI to the DOE-provided transfer/shipping casks during Period 5.

15. Costs for ISFSI security, operations and demolition for Units 1 and 2 are included in the estimate.

16. The estimate includes procurement of on-site fuel transfer equipment. It is assumed that equipment purchased for transfer equipment utilized during shipment from the spent fuel pool to the DOE will be utilized for the transfer of spent fuel to the ISFSI and is included in Period 1. It is assumed that this equipment will also be utilized for transfer/loading casks from the ISFSI to the DOE.

17. Based on FPL experience, the purchase of dry storage DSCs and HSMs required following shutdown are assumed to be 25% lower than for normal campaign costs due to volume discounts associated with the larger quantity of DSCs and HSMs required to transfer all fuel assemblies from the SFP to the pad.

18. As per FPL's settlement agreement, the DOE is expected to make payments to FPL to cover spent fuel management costs incurred by FPL prior to 2063 for St. Lucie.

19. The DOE is responsible to provide all transfer/shipping casks, containers, transportation and disposition of spent fuel shipped from the fuel pool and the ISFSI to a DOE designated off-site facility.

20. The estimate is based on site-specific plant systems and building inventories previously included in the 2015 Cost Study, and includes any updates provided by FPL.

21. All structures/systems shared between Unit 1 and Unit 2 are included in Unit 2 cost estimate.

22. License Termination costs include the complete demolition of the following buildings to a nominal depth of three feet below grade: Reactor Building, Auxiliary Building, and Fuel Handling Building.

23. The estimate is based on final site restoration, in which all remaining structures, with the exception of the switchyard and discharge diffuser, will be removed.

24. Foundations and building exterior walls are removed to a nominal depth of three feet below grade, surveyed and backfilled with appropriate fill material.

25. Intake piping will be left in place and sealed with a flowable concrete fill.

26. Clean concrete will be processed and utilized as backfill where needed to re-establish grade. The disturbed area of the site is to be graded and seeded.

27. Uncontaminated lead shielding remaining after shutdown was assumed to be removed from its installed locations and shipped off site by entities having a need for the material. The entities receive the lead at no charge in return for providing the removal and shipping services.

28. Any chemicals and hazardous materials present at shutdown are assumed to be removed and disposed of by the plant staff prior to decommissioning, as a normal part of plant operations.

29. Site-specific information regarding waste quantities of contaminated soil was provided by FPL and used as a basis for calculation of current costs for remediation and disposal.

30. All Class A waste is assumed to be disposed of at Energy*Solutions*' facility in Clive, Utah, in accordance with the existing LOP Disposal Agreement (Ref. No. 9) between Energy*Solutions* as allowed by the existing LOP and FPL dated January 1, 2007. A LOP agreement letter stating the 2020 price increase was also utilized to develop the waste disposal costs.

31. Class A waste includes Dry Active Waste (DAW) arising from the disposal of contaminated protective clothing and health physics supplies.

32. Class B and C waste disposal costs are based on disposal rates provided by FPL for the WCS Andrews, TX facility. All resins and filter waste is assumed to be Class B.

33. GTCC waste generated from the segmentation of the reactor internals will be stored in on-site canisters placed in the ISFSI until final disposition at a DOE facility. It is assumed that 12 GTCC canisters will be required for the St. Lucie units (6 canisters for Unit 1 and 6 canisters for Unit 2).

34. Vessel and internals curie estimates were derived from the values for the Reference PWR vessel and internals in NUREG/CR-0130. These values were adjusted for mass and decay period.

35. It is assumed that all Class A LLRW currently being accumulated on site will be removed to a low-level waste processing and/or disposal facility prior to the end of the operating life of the plant. The disposition of such materials is assumed not to be a decommissioning cost.

36. The spent fuel shipping schedules and transfer to dry storage costs for each scenario were developed by FPL and furnished to Energy*Solutions*.

37. St. Lucie currently has an existing ISFSI on site. Construction costs for any expansion of the ISFSI that may be required has not been included, but demolition has been included in the estimate and has been split between both units.

38. Energy*Solutions* has assumed that the 10 CFR Part 50 license for Units 1 and 2 will be terminated after DOE has taken possession of the spent fuel.

39. Emergency Preparedness fees were supplied by FPL. Per direction of FPL emergency preparedness fees are assumed to cease once all spent fuel is removed from the spent fuel pool.

40. NEIL and ANI insurance premiums are included based on the rate schedule provided by FPL. Insurance premiums have been reduced when major milestones have been completed.

41. Units 1 and 2 property taxes are included based on the rate schedule provided by FPL.

42. Energy costs have been estimated based on previous experience of similar projects utilizing energy rates provided by FPL.

43. Energy*Solutions* has included NRC inspection fees during each decommissioning period based on the type and level of activities being performed.

44. Energy*Solutions* has assumed that licensing fees will be reduced after shutdown.

45. Site operating expenses expected to be incurred during Unit 1 SAFSTOR and decommissioning are included in the estimate. These costs include materials and services, supplies, utilities, telecommunications equipment, non-process computers, and tools and equipment.

46. Utility staff and security positions, and average direct-burdened salary data were supplied by FPL.

47. Severance costs for Reductions-in-Force immediately following Unit 1 and Unit 2 permanently ceasing operations are excluded from the estimate.

48. Craft labor rates used a combination of the labor rates provided by FPL and 2019 RS Means rates escalated to 2020 costs.

49. The most recent NRC requirements for Security, Emergency Response, Fukushima, Cyber Security and any other regulatory changes have been included.

50. Undistributed staffing costs, taxes, and fees in Periods 3 and 4 is split 93% for License Termination and 7% Site Restoration with exception licensing and NRC fees (100% License Termination).

51. Estimate assumes that security staff for Unit 1 prior to Unit 2 shutdown is for spent fuel transfer only. Overall site security to be covered by Unit 2 security. Period 1 Unit 2 security post-shutdown is assumed to cover site security as well as spent fuel transfer.

52. Institute of Nuclear Power Operations (INPO) and Electric Power Research Institute (EPRI) dues are not included in this estimate.

## 6.0 STUDY RESULTS

The study results for each of the DCE scenarios are presented in this section.

The cost estimate results are provided in Table 6-1 below. This table provides License Termination costs (corresponding to 10 CFR 50.75(c) requirements); Spent Fuel Management costs (corresponding to 10 CFR 50.54(bb) requirements), and Site Restoration costs, including activities such as clean building demolition and site grading etc.

**Table 6-1**

**FPL St. Lucie Units 1 and 2**
**Decommissioning Cost Summary**
(thousands of 2020 dollars)

| Scenario | License Termination | Spent Fuel | Site Restoration | Total |
|---|---|---|---|---|
| 1 | 1,254,740 | 427,313 | 63,409 | 1,745,462 |
| 2 | 1,319,504 | 473,029 | 62,101 | 1,854,633 |

Summary schedule tables are shown for each scenario below. Detailed schedules for each scenario are provided in Appendix B.

Summary cost tables are shown for each scenario below. Detailed estimates for each scenario are provided in Appendix C.

Detailed staffing tables for each scenario are provided in Appendix D.

Summary waste quantities are shown for each scenario below. Waste estimates for each scenario are provided in Appendix E.

Detailed annual spending tables for each scenario are provided in Appendix F.

The following sections provide study results by scenario.

### 6.1 Scenario 1 - Unit 1 SAFSTOR, DECON both following Unit 2 Shutdown

Cost Summary

Table 6-2 below provides the cost estimate results for Scenario 1 organized by period and separated into Unit 1, Unit 2 and Total.

**Table 6-2**

**FPL St. Lucie Units 1 and 2**
**Scenario 1 - Cost Summary by Period & Unit**
(thousands of 2020 dollars)

| Period | Item Description | Unit 1 | Unit 2 | Total Cost |
|---|---|---|---|---|
| Period 1 | SHUTDOWN & TRANSITION | 136,894 | 192,259 | 329,153 |
| Period 2 | SAFSTOR | 129,823 | - | 129,823 |
| Period 3 | DECOMMISSIONING & LICENSE TERMINATION | 520,827 | 492,308 | 1,013,135 |
| Period 4 | SITE RESTORATION | 28,912 | 34,497 | 63,409 |
| Period 5 | DRY FUEL / GTCC STORAGE & TRANSFER | 99,594 | 97,109 | 196,703 |
| Period 6 | ISFSI DECOMMISSIONING | 7,351 | 5,887 | 13,238 |
| GRAND TOTAL | | 923,401 | 822,060 | 1,745,462 |

Table 6-3 below provides the cost estimate results for Scenario 1 organized by period and separated by cost type.

**Table 6-3**

**FPL St. Lucie Units 1 and 2**
**Scenario 1 - Cost Summary by Period & Cost Type**
(thousands of 2020 dollars)

| Period | Item Description | Labor Cost | Materials & Equipment | Waste Transport & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost |
|---|---|---|---|---|---|---|---|
| Period 1 | SHUTDOWN & TRANSITION | 223,517 | 33,539 | - | 28,541 | 43,557 | 329,153 |
| Period 2 | SAFSTOR | 57,755 | 42,112 | - | 14,633 | 15,325 | 129,823 |
| Period 3 | DECOMMISSIONING & LICENSE TERMINATION | 306,657 | 125,599 | 380,942 | 45,061 | 154,875 | 1,013,135 |
| Period 4 | SITE RESTORATION | 37,259 | 11,946 | 278 | 5,655 | 8,271 | 63,409 |
| Period 5 | DRY FUEL / GTCC STORAGE & TRANSFER | 98,987 | 3,000 | 32,896 | 36,006 | 25,813 | 196,703 |
| Period 6 | ISFSI DECOMMISSIONING | 9,255 | 1,886 | - | 371 | 1,727 | 13,238 |
| GRAND TOTAL | | 733,429 | 218,081 | 414,116 | 130,267 | 249,568 | 1,745,462 |

A detailed estimate is provided in Appendix C.

Schedule Summary

Table 6-4 below provides a schedule summary for Scenario 1 based on a DECON scenario with Unit 1 Shutdown March 1, 2036 and Unit 2 Shutdown April 6, 2043.

**Table 6-4**

| **FPL DCE-01 St. Lucie Units 1 and 2<br>Scenario 1 Schedule Summary** | |
|---|---|
| **Year** | **Item** |
| 2033 | DOE starts accepting fuel from spent fuel pool |
| 2036 | Unit 1 Shutdown |
| 2040 | Unit 1 SAFSTOR period begins |
| 2043 | Unit 2 Shutdown |
| 2046 | Unit 1 Fuel Pool Empty |
| 2046 | Unit 2 Fuel Pool Empty |
| 2046 | Unit 1 SAFSTOR period ends |
| 2047 | Start Demolition |
| 2053 | Decommissioning and Site Restoration Complete |
| 2071 | ISFSI Empty |
| 2073 | ISFSI Decommissioning and Site Restoration Complete |

A detailed schedule is provided in Appendix B.

Project Staffing

Table 6-5 below provides project staffing for Scenario 1 organized by period and staff group.

**Table 6-5**

| **Period 1 - Shutdown & Transition** | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Administration | | 8 | 8 | 7 | 2 | | | | 12 | 12 | 7 | 4 |
| Engineering | | 40 | 40 | 20 | 12 | | | | 40 | 40 | 20 | 8 |
| Health Physics/Rad Protection | | 30 | 30 | 24 | 6 | | | | 30 | 30 | 24 | 20 |
| Management | | 5 | 5 | 5 | 2 | | | | 5 | 5 | 5 | 3 |
| Maintenance & Operations | | 70 | 70 | 40 | 12 | | | | 70 | 60 | 40 | 20 |
| Quality Assurance | | 3 | 3 | 2 | 2 | | | | 3 | 3 | 2 | 1 |
| **Utility Staff** | **-** | **156** | **156** | **98** | **36** | **-** | **-** | **-** | **160** | **150** | **98** | **56** |
| | | | | | | | | | | | | |
| **General Contractor Staff** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |

| **Period 2 - SAFSTOR** | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |
|---|---|---|---|---|---|---|---|---|---|---|
| Administration | | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| Engineering | | 3 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |
| Health Physics/Rad Protection | | 3 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |
| Management | | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| Maintenance & Operations | | 3 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |
| Quality Assurance | | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| **Utility Staff** | **-** | **12** | **24** | **24** | **24** | **24** | **24** | **24** | **24** | **-** |
| | | | | | | | | | | |
| **General Contractor Staff** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |

| **Period 3 & 4 - License Term & Site Restoration** | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 | 2051 | 2052 | 2053 | 2054 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Administration | | 4 | 4 | 10 | 12 | 12 | 12 | 12 | 7 | 2 | |
| Engineering | | 4 | 6 | 16 | 20 | 20 | 20 | 20 | 7 | 2 | |
| Health Physics/Rad Protection | | | 4 | 8 | 24 | 24 | 24 | 24 | 16 | 4 | |
| Management | | 1 | 1 | 4 | 5 | 5 | 4 | 4 | 4 | 2 | |
| Maintenance & Operations | | | | 10 | 24 | 24 | 20 | 20 | 8 | 2 | |
| Quality Assurance | | 1 | 1 | 2 | 3 | 3 | 2 | 2 | 2 | 1 | |
| **Utility Staff** | **-** | **10** | **16** | **50** | **88** | **88** | **82** | **82** | **44** | **13** | **-** |
| | | | | | | | | | | | |
| Project Management | | 2 | 4 | 6 | 10 | 10 | 10 | 10 | 8 | 4 | |
| Engineering | | 4 | 6 | 6 | 12 | 12 | 10 | 10 | 7 | 2 | |
| Health Physics/Rad Protection | | | 4 | 8 | 16 | 16 | 16 | 16 | 12 | 6 | |
| Administration | | 2 | 3 | 6 | 12 | 12 | 12 | 12 | 8 | 4 | |
| Maintenance & Operations | | | | | - | - | - | - | - | - | |
| Quality Assurance | | 1 | 1 | 2 | 4 | 4 | 4 | 4 | 3 | 2 | |
| Waste Management | | | 1 | 2 | 12 | 12 | 12 | 12 | 12 | 4 | |
| **General Contractor Staff** | **-** | **9** | **19** | **30** | **66** | **66** | **64** | **64** | **50** | **22** | **-** |

| Period 5 - Dry Fuel / GTCC Storage & Transfer | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 | 2051 | 2052 / 2069 | 2070 | 2071 | 2072 | 2073 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Administration | | | | | | | | | | | | |
| Engineering | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| Health Physics/Rad Protection | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| Management | | | | | | | | | | | | |
| Maintenance & Operations | | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | |
| Quality Assurance | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| **Utility Staff** | **-** | **1** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **4** | **-** |
| | | | | | | | | | | | | |
| **General Contractor Staff** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |

| Period 6 - ISFSI Decommissioning | 2065 | 2066 | 2067 | 2068 | 2069 | 2070 | 2071 | 2072 | 2073 |
|---|---|---|---|---|---|---|---|---|---|
| Administration | | | | | | | | | |
| Engineering | | | | | | | | | 1 |
| Health Physics/Rad Protection | | | | | | | | | 1 |
| Management | | | | | | | | | 1 |
| Maintenance & Operations | | | | | | | | | |
| Quality Assurance | | | | | | | | | 1 |
| **Utility Staff** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **4** |
| | | | | | | | | | |
| Project Management | | | | | | | | 1 | 1 |
| Engineering | | | | | | | | 1 | 1 |
| Health Physics/Rad Protection | | | | | | | | | 1 |
| Administration | | | | | | | | | 1 |
| Maintenance & Operations | | | | | | | | | |
| Quality Assurance | | | | | | | | 1 | 1 |
| Waste Management | | | | | | | | 1 | 1 |
| **General Contractor Staff** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **4** | **6** |

Detailed staffing tables for each scenario are provided in Appendix D.

## Waste Disposal Volumes

Waste disposal is a significant element of the decommissioning project. The estimated waste disposal quantities for Scenario 1 are shown in cubic feet of waste as follows:

| | |
|---|---|
| Class A | 4,651,030 |
| Class B/C | 3,740 |
| GTCC | 5,772 |

Waste disposal volumes and costs, itemized by packaging, transportation, surcharges and disposal costs by waste class and facility, are provided in Appendix E.

## 6.2 Scenario 2 - SAFSTOR

Cost Summary

Table 6-6 below provides the cost estimate results for Scenario 2 organized by period and separated into Unit 1, Unit 2 and Total.

**Table 6-6**

**FPL St. Lucie Units 1 and 2**
**Scenario 2 - Cost Summary by Period & Unit**
(thousands of 2020 dollars)

| Period | Item Description | Unit 1 | Unit 2 | Total Cost |
|---|---|---|---|---|
| Period 1 | SHUTDOWN & TRANSITION | 138,072 | 198,972 | 337,044 |
| Period 2 | SAFSTOR | 236,728 | 106,813 | 343,541 |
| Period 3 | DECOMMISSIONING & LICENSE TERMINATION | 480,446 | 457,938 | 938,384 |
| Period 4 | SITE RESTORATION | 28,188 | 33,913 | 62,101 |
| Period 5 | DRY FUEL / GTCC STORAGE & TRANSFER | 81,576 | 78,423 | 159,999 |
| Period 6 | ISFSI DECOMMISSIONING | 7,514 | 6,050 | 13,564 |
| | GRAND TOTAL | 972,525 | 882,108 | 1,854,633 |

Table 6-7 below provides the cost estimate results for Scenario 2 organized by period and separated by cost type.

**Table 6-7**

**FPL St. Lucie Units 1 and 2**
**Scenario 2 - Cost Summary by Period & Cost Type**
(thousands of 2020 dollars)

| Period | Item Description | Labor Cost | Materials & Equipment | Waste Transport & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost |
|---|---|---|---|---|---|---|---|
| Period 1 | SHUTDOWN & TRANSITION | 229,990 | 33,926 | - | 28,541 | 44,587 | 337,044 |
| Period 2 | SAFSTOR | 131,511 | 63,668 | - | 113,609 | 34,754 | 343,541 |
| Period 3 | DECOMMISSIONING & LICENSE TERMINATION | 303,785 | 124,405 | 331,831 | 35,374 | 142,990 | 938,384 |
| Period 4 | SITE RESTORATION | 36,781 | 12,044 | 259 | 4,916 | 8,100 | 62,101 |
| Period 5 | DRY FUEL / GTCC STORAGE & TRANSFER | 99,109 | 3,000 | 32,896 | 3,968 | 21,026 | 159,999 |
| Period 6 | ISFSI DECOMMISSIONING | 9,255 | 1,886 | - | 654 | 1,769 | 13,564 |
| | GRAND TOTAL | 810,431 | 238,930 | 364,986 | 187,062 | 253,225 | 1,854,633 |

A detailed estimate is provided in Appendix C.

Schedule Summary

Table 6-8 below provides a schedule summary for Scenario 2 based on a SAFSTOR scenario with Unit 1 Shutdown March 1, 2036 and Unit 2 Shutdown April 6, 2043.

**Table 6-8**

| **FPL DCE-01 St. Lucie Units 1 and 2<br>Scenario 2 Schedule Summary** | |
|---|---|
| **Year** | **Item** |
| 2033 | DOE starts accepting fuel from spent fuel pool |
| 2036 | Unit 1 Shutdown |
| 2040 | Unit 1 SAFSTOR period begins |
| 2043 | Unit 2 Shutdown |
| 2046 | Unit 1 Fuel Pool Empty |
| 2046 | Unit 2 Fuel Pool Empty |
| 2047 | Unit 2 SAFSTOR period begins |
| 2071 | ISFSI Empty |
| 2089 | SAFSTOR Period ends |
| 2090 | Start Demolition |
| 2096 | Decommissioning and Site Restoration Complete |
| 2097 | ISFSI Decommissioning and Site Restoration Complete |

A detailed schedule is provided in Appendix B.

Project Staffing

Table 6-9 below provides project staffing for Scenario 2 organized by period and staff group.

**Table 6-9**

| **Period 1 - Shutdown & Transition** | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Administration | | 8 | 8 | 7 | 2 | | | | 12 | 12 | 7 | 4 | |
| Engineering | | 40 | 40 | 20 | 12 | | | | 40 | 40 | 20 | 8 | |
| Health Physics/Rad Protection | | 30 | 30 | 24 | 6 | | | | 30 | 30 | 24 | 20 | |
| Management | | 5 | 5 | 5 | 2 | | | | 5 | 5 | 5 | 3 | |
| Maintenance & Operations | | 70 | 70 | 40 | 12 | | | | 70 | 60 | 40 | 20 | |
| Quality Assurance | | 3 | 3 | 2 | 2 | | | | 3 | 3 | 2 | 1 | |
| **Utility Staff** | **-** | **156** | **156** | **98** | **36** | **-** | **-** | **-** | **160** | **150** | **98** | **56** | **-** |
| | | | | | | | | | | | | | |
| **General Contractor Staff** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |

| **Period 2 - SAFSTOR** | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 / 2086 | 2087 | 2088 | 2089 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Administration | | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Engineering | | 3 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Health Physics/Rad Protection | | 3 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Management | | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | |
| Maintenance & Operations | | 3 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Quality Assurance | | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | |
| **Utility Staff** | **-** | **12** | **24** | **24** | **24** | **24** | **24** | **24** | **24** | **6** | **6** | **6** | **6** | **6** | **6** | **6** |
| | | | | | | | | | | | | | | | | |
| **General Contractor Staff** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | | **-** | **-** |

| **Period 3 & 4 - License Term & Site Restoration** | 2087 | 2088 | 2089 | 2090 | 2091 | 2092 | 2093 | 2094 | 2095 | 2096 | 2097 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Administration | | 4 | 4 | 10 | 12 | 12 | 12 | 12 | 7 | 2 | |
| Engineering | | 4 | 6 | 16 | 20 | 20 | 20 | 20 | 7 | 2 | |
| Health Physics/Rad Protection | | | 4 | 8 | 24 | 24 | 24 | 24 | 16 | 4 | |
| Management | | 1 | 1 | 4 | 5 | 5 | 4 | 4 | 4 | 2 | |
| Maintenance & Operations | | | | 10 | 24 | 24 | 20 | 20 | 8 | 2 | |
| Quality Assurance | | 1 | 1 | 2 | 3 | 3 | 2 | 2 | 2 | 1 | |
| **Utility Staff** | **-** | **10** | **16** | **50** | **88** | **88** | **82** | **82** | **44** | **13** | **-** |
| | | | | | | | | | | | |
| Project Management | | 2 | 4 | 6 | 10 | 10 | 10 | 10 | 8 | 4 | |
| Engineering | | 4 | 6 | 6 | 12 | 12 | 10 | 10 | 7 | 2 | |
| Health Physics/Rad Protection | | | 4 | 8 | 16 | 16 | 16 | 16 | 12 | 6 | |
| Administration | | 2 | 3 | 6 | 12 | 12 | 12 | 12 | 8 | 4 | |
| Maintenance & Operations | | | | | - | - | - | - | - | - | |
| Quality Assurance | | 1 | 1 | 2 | 4 | 4 | 4 | 4 | 3 | 2 | |
| Waste Management | | | 1 | 2 | 12 | 12 | 12 | 12 | 12 | 4 | |
| **General Contractor Staff** | **-** | **9** | **19** | **30** | **66** | **66** | **64** | **64** | **50** | **22** | **-** |

| Period 5 - Dry Fuel / GTCC Storage & Transfer | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 / 2069 | 2069 | 2070 | 2071 | 2072 | 2073 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Administration | | | | | | | | | | | |
| Engineering | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| Health Physics/Rad Protection | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| Management | | | | | | | | | | | |
| Maintenance & Operations | | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | |
| Quality Assurance | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| **Utility Staff** | **-** | **1** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **4** | **-** |
| | | | | | | | | | | | |
| **General Contractor Staff** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |

| Period 6 - ISFSI Decommissioning | 2090 | 2091 | 2092 | 2093 | 2094 | 2095 | 2096 | 2097 | 2098 |
|---|---|---|---|---|---|---|---|---|---|
| Administration | | | | | | | | | |
| Engineering | | | | | | | | 1 | |
| Health Physics/Rad Protection | | | | | | | | 1 | |
| Management | | | | | | | | 1 | |
| Maintenance & Operations | | | | | | | | | |
| Quality Assurance | | | | | | | | 1 | |
| **Utility Staff** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **4** | **-** |
| | | | | | | | | | |
| Project Management | | | | | | | 1 | 1 | |
| Engineering | | | | | | | 1 | 1 | |
| Health Physics/Rad Protection | | | | | | | | 1 | |
| Administration | | | | | | | | 1 | |
| Maintenance & Operations | | | | | | | | | |
| Quality Assurance | | | | | | | 1 | 1 | |
| Waste Management | | | | | | | 1 | 1 | |
| **General Contractor Staff** | **-** | **-** | **-** | **-** | **-** | **-** | **4** | **6** | **-** |

Detailed staffing tables for each scenario are provided in Appendix D.

Waste Disposal Volumes

Waste disposal is a significant element of the decommissioning project. The estimated waste disposal quantities for Scenario 2 are shown in cubic feet of waste as follows:

| | |
|---|---|
| Class A | 4,133,459 |
| Class B/C | 2,288 |
| GTCC | 5,772 |

Waste disposal volumes and costs, itemized by packaging, transportation, surcharges and disposal costs by waste class and facility, are provided in Appendix E.

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11. U.S. Department of Energy, "Cost Estimating Guide," DOE G 430.1-1, March 1997.

**APPENDIX A**
**FPL - ST. LUCIE - UNITS 1 & 2**
**Plant Structures and Systems**

| St. Lucie - Primary Plant Structures | |
|---|---|
| | |
| **Unit 1** | **Unit 2** |
| Reactor | Reactor |
| Intake & CWS | Intake & CWS |
| Primary Water Tank & Pump | Primary Water Tank & Pump |
| Auxiliary Building | Auxiliary Building |
| Refueling Water Storage Tank | Steam Generator Blowdown |
| Turbine & Turbine Pedestal | Turbine & Turbine Pedestal |
| Fuel Handling Building | Fuel Handling Building |
| Misc Structures | Misc. Structures |

| St. Lucie - Primary Plant Systems | |
|---|---|
| **Unit 1** | **Unit 2** |
| Air Evacuation | Air Evacuation |
| Auxiliary Steam | Auxiliary Steam |
| Bulk Gas Supply | Bulk Gas Supply |
| Chemical & Volume Control | Chemical & Volume Control |
| Chemical Feed | Chemical Feed |
| Circulating & Intake Cooling Water | Circulating & Intake Cooling Water |
| Component Cooling | Component Cooling |
| Condensate | Condensate |
| Condensate Polishing | |
| Condensate Recovery | Condensate Recovery |
| Condenser Tube Cleaning | Condenser Tube Cleaning |
| Containment Spray & Refueling Water | Containment Spray & Refueling Water |
| Demin Makeup Water | Demin Makeup Water |
| Domestic - Makeup - Service Water | Domestic - Makeup - Service Water |
| Emergency Diesel Generator | Emergency Diesel Generator |
| Extraction Steam | Extraction Steam |
| Feedwater | Feedwater |
| Fire Protection | Fire Protection |
| Fuel Pool | Fuel Pool |
| HVAC | HVAC |
| Heater Drain & Vent | Heater Drain & Vent |
| Main Steam | Main Steam |
| Neutralization Basin Recirc | |
| Primary Water | Primary Water |
| RCP Oil | RCP Oil |
| Radiation Monitoring | Radiation Monitoring |
| Reactor Coolant | Reactor Coolant |
| Safety Injection | Safety Injection |
| Sampling | Sampling |
| Secondary Side Wet Layup | Secondary Side Wet Layup |
| Service & Instrument Air | Service & Instrument Air |
| SG Blowdown Cooling | SG Blowdown Cooling |
| | SG Blowdown Treatment Facility |
| | Sodium Hypochlorite |
| Turbine Cooling Water | Turbine Cooling Water |
| Turbine Lube Oil & Diesel Oil | Turbine Lube Oil & Diesel Oil |
| Waste Management | Waste Management |
| Water Treatment | Water Treatment |

Appendix B-1

**Florida Power and Light**
**St. Lucie Units 1 & 2**
**Scenario 1 - Unit 1 SAFSTOR, DECON both following Unit 2 Shutdown**

| Description | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 | 2051 | 2052 | 2053 | 2054 | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 | 2061 | 2062 | 2063 | 2064 | 2065 | 2066 | 2067 | 2068 | 2069 | 2070 | 2071 | 2072 | 2073 | 2074 | 2075 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MILESTONES** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unit 1 Shutdown (2036) | | | | | | | ◆ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DOE Starts Accepting Fuel (2033) | | | | ◆ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unit 1 Zirc Fire Period Ends (2037) | | | | | | | | ◆ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unit 2 Shutdown (2043) | | | | | | | | | | | | | | ◆ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unit 2 Zirc Fire Period Ends (2044) | | | | | | | | | | | | | | | ◆ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unit 1 Fuel Pool Empty (2046) | | | | | | | | | | | | | | | | | ◆ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unit 2 Fuel Pool Empty (2046) | | | | | | | | | | | | | | | | | ◆ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Decommissioning & Site Restoration Complete (2053) | | | | | | | | | | | | | | | | | | | | | | | | ◆ | | | | | | | | | | | | | | | | | | | | | | |
| ISFSI Empty (2071) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ◆ | | | |
| ISFSI Decommissioning & Site Restoration Complete (2073) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ◆ | | |
| **PERIOD 1 - SHUTDOWN & TRANSITION** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1a. Planning Prior to Shutdown (by Plant Operations) | | | | | ▬ | ▬ | | | | | ▬ | ▬ | ▬ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1b. Unit 1 Post Shutdown Planning & Engineering | | | | | | | ▬ | ▬ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1c. Unit 1 Post Shutdown Deactivation & Modifications | | | | | | | ▬ | ▬ | ▬ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1d. Unit 1 Wet Fuel Transfer to DOE prior to SAFSTOR | | | | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1e. Unit 2 Post Shutdown Planning & Engineering | | | | | | | | | | | | | | ▬ | ▬ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1f. Unit 2 Post Shutdown Deactivation & Modifications | | | | | | | | | | | | | | ▬ | ▬ | ▬ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1g Unit 2 Wet Fuel Transfer to DOE prior to DECON | | | | | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1h Unit 2 Wet Fuel Transfer to ISFSI prior to DECON | | | | | | | | | | | | | | | | | ▬ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1i. Undistributed Costs for Shutdown & Transition | | | | | | | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **PERIOD 2 - UNIT 1 SAFSTOR** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2a. Wet Fuel Transfer to DOE during SAFSTOR | | | | | | | | | | | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2b. Wet Fuel Transfer to ISFSI during SAFSTOR | | | | | | | | | | | | | | | | | ▬ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2c. Dormancy during Wet Fuel Transfer to DOE & ISFSI | | | | | | | | | | | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **PERIOD 3 - DECOMMISSIONING & LICENSE TERMINATION** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3a. Decommissioning Planning | | | | | | | | | | | | | | | ▬ | ▬ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3b. Decommissioning Transition & Preparations | | | | | | | | | | | | | | | ▬ | ▬ | ▬ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3c. Reactor Vessel Removal | | | | | | | | | | | | | | | | | ▬ | ▬ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3d. Large Component Removal | | | | | | | | | | | | | | | | | | ▬ | ▬ | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3e. Plant Decontamination & Interior Rad Demolition | | | | | | | | | | | | | | | | | | ▬ | ▬ | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3f. Rad Building Demolition | | | | | | | | | | | | | | | | | | | ▬ | ▬ | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3g. License Termination Activities | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3h. Undistributed Costs for Decommissioning & License Termination | | | | | | | | | | | | | | | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | | | | | | | | | | | | | | | | | | | | | | | | | |
| **PERIOD 4 - SITE RESTORATION** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4a. Clean Building & Site Demolition | | | | | | | | | | | | | | | | | | ▬ | ▬ | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4b. Site Restoration | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | | | | | | | | | | | | | | | | | | | | | | | | |
| 4c. Undistributed Costs for Site Restoration | | | | | | | | | | | | | | | | | | ▬ | ▬ | ▬ | ▬ | ▬ | | | | | | | | | | | | | | | | | | | | | | | | |
| **PERIOD 5 - DRY FUEL / GTCC STORAGE & TRANSFER** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5a. Dry Fuel Transfer to DOE during and after DECON | | | | | | | | | | | | | | | | | | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | | | | |
| 5b. GTCC Waste Disposition | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | | | |
| 5c. Undistributed Costs for Dry Fuel / GTCC Storage & Transfer | | | | | | | | | | | | | | | | | | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | | | | |
| **PERIOD 6 - ISFSI DECOMMISSIONING** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6a. ISFSI D&D Planning & Preparations | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | | | |
| 6b. ISFSI and Support Structure Clean Demolition | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | | |
| 6c. ISFSI Final Status Surveys | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | |
| 6d. Undistributed Costs for ISFSI Decommissioning | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | |

Assumed by plant Operations

Included in estimate

Undistributed costs Included in estimate

Appendix B-2

**Florida Power and Light**
**St. Lucie Units 1 & 2**
**Scenario 2 - SAFSTOR**

| Description | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 | 2051 | 2052 | 2053 | 2054 | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 | 2061 | 2062 | 2063 | 2064 | 2065 | 2066 | 2067 | 2068 | 2069 | 2070 | 2071 | 2072 | 2073 | 2074 | 2075 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MILESTONES** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unit 1 Shutdown (2036) | | | | | | | ◆ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DOE Starts Accepting Fuel (2033) | | | | ◆ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unit 1 Zirc Fire Period Ends (2037) | | | | | | | | ◆ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unit 1 Fuel Pool Empty (2046) | | | | | | | | | | | | | | | | | ◆ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unit 2 Shutdown (2043) | | | | | | | | | | | | | | ◆ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unit 2 Zirc Fire Period Ends (2044) | | | | | | | | | | | | | | | ◆ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unit 2 Fuel Pool Empty (2046) | | | | | | | | | | | | | | | | | ◆ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ISFSI Empty (2071) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ◆ | | | | |
| SAFSTOR Period Ends (2089) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Decommissioning & Site Restoration Complete (2096) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ISFSI Decommissioning & Site Restoration Complete (2097) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **PERIOD 1 - SHUTDOWN & TRANSITION** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1a. Planning Prior to Shutdown (by Plant Operations) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1b. Unit 1 Post Shutdown Planning & Engineering | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1c. Unit 1 Post Shutdown Deactivation & Modifications | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1d. Unit 1 Wet Fuel Transfer to DOE prior to SAFSTOR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1e. Unit 2 Post Shutdown Planning & Engineering | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1f. Unit 2 Post Shutdown Deactivation & Modifications | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1g Unit 2 Wet Fuel Transfer to DOE prior to DECON | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1h Unit 2 Wet Fuel Transfer to ISFSI prior to DECON | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1i. Undistributed Costs for Shutdown & Transition | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **PERIOD 2 - UNIT 2 SAFSTOR** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2a. Unit 1 Wet Fuel Transfer to DOE during SAFSTOR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2b. Unit 1 Wet Fuel Transfer to ISFSI during SAFSTOR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2c. Unit 1 Dormancy during Dry Fuel Storage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2d. Unit 2 Dormancy during Dry Fuel Storage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2e. Dormancy only | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **PERIOD 3 - DECOMMISSIONING & LICENSE TERMINATION** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3a. Decommissioning Planning | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3b. Decommissioning Transition & Preparations | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3c. Reactor Vessel Removal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3d. Large Component Removal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3e. Plant Decontamination & Interior Rad Demolition | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3f. Rad Building Demolition | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3g. License Termination Activities | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3h. Undistributed Costs for Decommissioning & License Termination | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **PERIOD 4 - SITE RESTORATION** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4a. Clean Building & Site Demolition | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4b. Site Restoration | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4c. Undistributed Costs for Site Restoration | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **PERIOD 5 - DRY FUEL / GTCC STORAGE & TRANSFER** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5a. Dry Fuel Transfer to DOE during SAFSTOR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5c. GTCC Waste Disposition | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5d. Undistributed Costs for Dry Fuel / GTCC Storage & Transfer | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **PERIOD 6 - ISFSI DECOMMISSIONING** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6a. ISFSI D&D Planning & Preparations | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6b. ISFSI and Support Structure Clean Demolition | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6c. ISFSI Final Status Surveys | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6d. Undistributed Costs for ISFSI Decommissioning | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Assumed by plant Operations

Included in estimate

Undistributed costs Included in estimate

Appendix B-2

**Florida Power and Light**
**St. Lucie Units 1 & 2**
**Scenario 2 - SAFSTOR**

| Description | 2076 | 2077 | 2078 | 2079 | 2080 | 2081 | 2082 | 2083 | 2084 | 2085 | 2086 | 2087 | 2088 | 2089 | 2090 | 2091 | 2092 | 2093 | 2094 | 2095 | 2096 | 2097 | 2098 | 2099 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MILESTONES** | | | | | | | | | | | | | | | | | | | | | | | | |
| Unit 1 Shutdown (2036) | | | | | | | | | | | | | | | | | | | | | | | | |
| DOE Starts Accepting Fuel (2033) | | | | | | | | | | | | | | | | | | | | | | | | |
| Unit 1 Zirc Fire Period Ends (2037) | | | | | | | | | | | | | | | | | | | | | | | | |
| Unit 1 Fuel Pool Empty (2046) | | | | | | | | | | | | | | | | | | | | | | | | |
| Unit 2 Shutdown (2043) | | | | | | | | | | | | | | | | | | | | | | | | |
| Unit 2 Zirc Fire Period Ends (2044) | | | | | | | | | | | | | | | | | | | | | | | | |
| Unit 2 Fuel Pool Empty (2046) | | | | | | | | | | | | | | | | | | | | | | | | |
| ISFSI Empty (2071) | | | | | | | | | | | | | | | | | | | | | | | | |
| SAFSTOR Period Ends (2089) | | | | | | | | | | | | | | ◆ | | | | | | | | | | |
| Decommissioning & Site Restoration Complete (2096) | | | | | | | | | | | | | | | | | | | | | ◆ | | | |
| ISFSI Decommissioning & Site Restoration Complete (2097) | | | | | | | | | | | | | | | | | | | | | | ◆ | | |
| **PERIOD 1 - SHUTDOWN & TRANSITION** | | | | | | | | | | | | | | | | | | | | | | | | |
| 1a. Planning Prior to Shutdown (by Plant Operations) | | | | | | | | | | | | | | | | | | | | | | | | |
| 1b. Unit 1 Post Shutdown Planning & Engineering | | | | | | | | | | | | | | | | | | | | | | | | |
| 1c. Unit 1 Post Shutdown Deactivation & Modifications | | | | | | | | | | | | | | | | | | | | | | | | |
| 1d. Unit 1 Wet Fuel Transfer to DOE prior to SAFSTOR | | | | | | | | | | | | | | | | | | | | | | | | |
| 1e. Unit 2 Post Shutdown Planning & Engineering | | | | | | | | | | | | | | | | | | | | | | | | |
| 1f. Unit 2 Post Shutdown Deactivation & Modifications | | | | | | | | | | | | | | | | | | | | | | | | |
| 1g Unit 2 Wet Fuel Transfer to DOE prior to DECON | | | | | | | | | | | | | | | | | | | | | | | | |
| 1h Unit 2 Wet Fuel Transfer to ISFSI prior to DECON | | | | | | | | | | | | | | | | | | | | | | | | |
| 1i. Undistributed Costs for Shutdown & Transition | | | | | | | | | | | | | | | | | | | | | | | | |
| **PERIOD 2 - UNIT 2 SAFSTOR** | | | | | | | | | | | | | | | | | | | | | | | | |
| 2a. Unit 1 Wet Fuel Transfer to DOE during SAFSTOR | | | | | | | | | | | | | | | | | | | | | | | | |
| 2b. Unit 1 Wet Fuel Transfer to ISFSI during SAFSTOR | | | | | | | | | | | | | | | | | | | | | | | | |
| 2c. Unit 1 Dormancy during Dry Fuel Storage | | | | | | | | | | | | | | | | | | | | | | | | |
| 2d. Unit 2 Dormancy during Dry Fuel Storage | | | | | | | | | | | | | | | | | | | | | | | | |
| 2e. Dormancy only | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | | | | | | | | | | |
| **PERIOD 3 - DECOMMISSIONING & LICENSE TERMINATION** | | | | | | | | | | | | | | | | | | | | | | | | |
| 3a. Decommissioning Planning | | | | | | | | | | | | | ▬ | ▬ | | | | | | | | | | |
| 3b. Decommissioning Transition & Preparations | | | | | | | | | | | | | ▬ | ▬ | ▬ | | | | | | | | | |
| 3c. Reactor Vessel Removal | | | | | | | | | | | | | | ▬ | ▬ | ▬ | | | | | | | | |
| 3d. Large Component Removal | | | | | | | | | | | | | | | ▬ | ▬ | | | | | | | | |
| 3e. Plant Decontamination & Interior Rad Demolition | | | | | | | | | | | | | | | ▬ | ▬ | | | | | | | | |
| 3f. Rad Building Demolition | | | | | | | | | | | | | | | | ▬ | ▬ | | | | | | | |
| 3g. License Termination Activities | | | | | | | | | | | | | | | | | ▬ | ▬ | | | | | | |
| 3h. Undistributed Costs for Decommissioning & License Termination | | | | | | | | | | | | | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | | | | |
| **PERIOD 4 - SITE RESTORATION** | | | | | | | | | | | | | | | | | | | | | | | | |
| 4a. Clean Building & Site Demolition | | | | | | | | | | | | | | | ▬ | ▬ | | | | | | | | |
| 4b. Site Restoration | | | | | | | | | | | | | | | | | | | ▬ | ▬ | | | | |
| 4c. Undistributed Costs for Site Restoration | | | | | | | | | | | | | | | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | | | | |
| **PERIOD 5 - DRY FUEL / GTCC STORAGE & TRANSFER** | | | | | | | | | | | | | | | | | | | | | | | | |
| 5a. Dry Fuel Transfer to DOE during SAFSTOR | | | | | | | | | | | | | | | | | | | | | | | | |
| 5c. GTCC Waste Disposition | | | | | | | | | | | | | | | | | | | ▬ | ▬ | | | | |
| 5d. Undistributed Costs for Dry Fuel / GTCC Storage & Transfer | | | | | | | | | | | | | | | | | | | | | | | | |
| **PERIOD 6 - ISFSI DECOMMISSIONING** | | | | | | | | | | | | | | | | | | | | | | | | |
| 6a. ISFSI D&D Planning & Preparations | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | | | |
| 6b. ISFSI and Support Structure Clean Demolition | | | | | | | | | | | | | | | | | | | | | ▬ | | | |
| 6c. ISFSI Final Status Surveys | | | | | | | | | | | | | | | | | | | | | ▬ | | | |
| 6d. Undistributed Costs for ISFSI Decommissioning | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | | | |

Assumed by plant Operations

Included in estimate

Undistributed costs Included in estimate

Appendix C-1

# Florida Power and Light

## St. Lucie Unit 1

## Scenario 1 - Unit 1 SAFSTOR, DECON both following Unit 2 Shutdown

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **1a Total** | **Planning Prior to Shutdown (by Plant Operations)** | | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| | 1b.1 | Admin Activities in Preparation for SAFSTOR - Unit 1 | 2,397 | 74 | - | - | 371 | 2,841 | 2,841 | - | - |
| | 1b.2 | Prepare PSDAR and License Documents - Unit 1 | 382 | 12 | - | - | 59 | 453 | 453 | - | - |
| | 1b.3 | Engineering Activities in Preparation for SAFSTOR - Unit 1 | 1,007 | 31 | - | - | 156 | 1,194 | 1,194 | - | - |
| **1b Total** | **Unit 1 Post Shutdown Planning & Engineering** | | **3,786** | **117** | **-** | **-** | **585** | **4,489** | **4,489** | **-** | **-** |
| | 1c.1 | Defuel Reactor Unit 1 (by Plant Operations) | - | - | - | - | - | - | - | - | - |
| | 1c.2 | Fuel Sampling & Inspections (by Plant Operations) | - | - | - | - | - | - | - | - | - |
| | 1c.3 | Spent Fuel Pool System Modifications - Unit 1 | 10,303 | 1,818 | - | - | 1,818 | 13,939 | - | 13,939 | - |
| | 1c.4 | Implement Cold & Dark - Unit 1 | 3,508 | 630 | - | - | 621 | 4,759 | 4,759 | - | - |
| | 1c.5 | Flush and Drain Non-Essential Systems - Unit 1 | 515 | 5 | - | - | 78 | 598 | 598 | - | - |
| | 1c.6 | Perform Pre-SAFSTOR Baseline Radiation Survey - Unit 1 | 1,264 | 39 | - | - | 195 | 1,499 | 674 | 824 | - |
| **1c Total** | **Unit 1 Post Shutdown Deactivation & Modifications** | | **15,589** | **2,493** | **-** | **-** | **2,712** | **20,795** | **6,032** | **14,763** | **-** |
| | 1d.1 | Provide Transfer Casks (supplied by DOE) | - | - | - | - | - | - | - | - | - |
| | 1d.2 | Procure Spent Fuel Loading & Transfer Equipment | - | 2,184 | - | - | 328 | 2,512 | - | 2,512 | - |
| | 1d.3 | Procedures & Dry Runs | 500 | - | - | 250 | 113 | 863 | - | 863 | - |
| | 1d.4 | Remove (224) Fuel Assemblies from Pool & Load DOE Casks | 1,120 | 280 | - | - | 280 | 1,680 | - | 1,680 | - |
| | 1d.5 | Dry, Close & Inspect (7) DOE supplied Casks | 560 | 140 | - | - | 140 | 840 | - | 840 | - |
| | 1d.6 | Load Out (7) Casks to DOE Transport | 560 | 140 | - | - | 140 | 840 | - | 840 | - |
| | 1d.7 | Spent Fuel Transportation & Disposal (by DOE) | - | - | - | - | - | - | - | - | - |
| **1d Total** | **Unit 1 Wet Fuel Transfer to DOE prior to SAFSTOR** | | **2,740** | **2,744** | **-** | **250** | **1,000** | **6,734** | **-** | **6,734** | **-** |
| **1e Total** | **Unit 2 Post Shutdown Planning & Engineering** | | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| **1f Total** | **Unit 2 Shutdown Preparations & Deactivation** | | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| **1g Total** | **Unit 2 Wet Fuel Transfer to DOE prior to DECON** | | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| **1h Total** | **Unit 2 Wet Fuel Transfer to ISFSI prior to DECON** | | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| | 1i.1 | Utility Staff | 64,707 | - | - | - | 9,706 | 74,414 | 59,531 | 14,883 | - |
| | 1i.2 | Security Guard Force | 6,442 | - | - | - | 966 | 7,408 | 2,223 | 5,186 | - |
| | 1i.3 | General Contractor Staff | - | - | - | - | - | - | - | - | - |
| | 1i.4 | Property Taxes | - | - | - | 177 | 27 | 203 | 163 | 41 | - |
| | 1i.5 | Insurance | - | - | - | 6,848 | 1,027 | 7,875 | 6,300 | 1,575 | - |

Appendix C-1

## Florida Power and Light

## St. Lucie Unit 1

## Scenario 1 - Unit 1 SAFSTOR, DECON both following Unit 2 Shutdown

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1i.6 | Corporate Support | 1,325 | - | - | - | 199 | 1,524 | 457 | 1,067 | - |
| | 1i.7 | Utility Staff HP Supplies | - | 883 | - | - | 132 | 1,016 | 305 | 711 | - |
| | 1i.8 | NRC Inspection Fee | - | - | - | 2,224 | 334 | 2,558 | 2,558 | - | - |
| | 1i.9 | Licensing Fees | - | - | - | 688 | 103 | 791 | 791 | - | - |
| | 1i.10 | Materials and Services | - | 1,945 | - | - | 292 | 2,237 | 671 | 1,566 | - |
| | 1i.11 | Energy | - | - | - | 1,097 | 165 | 1,262 | 1,010 | 252 | - |
| | 1i.12 | EPRI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 1i.13 | NEI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 1i.14 | County Fees | - | - | - | 2,049 | 307 | 2,356 | 1,885 | 471 | - |
| | 1i.15 | FEMA Fees | - | - | - | 1,079 | 162 | 1,241 | 993 | 248 | - |
| | 1i.16 | INPO Membership Fees | - | - | - | - | - | - | - | - | - |
| | 1i.17 | ISFSI Operating Costs | - | 422 | - | - | 63 | 485 | - | 485 | - |
| | 1i.18 | Spent Fuel Maintenance | 1,180 | 131 | - | - | 197 | 1,507 | - | 1,507 | - |
| **1i Total** | **Undistributed Costs for Shutdown & Transition** | | **73,654** | **3,381** | **-** | **14,162** | **13,680** | **104,877** | **76,885** | **27,992** | **-** |
| | | | | | | | | | | | |
| **Period 1 Total** | **SHUTDOWN & TRANSITION** | | **95,770** | **8,735** | **-** | **14,412** | **17,978** | **136,894** | **87,405** | **49,489** | **-** |
| | 2a.1 | Provide Transfer Casks (supplied by DOE) | - | - | - | - | - | - | - | - | - |
| | 2a.2 | Procure Spent Fuel Loading & Transfer Equipment | - | - | - | - | - | - | - | - | - |
| | 2a.3 | Procedures & Dry Runs | - | - | - - | | - | - | - | - | - |
| | 2a.4 | Remove (320) Fuel Assemblies from Pool & Load Casks | 1,600 | 400 | - | - | 400 | 2,400 | - | 2,400 | - |
| | 2a.5 | Dry, Close & Inspect (10) | 800 | 200 | - | - | 200 | 1,200 | - | 1,200 | - |
| | 2a.6 | Load Out (10) Casks to Transport | 800 | 200 | - | - | 200 | 1,200 | - | 1,200 | - |
| **2a Total** | **Wet Fuel Transfer to DOE during SAFSTOR** | | **3,200** | **800** | **-** | **-** | **800** | **4,800** | **-** | **4,800** | **-** |
| | | | | | | | | | | | |
| | 2b.1 | Provide Transfer Casks (41) | - | 36,193 | - | - | 5,429 | 41,622 | - | 41,622 | - |
| | 2b.2 | Procure Spent Fuel Loading & Transfer Equipment | - | - | - | - | - | - | - | - | - |
| | 2b.3 | Procedures & Dry Runs | 335 | - | - | 168 | 75 | 578 | - | 578 | - |
| | 2b.4 | Remove (1312) Fuel Assemblies from Pool & Load Casks | 6,560 | 1,640 | - | - | 1,640 | 9,840 | - | 9,840 | - |
| | 2b.5 | Dry, Close & Inspect (41) | 3,280 | 820 | - | - | 820 | 4,920 | - | 4,920 | - |
| | 2b.6 | Load Out (41) Casks to Transport | 3,280 | 820 | - | - | 820 | 4,920 | - | 4,920 | - |
| **2b Total** | **Wet Fuel Transfer to ISFSI during SAFSTOR** | | **13,455** | **39,473** | **-** | **168** | **8,784** | **61,880** | **-** | **61,880** | **-** |
| | | | | | | | | | | | |
| | 2c.1 | Utility Staff | 26,298 | - | - | - | 2,630 | 28,928 | 13,017 | 15,910 | - |
| | 2c.2 | Security Guard Force | 11,274 | - | - | - | 1,127 | 12,401 | - | 12,401 | - |
| | 2c.3 | General Contractor Staff | - | - | - | - | - | - | - | - | - |
| | 2c.4 | Property Taxes | - | - | - | 221 | 22 | 243 | 109 | 134 | - |
| | 2c.5 | Insurance | - | - | - | 8,560 | 856 | 9,416 | 4,237 | 5,179 | - |

Appendix C-1

## Florida Power and Light

## St. Lucie Unit 1

## Scenario 1 - Unit 1 SAFSTOR, DECON both following Unit 2 Shutdown

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2c.6 | Corporate Support | 3,528 | - | - | - | 353 | 3,881 | 1,746 | 2,134 | - |
| | 2c.7 | Utility Staff HP Supplies | - | 165 | - | - | 17 | 182 | 82 | 100 | - |
| | 2c.8 | NRC Inspection Fee | - | - | - | 723 | 72 | 795 | 358 | 437 | - |
| | 2c.9 | Licensing Fees | - | - | - | 860 | 86 | 946 | 946 | - | - |
| | 2c.10 | County Fees | - | - | - | 2,561 | 256 | 2,817 | 1,268 | 1,549 | - |
| | 2c.11 | FEMA Fees | - | - | - | 1,349 | 135 | 1,483 | 668 | 816 | - |
| | 2c.12 | EPRI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 2c.13 | NEI Fees | - | - | - | - | - | - | - | - | - |
| | 2c.14 | INPO Membership Fees | - | - | - | - | - | - | - | - | - |
| | 2c.15 | Materials and Services | - | 1,318 | - | - | 132 | 1,450 | 653 | 798 | - |
| | 2c.16 | ISFSI Operating Costs | - | 355 | - | - | 36 | 391 | - | 391 | - |
| | 2c.17 | Energy | - | - | - | 192 | 19 | 211 | 95 | 116 | - |
| **2c Total** | **Dormancy during Wet Fuel Transfer to DOE & ISFSI** | | **41,100** | **1,839** | **-** | **14,465** | **5,740** | **63,144** | **23,179** | **39,965** | **-** |
| | | | | | | | | | | | |
| **Period 2 Total** | **SAFSTOR** | | **57,755** | **42,112** | **-** | **14,633** | **15,325** | **129,823** | **23,179** | **106,645** | **-** |
| | 3a.1 | Decommissioning Planning and Design - Unit 1 | 1,493 | 45 | - | - | 231 | 1,769 | 1,769 | - | - |
| | 3a.2 | Prepare Integrated Work Sequence and Schedule - Unit 1 | 161 | 5 | - | - | 25 | 191 | 191 | - | - |
| | 3a.3 | Site Characterization - Unit 1 | 1,878 | 53 | - | 105 | 306 | 2,343 | 2,343 | - | - |
| | 3a.4 | Prepare Decommissioning Activity Specifications - Unit 1 | 4,794 | 148 | - | - | 741 | 5,684 | 5,684 | - | - |
| | 3a.5 | Prepare Detailed Work Procedures - Unit 1 | 4,213 | 130 | - | - | 652 | 4,995 | 4,995 | - | - |
| | 3a.6 | Prepare License Termination Plan - Unit 1 | 965 | - | - | 667 | 245 | 1,877 | 1,877 | - | - |
| | 3a.7 | Design Containment and Misc System Modifications - Unit 1 | 183 | - | - | - | 27 | 210 | 210 | - | - |
| | 3a.8 | Purchase Dry Storage Modules for Unit 1 GTCC Waste | - | - | 7,062 | - | 1,059 | 8,121 | 8,121 | - | - |
| **3a Total** | **Decommissioning Planning** | | **13,687** | **382** | **7,062** | **772** | **3,285** | **25,189** | **25,189** | **-** | **-** |
| | 3b.1 | Mobilize Decommissioning General Contractor | - | - | - | 1,300 | 195 | 1,495 | 1,495 | - | - |
| | 3b.2 | Perform Asbestos Abatement of Pipe Insulation - Unit 1 | 3,371 | 104 | - | - | 869 | 4,344 | 4,344 | - | - |
| | 3b.3 | Implement Temporary Power Upgrades - Unit 1 | 996 | 937 | - | - | 290 | 2,224 | 2,224 | - | - |
| | 3b.4 | Construct Misc Building Modifications, In-Plant Laydown Areas | 2,881 | 508 | - | - | 508 | 3,897 | 3,897 | - | - |
| | 3b.5 | Modify Containment Access - Unit 1 | 2,137 | 377 | - | - | 377 | 2,892 | 2,892 | - | - |
| | 3b.6 | Transportation Infrastructure Modifications | 89 | 447 | - | 2,089 | 394 | 3,019 | 3,019 | - | - |
| | 3b.7 | Procure Waste Handling & Processing Tents | - | - | - | 1,739 | 261 | 2,000 | 2,000 | - | - |
| **3b Total** | **Decommissioning Transition and Preparations** | | **9,475** | **2,374** | **-** | **5,127** | **2,894** | **19,870** | **19,870** | **-** | **-** |
| | 3c.1 | Design and Procure Special Equipment | - | 29,000 | - | - | 5,800 | 34,800 | 34,800 | - | - |
| | 3c.2 | Test Special Cutting and Handling Equipment and Train Operators | 2,263 | - | - | 70 | 467 | 2,800 | 2,800 | - | - |
| | 3c.3 | Finalize Internals and Vessel Segmentation Details - Unit 1 | 525 | - | - | - | 105 | 630 | 630 | - | - |

Appendix C-1

## Florida Power and Light

## St. Lucie Unit 1

## Scenario 1 - Unit 1 SAFSTOR, DECON both following Unit 2 Shutdown

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3c.4 | Segment, Package and Ship Reactor Internals - Unit 1 | 5,672 | 2,100 | 12,861 | - | 4,127 | 24,760 | 24,760 | - | - |
| | 3c.5 | Package and Ship Reactor Pressure Vessel - Unit 1 | 1,345 | 1,030 | - | - | 475 | 2,850 | 2,850 | - | - |
| **3c Total** | **Reactor Vessel Removal** | | **9,804** | **32,130** | **12,861** | **70** | **10,973** | **65,839** | **65,839** | **-** | **-** |
| | 3d.1 | Heavy Lift / Transfer Equipment | | 3,245 | - | - | 649 | 3,893 | 3,893 | - | - |
| | 3d.2 | Remove Steam Generators - Unit 1 | 1,368 | 163 | - | - | 306 | 1,836 | 1,836 | - | - |
| | 3d.3 | Remove Pressurizer - Unit 1 | 188 | 22 | - | - | 42 | 251 | 251 | - | - |
| | 3d.4 | Remove Reactor Coolant Pipe - Unit 1 | 506 | 35 | - | - | 108 | 649 | 649 | - | - |
| | 3d.5 | Remove Reactor Coolant Pumps - Unit 1 | 519 | 59 | - | - | 116 | 694 | 694 | - | - |
| | 3d.6 | Large Component Disposal | - | - | 14,614 | - | 2,923 | 17,537 | 17,537 | - | - |
| **3d Total** | **Large Component Removal** | | **2,581** | **3,523** | **14,614** | **-** | **4,143** | **24,861** | **24,861** | **-** | **-** |
| | 3e.1 | Remove and Dispose of Spent Fuel Storage Racks | 66 | 20 | - | - | 17 | 102 | 102 | - | - |
| | 3e.2 | Segment, Package and Dispose of Spent Fuel Pool Island Equipment | 207 | 20 | - | - | 45 | 272 | 272 | - | - |
| | 3e.3 | Decon/Surgical Removal Containment Building - Unit 1 | 1,066 | 130 | - | - | 239 | 1,435 | 1,435 | - | - |
| | 3e.4 | Decon/Surgical Removal Fuel Building | 542 | 21 | - | - | 112 | 675 | 675 | - | - |
| | 3e.5 | Decon/Surgical Remvoal Auxiliary Building Unit 1 | 3,017 | 287 | - | - | 661 | 3,965 | 3,965 | - | - |
| | 3e.6 | Oversize Debris / Containerized Debris Disposal | - | - | 3,885 | - | 777 | 4,661 | 4,661 | - | - |
| **3e Total** | **Plant Decontamination & Interior Rad Demolition** | | **4,897** | **477** | **3,885** | **-** | **1,852** | **11,110** | **11,110** | **-** | **-** |
| | 3f.1 | Demolish Fuel Building | 247 | 538 | - | - | 157 | 942 | 942 | - | - |
| | 3f.2 | Demolish Auxiliary Building | 1,552 | 4,131 | - | - | 1,137 | 6,820 | 6,820 | - | - |
| | 3f.3 | Demolish Unit 1 Containment Building | 1,940 | 6,120 | - | - | 1,612 | 9,673 | 9,673 | - | - |
| | 3f.4 | Contaminated Soil | 661 | 992 | 55,805 | - | 11,492 | 68,949 | 68,949 | - | - |
| | 3f.5 | Debris Disposal | - | - | 100,085 | - | 20,017 | 120,103 | 120,103 | - | - |
| **3f Total** | **Rad Building Demolition** | | **4,402** | **11,781** | **155,890** | **-** | **34,415** | **206,488** | **206,488** | **-** | **-** |
| | 3g.1 | Final Status Survey for Structures | 5,753 | 54 | - | 227 | 1,207 | 7,240 | 7,240 | - | - |
| | 3g.2 | Final Status Survey for Land Areas (Included with Structures) | - | - | - | - | - | - | - | - | - |
| **3g Total** | **License Termination Activities** | | **5,753** | **54** | **-** | **227** | **1,207** | **7,240** | **7,240** | **-** | **-** |
| | 3h.1 | Utility Staff | 33,033 | - | - | - | 4,955 | 37,988 | 37,988 | - | - |
| | 3h.2 | Security Guard Force | 1,994 | - | - | - | 299 | 2,293 | 2,293 | - | - |
| | 3h.3 | General Contractor Staff | 67,660 | - | - | - | 10,149 | 77,809 | 77,809 | - | - |
| | 3h.4 | Property Taxes | - | - | - | 288 | 43 | 331 | 331 | - | - |
| | 3h.5 | Insurance | - | - | - | 7,541 | 1,131 | 8,673 | 8,673 | - | - |
| | 3h.6 | Corporate Support | 4,813 | - | - | - | 722 | 5,535 | 5,535 | - | - |
| | 3h.7 | Utility Staff HP Supplies | - | 5,180 | - | - | 777 | 5,957 | 5,957 | - | - |

Appendix C-1

## Florida Power and Light

## St. Lucie Unit 1

## Scenario 1 - Unit 1 SAFSTOR, DECON both following Unit 2 Shutdown

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3h.8 | NRC Inspection Fee | - | - | - | 890 | 133 | 1,023 | 1,023 | - | - |
| | 3h.9 | Licensing Fees | - | - | - | 1,376 | 206 | 1,582 | 1,582 | - | - |
| | 3h.10 | County Fees | - | - | - | 953 | 143 | 1,096 | 1,096 | - | - |
| | 3h.11 | FEMA Fees | - | - | - | 502 | 75 | 577 | 577 | - | - |
| | 3h.12 | Materials and Services | - | 2,043 | - | - | 306 | 2,349 | 2,349 | - | - |
| | 3h.13 | Energy | - | - | - | 3,319 | 498 | 3,817 | 3,817 | - | - |
| | 3h.14 | DGC HP Supplies | - | 5,132 | - | - | 770 | 5,902 | 5,902 | - | - |
| | 3h.15 | Florida LLRW Inspection Fee | - | - | - | 4,607 | 691 | 5,299 | 5,299 | | |
| | 3h.16 | EPRI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 3h.16 | NEI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 3h.17 | INPO Membership Fees | - | - | - | - | - | - | - | - | - |
| **3h Total** | **Undistributed Costs for Decommissioning & License Termination** | | **107,501** | **12,354** | **-** | **19,476** | **20,900** | **160,231** | **160,231** | **-** | **-** |
| | | | | | | | | | | | |
| **Period 3 Total** | **DECOMMISSIONING & LICENSE TERMINATION** | | **158,099** | **63,074** | **194,312** | **25,672** | **79,669** | **520,827** | **520,827** | **-** | **-** |
| | 4a.1 | Demo Turbine Pedastal and Turbine Deck | 3,466 | 1,377 | - | - | 726 | 5,569 | - | - | 5,569 |
| | 4a.2 | Demo Intake & CWS | 1,776 | 1,184 | - | - | 444 | 3,405 | - | - | 3,405 |
| | 4a.3 | Demo Tank Foundations | 11 | 229 | - | - | 36 | 276 | - | - | 276 |
| | 4a.4 | Demo Misc Site Structures | 1,393 | 1,147 | - | - | 381 | 2,921 | - | - | 2,921 |
| | 4a.5 | Security Improvements | 536 | 459 | - | - | 149 | 1,144 | - | - | 1,144 |
| | 4a.6 | Clean Concrete Processing | - | - | - | 1,677 | 252 | 1,928 | - | - | 1,928 |
| | 4a.7 | Demo Site Paving | 339 | 791 | - | - | 169 | 1,299 | - | - | 1,299 |
| | 4a.8 | Clean Debris Disposal / Recycle | - | - | 138 | - | 21 | 159 | - | - | 159 |
| **4a Total** | **Clean Building & Site Demolition** | | **7,520** | **5,187** | **138** | **1,677** | **2,178** | **16,700** | **-** | **-** | **16,700** |
| | | | | | | | | | | | |
| | 4b.1 | Procure Site Restoration Equipment | - | 735 | - | - | 110 | 846 | - | - | 846 |
| | 4b.2 | Finish Grading and Re-Vegetate Site | 690 | | - | - | 103 | 793 | - | - | 793 |
| **4b Total** | **Site Restoration** | | **690** | **735** | **-** | **-** | **214** | **1,639** | **-** | **-** | **1,639** |
| | | | | | | | | | | | |
| | 4c.1 | Utility Staff | 2,486 | - | - | - | 373 | 2,859 | - | - | 2,859 |
| | 4c.2 | Security Guard Force | 150 | - | - | - | 23 | 173 | - | - | 173 |
| | 4c.3 | General Contractor Staff | 5,093 | - | - | - | 764 | 5,857 | - | - | 5,857 |
| | 4c.4 | Property Taxes | - | - | - | 22 | 3 | 25 | - | - | 25 |
| | 4c.5 | Insurance | - | - | - | 568 | 85 | 653 | - | - | 653 |
| | 4c.6 | Corporate Support | 362 | - | - | - | 54 | 417 | - | - | 417 |
| | 4c.7 | Energy | - | - | - | 250 | 37 | 287 | - | - | 287 |
| | 4c.8 | Materials and Services | - | 154 | - | - | 23 | 177 | - | - | 177 |
| | 4c.9 | County Fees | - | - | - | 72 | 11 | 82 | - | - | 82 |

Appendix C-1

## Florida Power and Light

## St. Lucie Unit 1

## Scenario 1 - Unit 1 SAFSTOR, DECON both following Unit 2 Shutdown

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4c.10 | FEMA Fees | - | - | - | 38 | 6 | 43 | - | - | 43 |
| **4c Total** | **Undistributed Costs for Site Restoration** | | **8,091** | **154** | **-** | **949** | **1,379** | **10,573** | **-** | **-** | **10,573** |
| | | | | | | | | | | | |
| **Period 4 Total** | **SITE RESTORATION** | | **16,301** | **6,076** | **138** | **2,625** | **3,771** | **28,912** | **-** | **-** | **28,912** |
| | | | | | | | | | | | |
| | 5a.1 | Procure Loading & Transfer Equipment (included in Period 1) | - | - | - | - | - | - | - | - | - |
| | 5a.2 | Procedures & Dry Runs (included in Period 1) | - | - | - | - | - | - | - | - | - |
| | 5a.3 | Remove (86) Fuel Casks from ISFSI & Load DOE Transport | 6,880 | 1,720 | - | - | 1,290 | 9,890 | - | 9,890 | - |
| | 5a.4 | Spent Fuel Transportation & Disposal (by DOE) | - | - | - | - | - | - | - | - | - |
| **5a Total** | **Dry Fuel Transfer to DOE during and after DECON** | | **6,880** | **1,720** | **-** | **-** | **1,290** | **9,890** | **-** | **9,890** | **-** |
| | | | | | | | | | | | |
| | 5b.1 | Remove GTCC Casks from ISFSI & Loadout | 480 | - | - | 120 | 180 | 780 | 780 | - | - |
| | 5b.2 | GTCC Transportation & Disposal | - | - | 16,448 | - | 2,467 | 18,915 | 18,915 | - | - |
| **5b Total** | **GTCC Waste Disposition** | | **480** | **-** | **16,448** | **120** | **2,647** | **19,695** | **19,695** | **-** | **-** |
| | | | | | | | | | | | |
| | 5c.1 | Utility Staff | 9,318 | - | - | - | 1,398 | 10,716 | - | 10,716 | - |
| | 5c.2 | Security Guard Force | 33,695 | - | - | - | 5,054 | 38,749 | - | 38,749 | - |
| | 5c.3 | General Contractor Staff | - | - | - | - | - | - | - | - | - |
| | 5c.4 | Property Taxes | - | - | - | 906 | 136 | 1,042 | - | 1,042 | - |
| | 5c.5 | Insurance | - | - | - | 9,740 | 1,461 | 11,201 | - | 11,201 | - |
| | 5c.6 | NRC Inspection Fee | - | - | - | 2,224 | 334 | 2,558 | - | 2,558 | - |
| | 5c.7 | Licensing Fees | - | - | - | 3,440 | 516 | 3,956 | - | 3,956 | - |
| | 5c.8 | County Fees | - | - | - | - | - | - | - | - | - |
| | 5c.9 | FEMA Fees | - | - | - | - | - | - | - | - | - |
| | 5c.10 | ISFSI Operating Costs | - | - | - | 1,553 | 233 | 1,787 | - | 1,787 | - |
| **5c Total** | **Undistributed Costs for Dry Fuel / GTCC Storage & Transfer** | | **43,013** | **-** | **-** | **17,864** | **9,132** | **70,008** | **-** | **70,008** | **-** |
| | | | | | | | | | | | |
| **Period 5 Total** | **DRY FUEL / GTCC STORAGE & TRANSFER** | | **50,373** | **1,720** | **16,448** | **17,984** | **13,069** | **99,594** | **19,695** | **79,898** | **-** |
| | | | | | | | | | | | |
| | 6a.1 | Preparation and NRC Review of License Termination Plan | 67 | - | - | 96 | 24 | 188 | - | 188 | - |
| **6a Total** | **ISFSI D&D Planning & Preparations** | | **67** | **-** | **-** | **96** | **24** | **188** | **-** | **188** | **-** |
| | | | | | | | | | | | |
| | 6b.1 | Clean Demolition of ISFSI | 1,975 | 958 | - | - | 440 | 3,372 | - | 3,372 | - |
| | 6b.2 | Demolition of ISFSI Support Structures | 359 | 141 | - | - | 75 | 575 | - | 575 | - |
| | 6b.3 | | - | - | - | - | - | - | - | - | - |
| **6b Total** | **ISFSI and Support Structure Clean Demolition** | | **2,334** | **1,099** | **-** | **-** | **515** | **3,947** | **-** | **3,947** | **-** |
| | | | | | | | | | | | |
| | 6c.1 | Verification Surveys | 122 | 33 | - | - | 23 | 178 | - | 178 | - |

Appendix C-1

## Florida Power and Light

## St. Lucie Unit 1

## Scenario 1 - Unit 1 SAFSTOR, DECON both following Unit 2 Shutdown

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 6c.2 | Preparation of Final Report on Decommissioning and NRC Review | 67 | - | - | - | 10 | 77 | - | 77 | - |
| **6c Total** | **ISFSI Final Status Surveys** | | **189** | **33** | **-** | **-** | **33** | **255** | **-** | **255** | **-** |
| | 6d.1 | Utility Staff | 318 | - | - | - | 48 | 365 | - | 365 | - |
| | 6d.2 | Security Guard Force | 152 | - | - | - | 23 | 175 | - | 175 | - |
| | 6d.3 | General Contractor Staff | 1,999 | - | - | - | 300 | 2,299 | - | 2,299 | - |
| | 6d.4 | Property Taxes | - | - | - | 44 | 7 | 51 | - | 51 | - |
| | 6d.5 | Insurance | - | - | - | 25 | 4 | 29 | - | 29 | - |
| | 6d.6 | Energy | - | - | - | 36 | 5 | 42 | - | 42 | - |
| | 6d.7 | County Fees | - | - | - | - | - | - | - | - | - |
| | 6d.8 | FEMA Fees | - | - | - | - | - | - | - | - | - |
| **6d Total** | **Undistributed Costs for ISFSI Decommissioning** | | **2,469** | **-** | **-** | **106** | **386** | **2,960** | **-** | **2,960** | **-** |
| **Period 6 Total** | **ISFSI DECOMMISSIONING** | | **5,059** | **1,131** | **-** | **202** | **959** | **7,351** | **-** | **7,351** | **-** |
| **GRAND TOTAL** | | | **383,357** | **122,849** | **210,899** | **75,527** | **130,770** | **923,401** | **651,106** | **243,383** | **28,912** |

Appendix C-1

# Florida Power and Light

## St. Lucie Unit 2

## Scenario 1 - Unit 1 SAFSTOR, DECON both following Unit 2 Shutdown

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | |
| **1a Total** | **Planning Prior to Shutdown (by Plant Operations)** | | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| | | | | | | | | | | | |
| **1b Total** | **Unit 1 Post Shutdown Planning & Engineering** | | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| | | | | | | | | | | | |
| **1c Total** | **Unit 1 Post Shutdown Deactivation & Modifications** | | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| | | | | | | | | | | | |
| **1d Total** | **Unit 1 Wet Fuel Transfer to DOE prior to SAFSTOR** | | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| | 1e.1 | Admin Activities in Preparation for Decommissioning - Unit 2 | 786 | 23 | - | - | 121 | 930 | 930 | - | - |
| | 1e.2 | Preparation of PSDAR and Licensing Documents - Unit 2 | 178 | 6 | - | - | 28 | 211 | 211 | - | - |
| | 1e.3 | Engineering Activities in Preparation for Decommissioning - Unit 2 | 583 | 18 | - | - | 90 | 691 | 691 | - | - |
| **1e Total** | **Unit 2 Post Shutdown Planning & Engineering** | | **1,547** | **47** | **-** | **-** | **239** | **1,833** | **1,833** | **-** | **-** |
| | 1f.1 | Defuel Reactor Unit 2 (by Plant Operations) | - | - | - | - | - | - | - | - | - |
| | 1f.2 | Fuel Sampling & Inspections (by Plant Operations) | - | - | - | - | - | - | - | - | - |
| | 1f.3 | Spent Fuel Pool System Modifications - Unit 2 | 6,868 | 1,212 | - | - | 1,212 | 9,292 | - | 9,292 | - |
| **1f Total** | **Unit 2 Shutdown Preparations & Deactivation** | | **6,868** | **1,212** | **-** | **-** | **1,212** | **9,292** | **-** | **9,292** | **-** |
| | 1g.1 | Provide Transfer Casks (supplied by DOE) | - | - | - | - | - | - | - | - | - |
| | 1g.2 | Procure Spent Fuel Loading & Transfer Equipment | - | 1,463 | - | - | 219 | 1,683 | - | 1,683 | - |
| | 1g.3 | Procedures & Dry Runs | 335 | - | - | 168 | 75 | 578 | - | 578 | - |
| | 1g.4 | Remove (256) Fuel Assemblies from Pool & Load DOE Casks | 1,280 | 280 | - | - | 312 | 1,872 | - | 1,872 | - |
| | 1g.5 | Dry, Close & Inspect (8) DOE supplied Casks | 640 | 160 | - | - | 160 | 960 | - | 960 | - |
| | 1g.6 | Load Out (8) Casks to DOE Transport | 640 | 160 | - | - | 160 | 960 | - | 960 | - |
| | 1g.7 | Spent Fuel Transportation & Disposal (by DOE) | - | - | - | - | - | - | - | - | - |
| **1g Total** | **Unit 2 Wet Fuel Transfer to DOE prior to DECON** | | **2,895** | **2,063** | **-** | **168** | **927** | **6,053** | **-** | **6,053** | **-** |
| | 1h.1 | Provide Transfer Casks (21) | - | 18,538 | - | - | 2,781 | 21,318 | - | 21,318 | - |
| | 1h.2 | Procure Spent Fuel Loading & Transfer Equipment | - | - | - | - | - | - | - | - | - |
| | 1h.3 | Procedures & Dry Runs | 335 | - | - | 168 | 75 | 578 | - | 578 | - |
| | 1h.4 | Remove (672) Fuel Assemblies from Pool & Load Casks | 3,360 | 840 | - | - | 840 | 5,040 | - | 5,040 | - |
| | 1h.5 | Dry, Close & Inspect (21) | 1,680 | 420 | - | - | 420 | 2,520 | - | 2,520 | - |
| | 1h.6 | Load Out (21) Casks to Transport | 1,680 | 420 | - | - | 420 | 2,520 | - | 2,520 | - |
| | 1h.7 | Spent Fuel Transportation & Disposal (by DOE) | - | - | - | - | - | - | - | - | - |
| **1h Total** | **Unit 2 Wet Fuel Transfer to ISFSI prior to DECON** | | **7,055** | **20,218** | **-** | **168** | **4,536** | **31,976** | **-** | **31,976** | **-** |
| | 1i.1 | Utility Staff | 67,101 | - | - | - | 10,065 | 77,167 | 61,733 | 15,433 | - |

Appendix C-1

## Florida Power and Light

## St. Lucie Unit 2

## Scenario 1 - Unit 1 SAFSTOR, DECON both following Unit 2 Shutdown

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1i.2 | Security Guard Force | 40,615 | - | - | - | 6,092 | 46,707 | 14,012 | 32,695 | - |
| | 1i.3 | General Contractor Staff | - | - | - | - | - | - | - | - | - |
| | 1i.4 | Property Taxes | - | - | - | 177 | 27 | 203 | 163 | 41 | - |
| | 1i.5 | Insurance | - | - | - | 6,848 | 1,027 | 7,875 | 6,300 | 1,575 | - |
| | 1i.6 | Corporate Support | 881 | - | - | - | 132 | 1,013 | 304 | 709 | - |
| | 1i.7 | Utility Staff HP Supplies | - | 403 | - | - | 61 | 464 | 139 | 325 | - |
| | 1i.8 | NRC Inspection Fee | - | - | - | 2,224 | 334 | 2,558 | 2,558 | - | - |
| | 1i.9 | Licensing Fees | - | - | - | 688 | 103 | 791 | 791 | - | - |
| | 1i.10 | Materials and Services | - | 719 | - | - | 108 | 827 | 248 | 579 | - |
| | 1i.11 | Energy | - | - | - | 730 | 109 | 839 | 671 | 168 | - |
| | 1i.12 | EPRI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 1i.13 | NEI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 1i.14 | County Fees | - | - | - | 2,049 | 307 | 2,356 | 1,885 | 471 | - |
| | 1i.15 | FEMA Fees | - | - | - | 1,079 | 162 | 1,241 | 993 | 248 | - |
| | 1i.16 | INPO Membership Fees | - | - | - | - | - | - | - | - | - |
| | 1i.17 | ISFSI Operating Costs | - | 54 | - | - | 8 | 62 | - | 62 | - |
| | 1i.18 | Spent Fuel Maintenance | 784 | 87 | - | - | 131 | 1,002 | - | 1,002 | - |
| **1i Total** | **Undistributed Costs for Shutdown & Transition** | | **109,382** | **1,263** | **-** | **13,794** | **18,666** | **143,105** | **89,797** | **53,308** | **-** |
| | | | | | | | | | | | |
| **Period 1 Total** | **SHUTDOWN & TRANSITION** | | **127,747** | **24,803** | **-** | **14,129** | **25,580** | **192,259** | **91,630** | **100,629** | **-** |
| | | | | | | | | | | | |
| **Period 2 Total** | **SAFSTOR** | | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| | 3a.1 | Decommissioning Planning and Design - Unit 2 | 1,493 | 45 | - | - | 231 | 1,769 | 1,769 | - | - |
| | 3a.2 | Site Characterization - Unit 2 | 1,409 | 53 | - | 105 | 235 | 1,803 | 1,803 | - | - |
| | 3a.3 | Prepare Integrated Work Sequence and Schedule - Unit 2 | 161 | 5 | - | - | 25 | 191 | 191 | - | - |
| | 3a.4 | Prepare Decommissioning Activity Specifications - Unit 2 | 2,156 | 67 | - | - | 333 | 2,556 | 2,556 | - | - |
| | 3a.5 | Prepare License Termination Plan - Unit 2 | 965 | - | - | 667 | 245 | 1,877 | 1,877 | - | - |
| | 3a.6 | Prepare Detailed Work Procedures for Decommissioning - Unit 2 | 1,748 | 54 | - | - | 270 | 2,072 | 2,072 | - | - |
| | 3a.7 | Design Containment and Misc System Modifications - Unit 2 | 79 | - | - | - | 12 | 91 | 91 | - | - |
| | 3a.8 | Purchase Dry Storage Modules for Unit 2 GTCC Waste | - | - | 7,062 | - | 1,059 | 8,121 | 8,121 | - | - |
| **3a Total** | **Decommissioning Planning** | | **8,010** | **224** | **7,062** | **772** | **2,410** | **18,478** | **18,478** | **-** | **-** |
| | | | | | | | | | | | |
| | 3b.1 | Mobilize Decommissioning General Contractor | - | - | - | 1,300 | 195 | 1,495 | 1,495 | - | - |
| | 3b.2 | Flush and Drain Non-Essential Systems - Unit 2 | 515 | 5 | - | - | 78 | 598 | 598 | - | - |
| | 3b.3 | Perform Asbestos Abatement of Pipe Insulation - Unit 2 | - | - | - | - | - | - | - | - | - |
| | 3b.4 | Implement Cold and Dark & Install Temporary Power - Unit 2 | 4,504 | 1,568 | - | - | 911 | 6,983 | 6,983 | - | - |
| | 3b.5 | Construct Misc Building Modifications, In-Plant Laydown Areas | 2,881 | 508 | - | - | 508 | 3,897 | 3,897 | - | - |

Appendix C-1

## Florida Power and Light

## St. Lucie Unit 2

## Scenario 1 - Unit 1 SAFSTOR, DECON both following Unit 2 Shutdown

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3b.6 | Modify Containment Access - Unit 2 | 2,137 | 377 | - | - | 377 | 2,892 | 2,892 | - | - |
| | 3b.7 | Transportation Infrastructure Modifications | 60 | 298 | - | 1,393 | 263 | 2,013 | 2,013 | - | - |
| | 3b.8 | Procure Waste Handling & Processing Tents | - | - | - | 1,476 | 221 | 1,697 | 1,697 | - | - |
| **3b Total** | **Decommissioning Transition and Preparations** | | **10,097** | **2,757** | **-** | **4,168** | **2,553** | **19,575** | **19,575** | **-** | **-** |
| | 3c.1 | Design and Procure Special Equipment | - | 27,050 | - | - | 5,410 | 32,460 | 32,460 | - | - |
| | 3c.2 | Test Special Cutting and Handling Equipment and Train Operators | 1,924 | - | - | 70 | 399 | 2,392 | 2,392 | - | - |
| | 3c.3 | Finalize Internals and Vessel Segmentation Details - Unit 2 | 447 | - | - | - | 89 | 536 | 536 | - | - |
| | 3c.4 | Segment, Package and Ship Reactor Internals - Unit 2 | 5,672 | 2,100 | 12,293 | - | 4,013 | 24,077 | 24,077 | - | - |
| | 3c.5 | Package and Ship Reactor Pressure Vessel - Unit 2 | 1,345 | 1,030 | - | - | 475 | 2,850 | 2,850 | - | - |
| **3c Total** | **Reactor Vessel Removal** | | **9,386** | **30,180** | **12,293** | **70** | **10,386** | **62,315** | **62,315** | **-** | **-** |
| | 3d.1 | Heavy Lift / Transfer Equipment | | 3,245 | - | - | 649 | 3,893 | 3,893 | - | - |
| | 3d.2 | Remove and Dispose of Steam Generators - Unit 2 | 1,368 | 163 | - | - | 306 | 1,836 | 1,836 | - | - |
| | 3d.3 | Remove and Dispose of Pressurizer - Unit 2 | 188 | 22 | - | - | 42 | 251 | 251 | - | - |
| | 3d.4 | Remove and Dispose of Reactor Coolant Pipe - Unit 2 | 506 | 35 | - | - | 108 | 649 | 649 | - | - |
| | 3d.5 | Remove and Dispose of Reactor Coolant Pumps - Unit 2 | 519 | 59 | - | - | 116 | 694 | 694 | - | - |
| | 3d.6 | Large Component Disposal | - | - | 14,495 | - | 2,899 | 17,394 | 17,394 | - | - |
| **3d Total** | **Large Component Removal** | | **2,581** | **3,523** | **14,495** | **-** | **4,120** | **24,718** | **24,718** | **-** | **-** |
| | 3e.1 | Remove and Dispose of Spent Fuel Storage Racks | 66 | 20 | - | - | 17 | 102 | 102 | - | - |
| | 3e.2 | Segment, Package and Dispose of Spent Fuel Pool Island Equipment | 207 | 62 | - | - | 54 | 322 | 322 | - | - |
| | 3e.3 | Decon/Surgical Removal Containment Building - Unit 2 | 1,066 | 130 | - | - | 239 | 1,435 | 1,435 | - | - |
| | 3e.4 | Decon/Surgical Removal Fuel Building - Unit 2 | 542 | 21 | - | - | 112 | 675 | 675 | - | - |
| | 3e.5 | Decon/Surgical Remvoal Auxiliary Building Unit 2 | 3,017 | 287 | - | - | 661 | 3,965 | 3,965 | - | - |
| | 3e.6 | Oversize Debris / Containerized / Processed Debris Disposal | - | - | 3,885 | - | 777 | 4,661 | 4,661 | - | - |
| **3e Total** | **Plant Decontamination & Interior Rad Demolition** | | **4,897** | **519** | **3,885** | **-** | **1,860** | **11,161** | **11,161** | **-** | **-** |
| | 3f.1 | Demolish Fuel Building | 247 | 538 | - | - | 157 | 942 | 942 | - | - |
| | 3f.2 | Demolish Auxiliary Building | 1,552 | 4,131 | - | - | 1,137 | 6,820 | 6,820 | - | - |
| | 3f.3 | Demolish Unit 2 Containment Building | 1,940 | 6,120 | - | - | 1,612 | 9,673 | 9,673 | - | - |
| | 3f.4 | Contaminated Soil | 614 | 922 | 51,494 | - | 10,606 | 63,636 | 63,636 | - | - |
| | 3f.5 | Debris Dispsoal | - | - | 97,401 | - | 19,480 | 116,882 | 116,882 | - | - |
| **3f Total** | **Rad Building Demolition** | | **4,355** | **11,711** | **148,895** | **-** | **32,992** | **197,953** | **197,953** | **-** | **-** |
| | 3g.1 | Final Status Survey for Structures | 5,753 | 54 | - | 227 | 1,207 | 7,240 | 7,240 | - | - |
| | 3g.2 | Final Status Survey for Land Areas (included with Structures) | - | - | - | - | - | - | - | - | - |
| **3g Total** | **License Termination Activities** | | **5,753** | **54** | **-** | **227** | **1,207** | **7,240** | **7,240** | **-** | **-** |

Appendix C-1

## Florida Power and Light

## St. Lucie Unit 2

## Scenario 1 - Unit 1 SAFSTOR, DECON both following Unit 2 Shutdown

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3h.1 | Utility Staff | 29,716 | - | - | - | 4,457 | 34,173 | 34,173 | - | - |
| | 3h.2 | Security Guard Force | 1,880 | - | - | - | 282 | 2,162 | 2,162 | - | - |
| | 3h.3 | General Contractor Staff | 67,660 | - | - | - | 10,149 | 77,809 | 77,809 | - | - |
| | 3h.4 | Property Taxes | - | - | - | 247 | 37 | 284 | 284 | - | - |
| | 3h.5 | Insurance | - | - | - | 4,357 | 654 | 5,011 | 5,011 | - | - |
| | 3h.6 | Corporate Support | 4,223 | - | - | - | 634 | 4,857 | 4,857 | - | - |
| | 3h.7 | Utility Staff HP Supplies | - | 6,677 | - | - | 1,002 | 7,679 | 7,679 | - | - |
| | 3h.8 | NRC Inspection Fee | - | - | - | 667 | 100 | 767 | 767 | - | - |
| | 3h.9 | Licensing Fees | - | - | - | 1,032 | 155 | 1,187 | 1,187 | - | - |
| | 3h.10 | County Fees | - | - | - | - | - | - | - | - | - |
| | 3h.11 | FEMA Fees | - | - | - | - | - | - | - | - | - |
| | 3h.12 | Materials and Services | - | 1,749 | - | - | 262 | 2,011 | 2,011 | - | - |
| | 3h.13 | Energy | - | - | - | 3,388 | 508 | 3,896 | 3,896 | - | - |
| | 3h.14 | DGC HP Supplies | - | 5,132 | - | - | 770 | 5,902 | 5,902 | - | - |
| | 3h.15 | Florida LLRW Inspection Fee | - | - | - | 4,461 | 669 | 5,130 | 5,130 | - | - |
| | 3h.16 | EPRI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 3h.17 | NEI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 3h.18 | INPO Membership Fees | - | - | - | - | - | - | - | - | - |
| **3h Total** | **Undistributed Costs for Decommissioning & License Termination** | | **103,480** | **13,558** | **-** | **14,152** | **19,679** | **150,869** | **150,869** | **-** | **-** |
| **Period 3 Total** | **DECOMMISSIONING & LICENSE TERMINATION** | | **148,558** | **62,525** | **186,630** | **19,389** | **75,206** | **492,308** | **492,308** | **-** | **-** |
| | 4a.1 | Demo Turbine Pedastal and Turbine Deck | 3,614 | 1,377 | - | - | 749 | 5,740 | - | - | 5,740 |
| | 4a.2 | Demo Intake & CWS | 1,830 | 1,220 | - | - | 457 | 3,507 | - | - | 3,507 |
| | 4a.3 | Demo Primary Water Tank Foundation | 11 | 92 | - | - | 15 | 118 | - | - | 118 |
| | 4a.4 | Demo Misc Site Structures | 5,795 | 1,147 | - | - | 1,041 | 7,984 | - | - | 7,984 |
| | 4a.5 | Demo Security Improvements | 536 | 459 | - | - | 149 | 1,144 | - | - | 1,144 |
| | 4a.6 | Demo Steam Generator Blowdown Treatment | 585 | 138 | - | - | 108 | 831 | - | - | 831 |
| | 4a.7 | Clean Concrete Processing | - | - | - | 2,428 | 364 | 2,792 | - | - | 2,792 |
| | 4a.8 | Demo Site Paving | 339 | 791 | - | - | 169 | 1,299 | - | - | 1,299 |
| | 4a.9 | Clean Debris Disposal / Recycle | - | - | 140 | - | 21 | 161 | - | - | 161 |
| **4a Total** | **Clean Building & Site Demolition** | | **12,709** | **5,223** | **140** | **2,428** | **3,075** | **23,574** | **-** | **-** | **23,574** |
| | 4b.1 | Procure Site Restoration Equipment | - | 490 | - | - | 74 | 564 | - | - | 564 |
| | 4b.2 | Finish Grading and Re-Vegetate Site | 460 | 26 | - | - | 73 | 558 | - | - | 558 |
| **4b Total** | **Site Restoration** | | **460** | **516** | **-** | **-** | **146** | **1,122** | **-** | **-** | **1,122** |

Appendix C-1

## Florida Power and Light

## St. Lucie Unit 2

## Scenario 1 - Unit 1 SAFSTOR, DECON both following Unit 2 Shutdown

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4c.1 | Utility Staff | 2,237 | - | - | - | 336 | 2,572 | - | - | 2,572 |
| | 4c.2 | Security Guard Force | 142 | - | - | - | 21 | 163 | - | - | 163 |
| | 4c.3 | General Contractor Staff | 5,093 | - | - | - | 764 | 5,857 | - | - | 5,857 |
| | 4c.4 | Property Taxes | - | - | - | 19 | 3 | 21 | - | - | 21 |
| | 4c.5 | Insurance | - | - | - | 328 | 49 | 377 | - | - | 377 |
| | 4c.6 | Corporate Support | 318 | - | - | - | 48 | 366 | - | - | 366 |
| | 4c.7 | Energy | - | - | - | 255 | 38 | 293 | - | - | 293 |
| | 4c.8 | Materials and Services | - | 132 | - | - | 20 | 151 | - | - | 151 |
| | 4c.9 | County Fees | - | - | - | - | - | - | - | - | - |
| | 4c.10 | FEMA Fees | - | - | - | - | - | - | - | - | - |
| **4c Total** | **Undistributed Costs for Site Restoration** | | **7,789** | **132** | **-** | **602** | **1,278** | **9,800** | **-** | **-** | **9,800** |
| | | | | | | | | | | | |
| **Period 4 Total** | **SITE RESTORATION** | | **20,958** | **5,870** | **140** | **3,029** | **4,500** | **34,497** | **-** | **-** | **34,497** |
| | | | | | | | | | | | |
| | 5a.1 | Procure Loading & Transfer Equipment (included in Period 1) | - | - | - | - | - | - | - | - | - |
| | 5a.2 | Procedures & Dry Runs (included in Period 1) | - | - | - | - | - | - | - | - | - |
| | 5a.3 | Remove (64) Fuel Casks from ISFSI & Load DOE Transport | 5,120 | 1,280 | - | - | 960 | 7,360 | - | 7,360 | - |
| | 5a.4 | Spent Fuel Transportation & Disposal (by DOE) | - | - | - | - | - | - | - | - | - |
| | 5a.5 | | - | - | - | - | - | - | - | - | - |
| **5a Total** | **Dry Fuel Transfer to DOE during and after DECON** | | **5,120** | **1,280** | **-** | **-** | **960** | **7,360** | **-** | **7,360** | **-** |
| | | | | | | | | | | | |
| | 5b.1 | Remove GTCC Casks from ISFSI & Loadout | 480 | - | - | 120 | 180 | 780 | 780 | - | - |
| | 5b.2 | GTCC Transportation & Disposal | - | - | 16,448 | - | 2,467 | 18,915 | 18,915 | - | - |
| | 5b.3 | | - | - | - | - | - | - | - | - | - |
| **5b Total** | **GTCC Waste Disposition** | | **480** | **-** | **16,448** | **120** | **2,647** | **19,695** | **19,695** | **-** | **-** |
| | | | | | | | | | | | |
| | 5c.1 | Utility Staff | 9,318 | - | - | - | 1,398 | 10,716 | - | 10,716 | - |
| | 5c.2 | Security Guard Force | 33,695 | - | - | - | 5,054 | 38,749 | - | 38,749 | - |
| | 5c.3 | General Contractor Staff | - | - | - | - | - | - | - | - | - |
| | 5c.4 | Property Taxes | - | - | - | 906 | 136 | 1,042 | - | 1,042 | - |
| | 5c.5 | Insurance | - | - | - | 9,740 | 1,461 | 11,201 | - | 11,201 | - |
| | 5c.6 | NRC Inspection Fee | - | - | - | 2,224 | 334 | 2,558 | - | 2,558 | - |
| | 5c.7 | Licensing Fees | - | - | - | 3,440 | 516 | 3,956 | - | 3,956 | - |
| | 5c.8 | County Fees | - | - | - | - | - | - | - | - | - |
| | 5c.9 | FEMA Fees | - | - | - | - | - | - | - | - | - |
| | 5c.10 | ISFSI Maintenance | - | - | - | 1,593 | 239 | 1,832 | - | 1,832 | - |
| **5c Total** | **Undistributed Costs for Dry Fuel / GTCC Storage & Transfer** | | **43,013** | **-** | **-** | **17,903** | **9,137** | **70,054** | **-** | **70,054** | **-** |

Appendix C-1

## Florida Power and Light

## St. Lucie Unit 2

## Scenario 1 - Unit 1 SAFSTOR, DECON both following Unit 2 Shutdown

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Period 5 Total** | | **DRY FUEL / GTCC STORAGE & TRANSFER** | **48,613** | **1,280** | **16,448** | **18,023** | **12,745** | **97,109** | **19,695** | **77,414** | **-** |
| | 6a.1 | Preparation and NRC Review of License Termination Plan | 45 | - | - | 64 | 16 | 125 | - | 125 | - |
| **6a Total** | | **ISFSI D&D Planning & Preparations** | **45** | **-** | **-** | **64** | **16** | **125** | **-** | **125** | **-** |
| | 6b.1 | Clean Demolition of ISFSI | 1,316 | 638 | - | - | 293 | 2,248 | - | 2,248 | - |
| | 6b.2 | Demolition of ISFSI Support Structures | 240 | 94 | - | - | 50 | 384 | - | 384 | - |
| **6b Total** | | **ISFSI and Support Structure Clean Demolition** | **1,556** | **732** | **-** | **-** | **343** | **2,632** | **-** | **2,632** | **-** |
| | 6c.1 | Verification Surveys | 81 | 22 | - | - | 15 | 119 | - | 119 | - |
| | 6c.2 | Preparation of Final Report on Decommissioning and NRC Review | 45 | - | - | - | 7 | 52 | - | 52 | - |
| **6c Total** | | **ISFSI Final Status Surveys** | **126** | **22** | **-** | **-** | **22** | **170** | **-** | **170** | **-** |
| | 6d.1 | Utility Staff | 318 | - | - | - | 48 | 365 | - | 365 | - |
| | 6d.2 | Security Guard Force | 152 | - | - | - | 23 | 175 | - | 175 | - |
| | 6d.3 | General Contractor Staff | 1,999 | - | - | - | 300 | 2,299 | - | 2,299 | - |
| | 6d.4 | Property Taxes | - | - | - | 44 | 7 | 51 | - | 51 | - |
| | 6d.5 | Insurance | - | - | - | 25 | 4 | 29 | - | 29 | - |
| | 6d.6 | Energy | - | - | - | 36 | 5 | 42 | - | 42 | - |
| | 6d.7 | County Fees | - | - | - | - | - | - | - | - | - |
| | 6d.8 | FEMA Fees | - | - | - | - | - | - | - | - | - |
| **6d Total** | | **Undistributed Costs for ISFSI Decommissioning** | **2,469** | **-** | **-** | **106** | **386** | **2,960** | **-** | **2,960** | **-** |
| | | | | | | | | | | | |
| **Period 6 Total** | | **ISFSI DECOMMISSIONING** | **4,196** | **754** | **-** | **170** | **768** | **5,887** | **-** | **5,887** | **-** |
| | | | | | | | | | | | |
| **GRAND TOTAL** | | | **350,072** | **95,233** | **203,217** | **54,740** | **118,798** | **822,060** | **603,633** | **183,930** | **34,497** |

Appendix C-2

# Florida Power and Light
## St. Lucie Unit 1
## Scenario 2 - SAFSTOR

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **1a Total** | **Planning Prior to Shutdown (by Plant Operations)** | | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| | 1b.1 | Admin Activities in Preparation for SAFSTOR - Unit 1 | 2,397 | 74 | - | - | 371 | 2,841 | 2,841 | - | - |
| | 1b.2 | Prepare PSDAR and License Documents - Unit 1 | 418 | 13 | - | - | 65 | 495 | 495 | - | - |
| | 1b.3 | Engineering Activities in Preparation for SAFSTOR - Unit 1 | 2,356 | 73 | - | - | 364 | 2,794 | 2,794 | - | - |
| **1b Total** | **Unit 1 Post Shutdown Planning & Engineering** | | **5,171** | **160** | **-** | **-** | **800** | **6,130** | **6,130** | **-** | **-** |
| | 1c.1 | Defuel Reactor Unit 1 (by Plant Operations) | - | - | - | - | - | - | - | - | - |
| | 1c.2 | Fuel Sampling & Inspections (by Plant Operations) | - | - | - | - | - | - | - | - | - |
| | 1c.3 | Spent Fuel Pool System Modifications - Unit 1 | 10,303 | 1,818 | - | - | 1,818 | 13,939 | - | 13,939 | - |
| | 1c.4 | Implement Cold & Dark - Unit 1 | 3,508 | 630 | - | - | 621 | 4,759 | 4,759 | - | - |
| | 1c.5 | Flush and Drain Non-Essential Systems - Unit 1 | 515 | 13 | - | - | 79 | 607 | 607 | - | - |
| | 1c.6 | Perform Pre-SAFSTOR Baseline Radiation Survey - Unit 1 | 1,210 | 37 | - | - | 187 | 1,434 | 646 | 789 | - |
| **1c Total** | **Unit 1 Post Shutdown Deactivation & Modifications** | | **15,535** | **2,499** | **-** | **-** | **2,705** | **20,739** | **6,012** | **14,728** | **-** |
| | 1d.1 | Provide Transfer Casks (supplied by DOE) | - | - | - | - | - | - | - | - | - |
| | 1d.2 | Procure Spent Fuel Loading & Transfer Equipment | - | 2,184 | - | - | 328 | 2,512 | - | 2,512 | - |
| | 1d.3 | Procedures & Dry Runs | 500 | - | - | 250 | 113 | 863 | - | 863 | - |
| | 1d.4 | Remove (224) Fuel Assemblies from Pool & Load DOE Casks | 1,120 | 280 | - | - | 280 | 1,680 | - | 1,680 | - |
| | 1d.5 | Dry, Close & Inspect (7) DOE supplied Casks | 560 | 140 | - | - | 140 | 840 | - | 840 | - |
| | 1d.6 | Load Out (7) Casks to DOE Transport | 560 | 140 | - | - | 140 | 840 | - | 840 | - |
| | 1d.7 | Spent Fuel Transportation & Disposal (by DOE) | - | - | - | - | - | - | - | - | - |
| **1d Total** | **Unit 1 Wet Fuel Transfer to DOE prior to SAFSTOR** | | **2,740** | **2,744** | **-** | **250** | **1,000** | **6,734** | **-** | **6,734** | **-** |
| **1e Total** | **Unit 2 Post Shutdown Planning & Engineering** | | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| **1f Total** | **Unit 2 Shutdown Preparations & Deactivation** | | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| **1g Total** | **Unit 2 Wet Fuel Transfer to DOE prior to SAFSTOR** | | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| **1h Total** | **Unit 2 Wet Fuel Transfer to ISFSI prior to SAFSTOR** | | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| | 1i.1 | Utility Staff | 64,707 | - | - | - | 9,706 | 74,414 | 59,531 | 14,883 | - |
| | 1i.2 | Security Guard Force | 6,442 | - | - | - | 966 | 7,408 | 2,223 | 5,186 | - |
| | 1i.3 | General Contractor Staff | - | - | - | - | - | - | - | - | - |
| | 1i.4 | Property Taxes | - | - | - | 177 | 27 | 203 | 163 | 41 | - |
| | 1i.5 | Insurance | - | - | - | 6,848 | 1,027 | 7,875 | 6,300 | 1,575 | - |

Appendix C-2

# Florida Power and Light
## St. Lucie Unit 1
## Scenario 2 - SAFSTOR

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1i.6 | Corporate Support | 1,325 | - | - | - | 199 | 1,524 | 457 | 1,067 | - |
| | 1i.7 | Utility Staff HP Supplies | - | 883 | - | - | 132 | 1,016 | 305 | 711 | - |
| | 1i.8 | NRC Inspection Fee | - | - | - | 2,224 | 334 | 2,558 | 2,558 | - | - |
| | 1i.9 | Licensing Fees | - | - | - | 688 | 103 | 791 | 791 | - | - |
| | 1i.10 | Materials and Services | - | 1,945 | - | - | 292 | 2,237 | 671 | 1,566 | - |
| | 1i.11 | Energy | - | - | - | 1,097 | 165 | 1,262 | 1,010 | 252 | - |
| | 1i.12 | EPRI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 1i.13 | NEI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 1i.14 | County Fees | - | - | - | 2,049 | 307 | 2,356 | 1,885 | 471 | - |
| | 1i.15 | FEMA Fees | - | - | - | 1,079 | 162 | 1,241 | 993 | 248 | - |
| | 1i.16 | INPO Membership Fees | - | - | - | - | - | - | - | - | - |
| | 1i.17 | ISFSI Operating Costs | - | 67 | - | - | 10 | 77 | - | 77 | - |
| | 1i.18 | Spent Fuel Maintenance | 1,180 | 131 | - | - | 197 | 1,507 | - | 1,507 | - |
| **1i Total** | **Undistributed Costs for Shutdown & Transition** | | **73,654** | **3,026** | **-** | **14,162** | **13,626** | **104,468** | **76,885** | **27,583** | **-** |
| | | | | | | | | | | | |
| **Period 1 Total** | **SHUTDOWN & TRANSITION** | | **97,100** | **8,429** | **-** | **14,412** | **18,131** | **138,072** | **89,027** | **49,045** | **-** |
| | 2a.1 | Provide Transfer Casks (supplied by DOE) | - | - | - | - | - | - | - | - | - |
| | 2a.2 | Procure Spent Fuel Loading & Transfer Equipment | - | - | - | - | - | - | - | - | - |
| | 2a.3 | Procedures & Dry Runs | - | - | - - | | - | - | - | - | - |
| | 2a.4 | Remove (320) Fuel Assemblies from Pool & Load Casks | 1,600 | 400 | - | - | 400 | 2,400 | - | 2,400 | - |
| | 2a.5 | Dry, Close & Inspect (10) | 800 | 200 | - | - | 200 | 1,200 | - | 1,200 | - |
| | 2a.6 | Load Out (10) Casks to Transport | 800 | 200 | - | - | 200 | 1,200 | - | 1,200 | - |
| | 2a.7 | Spent Fuel Transportation & Disposal (by DOE) | - | - | - | - | - | - | - | - | - |
| **2a Total** | **Unit 1 Wet Fuel Transfer to DOE during SAFSTOR** | | **3,200** | **800** | **-** | **-** | **800** | **4,800** | **-** | **4,800** | **-** |
| | | | | | | | | | | | |
| | 2b.1 | Provide Transfer Casks (41) | - | 36,193 | - | - | 5,429 | 41,622 | - | 41,622 | - |
| | 2b.2 | Procure Spent Fuel Loading & Transfer Equipment | - | - | - | - | - | - | - | - | - |
| | 2b.3 | Procedures & Dry Runs | 335 | - | - | 168 | 75 | 578 | - | 578 | - |
| | 2b.4 | Remove (1312) Fuel Assemblies from Pool & Load Casks | 6,560 | 1,640 | - | - | 1,640 | 9,840 | - | 9,840 | - |
| | 2b.5 | Dry, Close & Inspect (41) | 3,280 | 820 | - | - | 820 | 4,920 | - | 4,920 | - |
| | 2b.6 | Load Out (41) Casks to Transport | 3,280 | 820 | - | - | 820 | 4,920 | - | 4,920 | - |
| | 2b.7 | Spent Fuel Transportation & Disposal (by DOE) | - | - | - | - | - | - | - | - | - |
| **2b Total** | **Unit 1 Wet Fuel Transfer to ISFSI during SAFSTOR** | | **13,455** | **39,473** | **-** | **168** | **8,784** | **61,880** | **-** | **61,880** | **-** |
| | | | | | | | | | | | |
| | 2c.1 | Utility Staff | 36,911 | - | - | - | 3,691 | 40,603 | 18,271 | 22,331 | - |
| | 2c.2 | Security Guard Force | 16,218 | - | - | - | 1,622 | 17,840 | - | 17,840 | - |
| | 2c.3 | General Contractor Staff | - | - | - | - | - | - | - | - | - |

Appendix C-2

# Florida Power and Light
## St. Lucie Unit 1
## Scenario 2 - SAFSTOR

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2c.4 | Property Taxes | - | - | - | 1,414 | 141 | 1,555 | 700 | 855 | - |
| | 2c.5 | Insurance | - | - | - | 31,505 | 3,151 | 34,656 | 15,595 | 19,061 | - |
| | 2c.6 | Corporate Support | 9,222 | - | - | - | 922 | 10,145 | 4,565 | 5,580 | - |
| | 2c.7 | Utility Staff HP Supplies | - | 2,795 | - | - | 280 | 3,075 | 1,384 | 1,691 | - |
| | 2c.8 | NRC Inspection Fee | - | - | - | 3,725 | 373 | 4,098 | 1,844 | 2,254 | - |
| | 2c.9 | Licensing Fees | - | - | - | 5,504 | 550 | 6,054 | 2,724 | 3,330 | - |
| | 2c.10 | County Fees | - | - | - | 3,586 | 359 | 3,944 | 1,775 | 2,169 | - |
| | 2c.11 | FEMA Fees | - | - | - | 1,888 | 189 | 2,077 | 935 | 1,142 | - |
| | 2c.12 | EPRI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 2c.13 | NEI Fees | - | - | - | - | - | - | - | - | - |
| | 2c.14 | INPO Membership Fees | - | - | - | - | - | - | - | - | - |
| | 2c.15 | Materials and Services | - | 5,560 | - | - | 556 | 6,116 | 2,752 | 3,364 | - |
| | 2c.16 | Roof Replacement | - | 42 | - | - | 4 | 46 | 21 | 25 | - |
| | 2c.17 | Energy | - | - | - | 2,944 | 294 | 3,239 | 1,457 | 1,781 | - |
| **2c Total** | **Unit 1 Dormancy during Dry Fuel Storage** | | **62,352** | **8,397** | **-** | **50,566** | **12,132** | **133,447** | **52,023** | **81,424** | **-** |
| | | | | | | | | | | | |
| **2d Total** | **Unit 2 Dormancy during Dry Fuel Storage** | | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| | 2e.1 | Utility Staff | 7,642 | - | - | - | 764 | 8,406 | 8,406 | - | - |
| | 2e.2 | Security Guard Force | 3,560 | - | - | - | 356 | 3,916 | 3,916 | - | - |
| | 2e.3 | General Contractor Staff | - | - | - | - | - | - | - | - | - |
| | 2e.4 | Property Taxes | - | - | - | 839 | 84 | 923 | 923 | - | - |
| | 2e.5 | Insurance | - | - | - | 8,790 | 879 | 9,669 | 9,669 | - | - |
| | 2e.6 | Corporate Support | 2,660 | - | - | - | 266 | 2,926 | 2,926 | - | - |
| | 2e.7 | Utility Staff HP Supplies | - | 974 | - | - | 97 | 1,071 | 1,071 | - | - |
| | 2e.8 | NRC Inspection Fee | - | - | - | 2,113 | 211 | 2,324 | 2,324 | - | - |
| | 2e.9 | Licensing Fees | - | - | - | 3,268 | 327 | 3,595 | 3,595 | - | - |
| | 2e.10 | County Fees | - | - | - | - | - | - | - | - | - |
| | 2e.11 | FEMA Fees | - | - | - | - | - | - | - | - | - |
| | 2e.12 | EPRI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 2e.13 | NEI Fees | - | - | - | - | - | - | - | - | - |
| | 2e.14 | INPO Membership Fees | - | - | - | - | - | - | - | - | - |
| | 2e.15 | Materials and Services | - | 2,309 | - | - | 231 | 2,540 | 2,540 | - | - |
| | 2e.16 | Roof Replacement | - | 17 | - | - | 2 | 19 | 19 | - | - |
| | 2e.17 | Energy | - | - | - | 1,102 | 110 | 1,212 | 1,212 | - | - |
| **2e Total** | **Dormancy only** | | **13,862** | **3,300** | **-** | **16,112** | **3,327** | **36,602** | **36,602** | **-** | **-** |
| | | | | | | | | | | | |
| **Period 2 Total** | **SAFSTOR** | | **92,869** | **51,970** | **-** | **66,846** | **25,043** | **236,728** | **88,625** | **148,103** | **-** |

Appendix C-2

# Florida Power and Light
## St. Lucie Unit 1
## Scenario 2 - SAFSTOR

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3a.1 | Decommissioning Planning and Design - Unit 1 | 1,493 | 45 | - | - | 231 | 1,769 | 1,769 | - | - |
| | 3a.2 | Prepare Integrated Work Sequence and Schedule - Unit 1 | 161 | 5 | - | - | 25 | 191 | 191 | - | - |
| | 3a.3 | Planning and Design of Site Characterization - Unit 1 | 1,878 | 53 | - | 105 | 306 | 2,343 | 2,343 | - | - |
| | 3a.4 | Prepare Decommissioning Activity Specifications - Unit 1 | 5,041 | 156 | - | - | 780 | 5,977 | 5,977 | - | - |
| | 3a.5 | Prepare Detailed Work Procedures - Unit 1 | 4,087 | 126 | - | - | 632 | 4,845 | 4,845 | - | - |
| | 3a.6 | Prepare License Termination Plan - Unit 1 | 965 | 15 | - | 667 | 247 | 1,894 | 1,894 | - | - |
| | 3a.7 | Design Containment and Misc System Modifications - Unit 1 | 183 | - | - | - | 27 | 210 | 210 | - | - |
| | 3a.8 | Purchase Dry Storage Modules for Unit 1 GTCC Waste | - | - | 7,062 | - | 1,059 | 8,121 | 8,121 | - | - |
| **3a Total** | **Decommissioning Planning** | | **13,808** | **401** | **7,062** | **772** | **3,306** | **25,350** | **25,350** | **-** | **-** |
| | 3b.1 | Mobilize Decommissioning General Contractor | - | - | - | 1,300 | 195 | 1,495 | 1,495 | - | - |
| | 3b.2 | Perform Asbestos Abatement of Pipe Insulation - Unit 1 | 3,371 | 104 | | - | 869 | 4,344 | 4,344 | - | - |
| | 3b.3 | Implement Temporary Power Upgrades - Unit 1 | 996 | 937 | - | - | 290 | 2,224 | 2,224 | - | - |
| | 3b.4 | Construct Misc Building Modifications, In-Plant Laydown Areas | 2,881 | 508 | - | - | 508 | 3,897 | 3,897 | - | - |
| | 3b.5 | Modify Containment Access - Unit 1 | 2,137 | 377 | - | - | 377 | 2,892 | 2,892 | - | - |
| | 3b.6 | Transportation Infrastructure Modifications | 89 | 447 | - | 2,089 | 394 | 3,019 | 3,019 | - | - |
| | 3b.7 | Procure Waste Handling & Processing Tents | - | - | - | 1,739 | 261 | 2,000 | 2,000 | - | - |
| **3b Total** | **Decommissioning Transition and Preparations** | | **9,475** | **2,374** | **-** | **5,127** | **2,894** | **19,870** | **19,870** | **-** | **-** |
| | 3c.1 | Design and Procure Special Equipment | - | 29,000 | - | - | 5,800 | 34,800 | 34,800 | - | - |
| | 3c.2 | Test Special Cutting and Handling Equipment and Train Operators | 2,263 | - | - | 70 | 467 | 2,800 | 2,800 | - | - |
| | 3c.3 | Finalize Internals and Vessel Segmentation Details - Unit 1 | 525 | - | - | - | 105 | 630 | 630 | - | - |
| | 3c.4 | Segment, Package and Ship Reactor Internals - Unit 1 | 5,672 | 2,100 | 8,974 | - | 3,349 | 20,094 | 20,094 | - | - |
| | 3c.5 | Segment, Package and Ship RPV - Unit 1 | 1,345 | 1,030 | - | - | 475 | 2,850 | 2,850 | - | - |
| **3c Total** | **Reactor Vessel Removal** | | **9,804** | **32,130** | **8,974** | **70** | **10,196** | **61,173** | **61,173** | **-** | **-** |
| | 3d.1 | Heavy Lift / Transfer Equipment | | 3,245 | - | - | 649 | 3,893 | 3,893 | - | - |
| | 3d.2 | Remove and Dispose of Steam Generators - Unit 1 | 1,368 | 163 | - | - | 306 | 1,836 | 1,836 | - | - |
| | 3d.3 | Remove and Dispose of Pressurizer - Unit 1 | 188 | 22 | - | - | 42 | 251 | 251 | - | - |
| | 3d.4 | Remove and Dispose of Reactor Coolant Pipe - Unit 1 | 506 | 35 | - | - | 108 | 649 | 649 | - | - |
| | 3d.5 | Remove and Dispose of Reactor Coolant Pumps - Unit 1 | 519 | 59 | - | - | 116 | 694 | 694 | - | - |
| | 3d.6 | Large Component Disposal | - | - | 15,209 | - | 3,042 | 18,251 | 18,251 | - | - |
| **3d Total** | **Large Component Removal** | | **2,581** | **3,523** | **15,209** | **-** | **4,263** | **25,575** | **25,575** | **-** | **-** |
| | 3e.1 | Remove and Dispose of Spent Fuel Storage Racks | 66 | 20 | - | - | 17 | 102 | 102 | - | - |
| | 3e.2 | Segment, Package and Dispose of Spent Fuel Pool Island Equipment | 207 | 20 | - | - | 45 | 272 | 272 | - | - |
| | 3e.3 | Decon/Surgical Removal Containment Building - Unit 1 | 1,066 | 130 | - | - | 239 | 1,435 | 1,435 | - | - |

**Appendix C-2**

## Florida Power and Light
## St. Lucie Unit 1
## Scenario 2 - SAFSTOR

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3e.4 | Decon/Surgical Removal Fuel Building | 542 | 21 | - | - | 112 | 675 | 675 | - | - |
| | 3e.5 | Decon/Surgical Remvoal Auxiliary Building Unit 1 | 3,017 | 287 | - | - | 661 | 3,965 | 3,965 | - | - |
| | 3e.6 | Oversize Debris / Containerized Debris Disposal | - | - | 3,885 | - | 777 | 4,661 | 4,661 | - | - |
| **3e Total** | **Plant Decontamination & Interior Rad Demolition** | | **4,897** | **477** | **3,885** | **-** | **1,852** | **11,110** | **11,110** | **-** | **-** |
| | 3f.1 | Demolish Fuel Building | 247 | 538 | - | - | 157 | 942 | 942 | - | - |
| | 3f.2 | Demolish Auxiliary Building | 1,552 | 4,131 | - | - | 1,137 | 6,820 | 6,820 | - | - |
| | 3f.3 | Demolish Unit 1 Containment Building | 1,940 | 6,120 | - | - | 1,612 | 9,673 | 9,673 | - | - |
| | 3f.4 | Contaminated Soil | 661 | 992 | 55,805 | - | 11,492 | 68,949 | 68,949 | - | - |
| | 3f.5 | Debris Disposal | - | - | 78,433 | - | 15,687 | 94,120 | 94,120 | - | - |
| **3f Total** | **Rad Building Demolition** | | **4,402** | **11,781** | **134,238** | **-** | **30,084** | **180,505** | **180,505** | **-** | **-** |
| | 3g.1 | Final Status Survey for Structures | 5,753 | 54 | - | 227 | 1,207 | 7,240 | 7,240 | - | - |
| | 3g.2 | Final Status Survey for Land Areas (inlcuded in structures) | - | - | - | - | - | - | - | - | - |
| **3g Total** | **License Termination Activities** | | **5,753** | **54** | **-** | **227** | **1,207** | **7,240** | **7,240** | **-** | **-** |
| | 3h.1 | Utility Staff | 31,375 | - | - | - | 4,706 | 36,081 | 36,081 | - | - |
| | 3h.2 | Security Guard Force | 1,937 | - | - | - | 291 | 2,228 | 2,228 | - | - |
| | 3h.3 | General Contractor Staff | 67,660 | - | - | - | 10,149 | 77,809 | 77,809 | - | - |
| | 3h.4 | Property Taxes | - | - | - | 247 | 37 | 284 | 284 | - | - |
| | 3h.5 | Insurance | - | - | - | 2,582 | 387 | 2,969 | 2,969 | - | - |
| | 3h.6 | Corporate Support | 4,813 | - | - | - | 722 | 5,535 | 5,535 | - | - |
| | 3h.7 | Utility Staff HP Supplies | - | 5,180 | - | - | 777 | 5,957 | 5,957 | - | - |
| | 3h.8 | NRC Inspection Fee | - | - | - | 667 | 100 | 767 | 767 | - | - |
| | 3h.9 | Licensing Fees | - | - | - | 1,032 | 155 | 1,187 | 1,187 | - | - |
| | 3h.10 | County Fees | - | - | - | - | - | - | - | - | - |
| | 3h.11 | FEMA Fees | - | - | - | - | - | - | - | - | - |
| | 3h.12 | Materials and Services | - | 2,043 | - | - | 306 | 2,349 | 2,349 | - | - |
| | 3h.13 | Energy | - | - | - | 3,319 | 498 | 3,817 | 3,817 | - | - |
| | 3h.14 | DGC HP Supplies | - | 5,132 | - | - | 770 | 5,902 | 5,902 | - | - |
| | 3h.15 | Florida LLRW Inspection Fee | - | - | - | 4,121 | 618 | 4,739 | 4,739 | - | - |
| | 3h.16 | EPRI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 3h.16 | NEI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 3h.17 | INPO Membership Fees | - | - | - | - | - | - | - | - | - |
| **3h Total** | **Undistributed Costs for Decommissioning & License Termination** | | **105,785** | **12,354** | **-** | **11,967** | **19,516** | **149,623** | **149,623** | **-** | **-** |
| **Period 3 Total** | **DECOMMISSIONING & LICENSE TERMINATION** | | **156,505** | **63,093** | **169,368** | **18,164** | **73,317** | **480,446** | **480,446** | **-** | **-** |

Appendix C-2

# Florida Power and Light
## St. Lucie Unit 1
## Scenario 2 - SAFSTOR

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4a.1 | Demo Turbine Pedastal and Turbine Deck | 3,466 | 1,377 | - | - | 726 | 5,569 | - | - | 5,569 |
| | 4a.2 | Demo Intake & CWS | 1,776 | 1,184 | - | - | 444 | 3,405 | - | - | 3,405 |
| | 4a.3 | Demo Tank Foundations | 11 | 229 | - | - | 36 | 276 | - | - | 276 |
| | 4a.4 | Demo Misc Site Structures | 1,393 | 1,147 | - | - | 381 | 2,921 | - | - | 2,921 |
| | 4a.5 | Security Improvements | 536 | 459 | - | - | 149 | 1,144 | - | - | 1,144 |
| | 4a.6 | Clean Concrete Processing | - | - | - | 1,677 | 252 | 1,928 | - | - | 1,928 |
| | 4a.7 | Demo Site Paving | 339 | 791 | - | - | 169 | 1,299 | - | - | 1,299 |
| | 4a.8 | Clean Debris Disposal / Recycle | - | - | 123 | - | 19 | 142 | - | - | 142 |
| **4a Total** | **Clean Building & Site Demolition** | | **7,520** | **5,187** | **123** | **1,677** | **2,176** | **16,683** | **-** | **-** | **16,683** |
| | 4b.1 | Procure Site Restoration Equipment | - | 735 | - | - | 110 | 846 | - | - | 846 |
| | 4b.2 | Finish Grading and Re-Vegetate Site | 690 | | - | - | 103 | 793 | - | - | 793 |
| **4b Total** | **Site Restoration** | | **690** | **735** | **-** | **-** | **214** | **1,639** | **-** | **-** | **1,639** |
| | 4c.1 | Utility Staff | 2,362 | - | - | - | 354 | 2,716 | - | - | 2,716 |
| | 4c.2 | Security Guard Force | 146 | - | - | - | 22 | 168 | - | - | 168 |
| | 4c.3 | General Contractor Staff | 5,093 | - | - | - | 764 | 5,857 | - | - | 5,857 |
| | 4c.4 | Property Taxes | - | - | - | 19 | 3 | 21 | - | - | 21 |
| | 4c.5 | Insurance | - | - | - | 194 | 29 | 223 | - | - | 223 |
| | 4c.6 | Corporate Support | 362 | - | - | - | 54 | 417 | - | - | 417 |
| | 4c.7 | Energy | - | - | - | 250 | 37 | 287 | - | - | 287 |
| | 4c.8 | Materials and Services | - | 154 | - | - | 23 | 177 | - | - | 177 |
| | 4c.9 | County Fees | - | - | - | - | - | - | - | - | - |
| | 4c.10 | FEMA Fees | - | - | - | - | - | - | - | - | - |
| **4c Total** | **Undistributed Costs for Site Restoration** | | **7,962** | **154** | **-** | **463** | **1,287** | **9,866** | **-** | **-** | **9,866** |
| **Period 4 Total** | **SITE RESTORATION** | | **16,172** | **6,076** | **123** | **2,140** | **3,677** | **28,188** | **-** | **-** | **28,188** |
| | 5a.1 | Procure Loading & Transfer Equipment (included in Period 1) | - | - | - | - | - | - | - | - | - |
| | 5a.2 | Procedures & Dry Runs (included in Period 1) | - | - | - | - | - | - | - | - | - |
| | 5a.3 | Remove (86) Fuel Casks from ISFSI & Load DOE Transport | 6,880 | 1,720 | - | - | 1,290 | 9,890 | - | 9,890 | - |
| | 5a.4 | Spent Fuel Transportation & Disposal (by DOE) | - | - | - | - | - | - | - | - | - |
| **5a Total** | **Dry Fuel Transfer to DOE during SAFSTOR** | | **6,880** | **1,720** | **-** | **-** | **1,290** | **9,890** | **-** | **9,890** | **-** |
| | 5b.1 | Remove GTCC Casks from ISFSI & Loadout | 480 | - | - | 120 | 180 | 780 | 780 | - | - |
| | 5b.2 | GTCC Transportation & Disposal | - | - | 16,448 | - | 2,467 | 18,915 | 18,915 | - | - |
| **5b Total** | **GTCC Waste Disposition** | | **480** | **-** | **16,448** | **120** | **2,647** | **19,695** | **19,695** | **-** | **-** |

Appendix C-2

## Florida Power and Light
## St. Lucie Unit 1
## Scenario 2 - SAFSTOR

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5c.1 | Utility Staff | 9,318 | - | - | - | 1,398 | 10,716 | - | 10,716 | - |
| | 5c.2 | Security Guard Force | 33,756 | - | - | - | 5,063 | 38,820 | - | 38,820 | - |
| | 5c.3 | General Contractor Staff | - | - | - | - | - | - | - | - | - |
| | 5c.4 | Property Taxes | - | - | - | - | - | - | - | - | - |
| | 5c.5 | Insurance | - | - | - | - | - | - | - | - | - |
| | 5c.6 | Corporate Support | - | - | - | - | - | - | - | - | - |
| | 5c.7 | Utility Staff HP Supplies | - | - | - | - | - | - | - | - | - |
| | 5c.8 | NRC Inspection Fee | - | - | - | - | - | - | - | - | - |
| | 5c.9 | Licensing Fees | - | - | - | - | - | - | - | - | - |
| | 5c.10 | County Fees | - | - | - | - | - | - | - | - | - |
| | 5c.11 | FEMA Fees | - | - | - | - | - | - | - | - | - |
| | 5c.12 | Energy | - | - | - | - | - | - | - | - | - |
| | 5c.13 | Materials and Services | - | - | - | - | - | - | - | - | - |
| | 5c.14 | ISFSI Operating Costs | - | - | - | 2,135 | 320 | 2,455 | - | 2,455 | - |
| **5c Total** | **Undistributed Costs for Dry Fuel / GTCC Storage & Transfer** | | **43,075** | **-** | **-** | **2,135** | **6,781** | **51,991** | **-** | **51,991** | **-** |
| | | | | | | | | | | | |
| **Period 5 Total** | **DRY FUEL / GTCC STORAGE & TRANSFER** | | **50,435** | **1,720** | **16,448** | **2,255** | **10,719** | **81,576** | **19,695** | **61,881** | **-** |
| | 6a.1 | Preparation and NRC Review of License Termination Plan | 67 | - | - | 96 | 24 | 188 | - | 188 | - |
| **6a Total** | **ISFSI D&D Planning & Preparations** | | **67** | **-** | **-** | **96** | **24** | **188** | **-** | **188** | **-** |
| | 6b.1 | Clean Demolition of ISFSI | 1,975 | 958 | - | - | 440 | 3,372 | - | 3,372 | - |
| | 6b.2 | Demolition of ISFSI Support Structures | 359 | 141 | - | - | 75 | 575 | - | 575 | - |
| **6b Total** | **ISFSI and Support Structure Clean Demolition** | | **2,334** | **1,099** | **-** | **-** | **515** | **3,947** | **-** | **3,947** | **-** |
| | 6c.1 | Verification Surveys | 122 | 33 | - | - | 23 | 178 | - | 178 | - |
| | 6c.2 | Preparation of Final Report on Decommissioning and NRC Review | 67 | - | - | - | 10 | 77 | - | 77 | - |
| **6c Total** | **ISFSI Final Status Surveys** | | **189** | **33** | **-** | **-** | **33** | **255** | **-** | **255** | **-** |
| | 6d.1 | Utility Staff | 318 | - | - | - | 48 | 365 | - | 365 | - |
| | 6d.2 | Security Guard Force | 152 | - | - | - | 23 | 175 | - | 175 | - |
| | 6d.3 | General Contractor Staff | 1,999 | - | - | - | 300 | 2,299 | - | 2,299 | - |
| | 6d.4 | Property Taxes | - | - | - | 44 | 7 | 51 | - | 51 | - |
| | 6d.5 | Insurance | - | - | - | 25 | 4 | 29 | - | 29 | - |
| | 6d.6 | Corporate Support | - | - | - | - | - | - | - | - | - |
| | 6d.7 | Utility Staff HP Supplies | - | - | - | - | - | - | - | - | - |
| | 6d.8 | Materials and Services | - | - | - | - | - | - | - | - | - |
| | 6d.9 | Energy | - | - | - | 36 | 5 | 42 | - | 42 | - |

Appendix C-2

## Florida Power and Light
## St. Lucie Unit 1
## Scenario 2 - SAFSTOR

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 6d.10 | NRC Inspection Fee | - | - | - | 56 | 8 | 64 | - | 64 | - |
| | 6d.11 | Licensing Fees | - | - | - | 86 | 13 | 99 | - | 99 | - |
| | 6d.12 | County Fees | - | - | - | - | - | - | - | - | - |
| | 6d.13 | FEMA Fees | - | - | - | - | - | - | - | - | - |
| **6d Total** | **Undistributed Costs for ISFSI Decommissioning** | | **2,469** | **-** | **-** | **247** | **407** | **3,123** | **-** | **3,123** | **-** |
| | | | | | | | | | | | |
| **Period 6 Total** | **ISFSI DECOMMISSIONING** | | **5,059** | **1,131** | **-** | **343** | **980** | **7,514** | **-** | **7,514** | **-** |
| | | | | | | | | | | | |
| **GRAND TOTAL** | | | **418,139** | **132,420** | **185,939** | **104,159** | **131,867** | **972,525** | **677,793** | **266,544** | **28,188** |

Appendix C-2

# Florida Power and Light
# St. Lucie Unit 2
# Scenario 2 - SAFSTOR

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **1a Total** | | **Planning Prior to Shutdown (by Plant Operations)** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| **1b Total** | | **Unit 1 Post Shutdown Planning & Engineering** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| **1c Total** | | **Unit 1 Post Shutdown Deactivation & Modifications** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| **1d Total** | | **Unit 1 Wet Fuel Transfer to DOE prior to SAFSTOR** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| | 1e.1 | Admin Activities in Preparation for Decommissioning - Unit 2 | 786 | 23 | - | - | 121 | 930 | 930 | - | - |
| | 1e.2 | Preparation of PSDAR and Licensing Documents - Unit 2 | 178 | 6 | - | - | 28 | 211 | 211 | - | - |
| | 1e.3 | Engineering Activities in Preparation for Decommissioning - Unit 2 | 1,008 | 31 | - | - | 156 | 1,196 | 1,196 | - | - |
| **1e Total** | | **Unit 2 Post Shutdown Planning & Engineering** | **1,972** | **60** | **-** | **-** | **305** | **2,337** | **2,337** | **-** | **-** |
| | 1f.1 | Defuel Reactor Unit 2 (by Plant Operations) | - | - | - | - | - | - | - | - | - |
| | 1f.2 | Fuel Sampling & Inspections (by Plant Operations) | - | - | - | - | - | - | - | - | - |
| | 1f.3 | Spent Fuel Pool System Modifications - Unit 2 | 6,868 | 1,212 | - | - | 1,212 | 9,292 | - | 9,292 | - |
| | 1f.4 | Implement Cold & Dark - Unit 2 | 3,508 | 630 | - | - | 621 | 4,759 | 4,759 | - | - |
| | 1f.5 | Perform Pre-SAFSTOR Baseline Radiation Survey - Unit 2 | 1,210 | 37 | - | - | 187 | 1,434 | 1,434 | - | - |
| **1f Total** | | **Unit 2 Shutdown Preparations & Deactivation** | **11,586** | **1,880** | **-** | **-** | **2,020** | **15,485** | **6,193** | **9,292** | **-** |
| | 1g.1 | Provide Transfer Casks (supplied by DOE) | - | - | - | - | - | - | - | - | - |
| | 1g.2 | Procure Spent Fuel Loading & Transfer Equipment | - | 1,463 | - | - | 219 | 1,683 | - | 1,683 | - |
| | 1g.3 | Procedures & Dry Runs | 335 | - | - | 168 | 75 | 578 | - | 578 | - |
| | 1g.4 | Remove (256) Fuel Assemblies from Pool & Load DOE Casks | 1,280 | 280 | - | - | 312 | 1,872 | - | 1,872 | - |
| | 1g.5 | Dry, Close & Inspect (8) DOE supplied Casks | 640 | 160 | - | - | 160 | 960 | - | 960 | - |
| | 1g.6 | Load Out (8) Casks to DOE Transport | 640 | 160 | - | - | 160 | 960 | - | 960 | - |
| | 1g.7 | Spent Fuel Transportation & Disposal (by DOE) | - | - | - | - | - | - | - | - | - |
| **1g Total** | | **Unit 2 Wet Fuel Transfer to DOE prior to SAFSTOR** | **2,895** | **2,063** | **-** | **168** | **927** | **6,053** | **-** | **6,053** | **-** |
| | 1h.1 | Provide Transfer Casks (21) | - | 18,538 | - | - | 2,781 | 21,318 | - | 21,318 | - |
| | 1h.2 | Procure Spent Fuel Loading & Transfer Equipment | - | - | - | - | - | - | - | - | - |
| | 1h.3 | Procedures & Dry Runs | 335 | - | - | 168 | 75 | 578 | - | 578 | - |
| | 1h.4 | Remove (672) Fuel Assemblies from Pool & Load Casks | 3,360 | 840 | - | - | 840 | 5,040 | - | 5,040 | - |
| | 1h.5 | Dry, Close & Inspect (21) | 1,680 | 420 | - | - | 420 | 2,520 | - | 2,520 | - |
| | 1h.6 | Load Out (21) Casks to Transport | 1,680 | 420 | - | - | 420 | 2,520 | - | 2,520 | - |
| | 1h.7 | Spent Fuel Transportation & Disposal (by DOE) | - | - | - | - | - | - | - | - | - |
| **1h Total** | | **Unit 2 Wet Fuel Transfer to ISFSI prior to SAFSTOR** | **7,055** | **20,218** | **-** | **168** | **4,536** | **31,976** | **-** | **31,976** | **-** |

Appendix C-2

# Florida Power and Light
## St. Lucie Unit 2
## Scenario 2 - SAFSTOR

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1i.1 | Utility Staff | 67,101 | - | - | - | 10,065 | 77,167 | 61,733 | 15,433 | - |
| | 1i.2 | Security Guard Force | 40,615 | - | - | - | 6,092 | 46,707 | 14,012 | 32,695 | - |
| | 1i.3 | General Contractor Staff | - | - | - | - | - | - | - | - | - |
| | 1i.4 | Property Taxes | - | - | - | 177 | 27 | 203 | 163 | 41 | - |
| | 1i.5 | Insurance | - | - | - | 6,848 | 1,027 | 7,875 | 6,300 | 1,575 | - |
| | 1i.6 | Corporate Support | 881 | - | - | - | 132 | 1,013 | 304 | 709 | - |
| | 1i.7 | Utility Staff HP Supplies | - | 403 | - | - | 61 | 464 | 139 | 325 | - |
| | 1i.8 | NRC Inspection Fee | - | - | - | 2,224 | 334 | 2,558 | 2,558 | - | - |
| | 1i.9 | Licensing Fees | - | - | - | 688 | 103 | 791 | 791 | - | - |
| | 1i.10 | Materials and Services | - | 719 | - | - | 108 | 827 | 248 | 579 | - |
| | 1i.11 | Energy | - | - | - | 730 | 109 | 839 | 671 | 168 | - |
| | 1i.12 | EPRI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 1i.13 | NEI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 1i.14 | County Fees | - | - | - | 2,049 | 307 | 2,356 | 1,885 | 471 | - |
| | 1i.15 | FEMA Fees | - | - | - | 1,079 | 162 | 1,241 | 993 | 248 | - |
| | 1i.16 | INPO Membership Fees | - | - | - | - | - | - | - | - | - |
| | 1i.17 | ISFSI Maintenance Cost | - | 67 | - | - | 10 | 77 | - | 77 | - |
| | 1i.18 | Spent Fuel Maintenance | 784 | 87 | - | - | 131 | 1,002 | - | 1,002 | - |
| **1i Total** | | **Undistributed Costs for Shutdown & Transition** | **109,382** | **1,277** | **-** | **13,794** | **18,668** | **143,120** | **89,797** | **53,323** | **-** |
| | | | | | | | | | | | |
| **Period 1 Total** | | **SHUTDOWN & TRANSITION** | **132,890** | **25,497** | **-** | **14,129** | **26,455** | **198,972** | **98,328** | **100,644** | **-** |
| | | | | | | | | | | | |
| **2a Total** | | **Unit 1 Wet Fuel Transfer to DOE during SAFSTOR** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| | | | | | | | | | | | |
| **2b Total** | | **Unit 1 Wet Fuel Transfer to ISFSI during SAFSTOR** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| | | | | | | | | | | | |
| **2c Total** | | **Unit 1 Dormancy during Dry Fuel Storage** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| | | | | | | | | | | | |
| | 2d.1 | Utility Staff | 10,614 | - | - | - | 1,061 | 11,675 | 5,254 | 6,421 | - |
| | 2d.2 | Security Guard Force | 4,945 | - | - | - | 494 | 5,439 | - | 5,439 | - |
| | 2d.3 | General Contractor Staff | - | - | - | - | - | - | - | - | - |
| | 2d.4 | Property Taxes | - | - | - | 1,105 | 110 | 1,215 | 547 | 668 | - |
| | 2d.5 | Insurance | - | - | - | 19,522 | 1,952 | 21,474 | 9,663 | 11,811 | - |
| | 2d.6 | Corporate Support | 9,222 | - | - | - | 922 | 10,145 | 4,565 | 5,580 | - |
| | 2d.7 | Utility Staff HP Supplies | - | 2,795 | - | - | 280 | 3,075 | 1,384 | 1,691 | - |
| | 2d.8 | NRC Inspection Fee | - | - | - | 2,780 | 278 | 3,058 | 1,376 | 1,682 | - |
| | 2d.9 | Licensing Fees | - | - | - | 4,300 | 430 | 4,730 | 2,129 | 2,602 | - |

Appendix C-2

# Florida Power and Light
## St. Lucie Unit 2
## Scenario 2 - SAFSTOR

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2d.10 | County Fees | - | - | - | - | - | - | - | - | - |
| | 2d.11 | FEMA Fees | - | - | - | - | - | - | - | - | - |
| | 2d.12 | EPRI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 2d.13 | NEI Fees | - | - | - | - | - | - | - | - | - |
| | 2d.14 | INPO Membership Fees | - | - | - | - | - | - | - | - | - |
| | 2d.15 | Materials and Services | - | 5,602 | - | - | 560 | 6,162 | 2,773 | 3,389 | - |
| | 2d.16 | Energy | - | - | - | 2,944 | 294 | 3,239 | 1,457 | 1,781 | - |
| **2d Total** | **Unit 2 Dormancy during Dry Fuel Storage** | | **24,781** | **8,397** | **-** | **30,650** | **6,383** | **70,211** | **29,147** | **41,064** | **-** |
| | 2e.1 | Utility Staff | 7,642 | - | - | - | 764 | 8,406 | 8,406 | - | - |
| | 2e.2 | Security Guard Force | 3,560 | - | - | - | 356 | 3,916 | 3,916 | - | - |
| | 2e.3 | General Contractor Staff | - | - | - | - | - | - | - | - | - |
| | 2e.4 | Property Taxes | - | - | - | 839 | 84 | 923 | 923 | - | - |
| | 2e.5 | Insurance | - | - | - | 8,790 | 879 | 9,669 | 9,669 | - | - |
| | 2e.6 | Corporate Support | 2,660 | - | - | - | 266 | 2,926 | 2,926 | - | - |
| | 2e.7 | Utility Staff HP Supplies | - | 974 | - | - | 97 | 1,071 | 1,071 | - | - |
| | 2e.8 | NRC Inspection Fee | - | - | - | 2,113 | 211 | 2,324 | 2,324 | - | - |
| | 2e.9 | Licensing Fees | - | - | - | 3,268 | 327 | 3,595 | 3,595 | - | - |
| | 2e.10 | County Fees | - | - | - | - | - | - | - | - | - |
| | 2e.11 | FEMA Fees | - | - | - | - | - | - | - | - | - |
| | 2e.12 | EPRI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 2e.13 | NEI Fees | - | - | - | - | - | - | - | - | - |
| | 2e.14 | INPO Membership Fees | - | - | - | - | - | - | - | - | - |
| | 2e.15 | Materials and Services | - | 2,326 | - | - | 233 | 2,559 | 2,559 | - | - |
| | 2e.16 | Energy | - | - | - | 1,102 | 110 | 1,212 | 1,212 | - | - |
| **2e Total** | **Dormancy only** | | **13,862** | **3,300** | **-** | **16,112** | **3,327** | **36,602** | **36,602** | **-** | **-** |
| **Period 2 Total** | **SAFSTOR** | | **38,642** | **11,698** | **-** | **46,763** | **9,710** | **106,813** | **65,749** | **41,064** | **-** |
| | 3a.1 | Decommissioning Planning and Design - Unit 2 | 1,493 | 45 | - | - | 231 | 1,769 | 1,769 | - | - |
| | 3a.2 | Planning and Design of Site Characterization - Unit 2 | 1,409 | 53 | - | 105 | 235 | 1,803 | 1,803 | - | - |
| | 3a.3 | Prepare Integrated Work Sequence and Schedule - Unit 2 | 161 | 5 | - | - | 25 | 191 | 191 | - | - |
| | 3a.4 | Prepare Decommissioning Activity Specifications - Unit 2 | 2,158 | 67 | - | - | 334 | 2,558 | 2,558 | - | - |
| | 3a.5 | Prepare License Termination Plan - Unit 2 | 965 | - | - | 667 | 245 | 1,877 | 1,877 | - | - |
| | 3a.6 | Prepare Detailed Work Procedures for Decommissioning - Unit 2 | 1,749 | 54 | - | - | 270 | 2,073 | 2,073 | - | - |
| | 3a.7 | Design Containment and Misc System Modifications - Unit 2 | 79 | - | - | - | 12 | 91 | 91 | - | - |
| | 3a.8 | Purchase Dry Storage Modules for Unit 2 GTCC Waste | - | - | 7,062 | - | 1,059 | 8,121 | 8,121 | - | - |
| **3a Total** | **Decommissioning Planning** | | **8,013** | **224** | **7,062** | **772** | **2,411** | **18,482** | **18,482** | **-** | **-** |

Appendix C-2

# Florida Power and Light
# St. Lucie Unit 2
# Scenario 2 - SAFSTOR

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3b.1 | Mobilize Decommissioning General Contractor | - | - | - | 1,300 | 195 | 1,495 | 1,495 | - | - |
| | 3b.2 | Perform Asbestos Abatement of Pipe Insulation - Unit 2 | - | - | - | - | - | - | - | - | - |
| | 3b.3 | Implement Temporary Power Upgrades - Unit 2 | 996 | 937 | - | - | 290 | 2,224 | 2,224 | - | - |
| | 3b.4 | Construct Misc Building Modifications, In-Plant Laydown Areas | 3,287 | 102 | - | - | 508 | 3,897 | 3,897 | - | - |
| | 3b.5 | Modify Containment Access - Unit 2 | 2,439 | 75 | - | - | 377 | 2,892 | 2,892 | - | - |
| | 3b.6 | Transportation Infrastructure Modifications | 60 | 298 | - | 1,393 | 263 | 2,013 | 2,013 | - | - |
| | 3b.7 | Procure Waste Handling & Processing Tents | - | - | - | 1,476 | 221 | 1,697 | 1,697 | - | - |
| **3b Total** | **Decommissioning Transition and Preparations** | | **6,782** | **1,412** | **-** | **4,168** | **1,854** | **14,217** | **14,217** | **-** | **-** |
| | 3c.1 | Design and Procure Special Equipment | - | 27,050 | - | - | 5,410 | 32,460 | 32,460 | - | - |
| | 3c.2 | Test Special Cutting and Handling Equipment and Train Operators | 1,924 | - | - | 70 | 399 | 2,392 | 2,392 | - | - |
| | 3c.3 | Finalize Internals and Vessel Segmentation Details - Unit 2 | 447 | - | - | - | 89 | 536 | 536 | - | - |
| | 3c.4 | Segment, Package and Ship Reactor Internals - Unit 2 | 5,672 | 2,100 | 8,999 | - | 3,354 | 20,125 | 20,125 | - | - |
| | 3c.5 | Segment, Package and Ship RPV - Unit 2 | 1,345 | 1,030 | - | - | 475 | 2,850 | 2,850 | - | - |
| **3c Total** | **Reactor Vessel Removal** | | **9,386** | **30,180** | **8,999** | **70** | **9,727** | **58,363** | **58,363** | **-** | **-** |
| | 3d.1 | Heavy Lift / Transfer Equipment | | 3,245 | - | - | 649 | 3,893 | 3,893 | - | - |
| | 3d.2 | Remove and Dispose of Steam Generators - Unit 2 | 1,368 | 163 | - | - | 306 | 1,836 | 1,836 | - | - |
| | 3d.3 | Remove and Dispose of Pressurizer - Unit 2 | 188 | 22 | - | - | 42 | 251 | 251 | - | - |
| | 3d.4 | Remove and Dispose of Reactor Coolant Pipe - Unit 2 | 506 | 35 | - | - | 108 | 649 | 649 | - | - |
| | 3d.5 | Remove and Dispose of Reactor Coolant Pumps - Unit 2 | 519 | 59 | - | - | 116 | 694 | 694 | - | - |
| | 3d.6 | Large Component Disposal | - | - | 15,091 | - | 3,018 | 18,109 | 18,109 | - | - |
| **3d Total** | **Large Component Removal** | | **2,581** | **3,523** | **15,091** | **-** | **4,239** | **25,433** | **25,433** | **-** | **-** |
| | 3e.1 | Remove and Dispose of Spent Fuel Storage Racks | 66 | 20 | - | - | 17 | 102 | 102 | - | - |
| | 3e.2 | Segment, Package and Dispose of Spent Fuel Pool Island Equipmen | 207 | 62 | - | - | 54 | 322 | 322 | - | - |
| | 3e.3 | Decon/Surgical Removal Containment Building - Unit 2 | 1,066 | 130 | - | - | 239 | 1,435 | 1,435 | - | - |
| | 3e.4 | Decon/Surgical Removal Fuel Building - Unit 2 | 542 | 21 | - | - | 112 | 675 | 675 | - | - |
| | 3e.5 | Decon/Surgical Remvoal Auxiliary Building Unit 2 | 3,017 | 287 | - | - | 661 | 3,965 | 3,965 | - | - |
| | 3e.6 | Oversized Debris / Containerized Debris Disposal | - | - | 3,885 | - | 777 | 4,661 | 4,661 | - | - |
| **3e Total** | **Plant Decontamination & Interior Rad Demolition** | | **4,897** | **519** | **3,885** | **-** | **1,860** | **11,161** | **11,161** | **-** | **-** |
| | 3f.1 | Demolish Fuel Building | 247 | 538 | - | - | 157 | 942 | 942 | - | - |
| | 3f.2 | Demolish Auxiliary Building | 1,552 | 4,131 | - | - | 1,137 | 6,820 | 6,820 | - | - |
| | 3f.3 | Demolish Unit 2 Containment Building | 1,940 | 6,120 | - | - | 1,612 | 9,673 | 9,673 | - | - |
| | 3f.4 | Contaminated Soil | 614 | 922 | 51,494 | - | 10,606 | 63,636 | 63,636 | - | - |
| | 3f.5 | Debris Disposal | - | - | 75,932 | - | 15,186 | 91,119 | 91,119 | - | - |

Appendix C-2

# Florida Power and Light
## St. Lucie Unit 2
## Scenario 2 - SAFSTOR

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **3f Total** | **Rad Building Demolition** | | **4,355** | **11,711** | **127,426** | **-** | **28,698** | **172,190** | **172,190** | **-** | **-** |
| | 3g.1 | Final Status Survey for Structures | 5,753 | 54 | - | 227 | 1,207 | 7,240 | 7,240 | - | - |
| | 3g.2 | Final Status Survey for Land Areas (inlcuded in structures) | - | - | - | - | - | - | - | - | - |
| **3g Total** | **License Termination Activities** | | **5,753** | **54** | **-** | **227** | **1,207** | **7,240** | **7,240** | **-** | **-** |
| | 3h.1 | Utility Staff | 31,375 | - | - | - | 4,706 | 36,081 | 36,081 | - | - |
| | 3h.2 | Security Guard Force | 1,937 | - | - | - | 291 | 2,228 | 2,228 | - | - |
| | 3h.3 | General Contractor Staff | 67,660 | - | - | - | 10,149 | 77,809 | 77,809 | - | - |
| | 3h.4 | Property Taxes | - | - | - | 247 | 37 | 284 | 284 | - | - |
| | 3h.5 | Insurance | - | - | - | 2,582 | 387 | 2,969 | 2,969 | - | - |
| | 3h.6 | Corporate Support | 4,541 | - | - | - | 681 | 5,222 | 5,222 | - | - |
| | 3h.7 | Utility Staff HP Supplies | - | 6,677 | - | - | 1,002 | 7,679 | 7,679 | - | - |
| | 3h.8 | NRC Inspection Fee | - | - | - | 667 | 100 | 767 | 767 | - | - |
| | 3h.9 | Licensing Fees | - | - | - | 1,032 | 155 | 1,187 | 1,187 | - | - |
| | 3h.10 | County Fees | - | - | - | - | - | - | - | - | - |
| | 3h.11 | FEMA Fees | - | - | - | - | - | - | - | - | - |
| | 3h.12 | Materials and Services | - | 1,880 | - | - | 282 | 2,162 | 2,162 | - | - |
| | 3h.13 | Energy | - | - | - | 3,507 | 526 | 4,033 | 4,033 | - | - |
| | 3h.14 | DGC HP Supplies | - | 5,132 | - | - | 770 | 5,902 | 5,902 | - | - |
| | 3h.15 | Florida LLRW Inspection Fee | - | - | - | 3,939 | 591 | 4,530 | 4,530 | - | - |
| | 3h.16 | EPRI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 3h.17 | NEI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 3h.18 | INPO Membership Fees | - | - | - | - | - | - | - | - | - |
| **3h Total** | **Undistributed Costs for Decommissioning & License Termination** | | **105,513** | **13,690** | **-** | **11,973** | **19,676** | **150,852** | **150,852** | **-** | **-** |
| | | | | | | | | | | | |
| **Period 3 Total** | **DECOMMISSIONING & LICENSE TERMINATION** | | **147,280** | **61,312** | **162,463** | **17,210** | **69,673** | **457,938** | **457,938** | **-** | **-** |
| | 4a.1 | Demo Turbine Pedastal and Turbine Deck | 3,454 | 1,377 | - | - | 725 | 5,555 | - | - | 5,555 |
| | 4a.2 | Demo Intake & CWS | 1,830 | 1,220 | - | - | 457 | 3,507 | - | - | 3,507 |
| | 4a.3 | Demo Primary Water Tank Foundation | 11 | 92 | - | - | 15 | 118 | - | - | 118 |
| | 4a.4 | Demo Misc Site Structures | 5,795 | 1,147 | - | - | 1,041 | 7,984 | - | - | 7,984 |
| | 4a.5 | Demo Security Improvements | 536 | 459 | - | - | 149 | 1,144 | - | - | 1,144 |
| | 4a.6 | Demo Steam Generator Blowdown Treatment | 585 | 138 | - | - | 108 | 831 | - | - | 831 |
| | 4a.7 | Clean Concrete Processing | - | - | - | 2,428 | 364 | 2,792 | - | - | 2,792 |
| | 4a.8 | Demo Site Paving | 339 | 791 | - | - | 169 | 1,299 | - | - | 1,299 |
| | 4a.9 | Clean Debris Disposal / Recycle | - | - | 136 | - | 20 | 156 | - | - | 156 |
| **4a Total** | **Clean Building & Site Demolition** | | **12,549** | **5,223** | **136** | **2,428** | **3,050** | **23,385** | **-** | **-** | **23,385** |

Appendix C-2

## Florida Power and Light
## St. Lucie Unit 2
## Scenario 2 - SAFSTOR

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4b.1 | Procure Site Restoration Equipment | - | 490 | - | - | 74 | 564 | - | - | 564 |
| | 4b.2 | Finish Grading and Re-Vegetate Site | 460 | 26 | - | - | 73 | 558 | - | - | 558 |
| **4b Total** | **Site Restoration** | | **460** | **516** | **-** | **-** | **146** | **1,122** | **-** | **-** | **1,122** |
| | 4c.1 | Utility Staff | 2,362 | - | - | - | 354 | 2,716 | - | - | 2,716 |
| | 4c.2 | Security Guard Force | 146 | - | - | - | 22 | 168 | - | - | 168 |
| | 4c.3 | General Contractor Staff | 5,093 | - | - | - | 764 | 5,857 | - | - | 5,857 |
| | 4c.4 | Property Taxes | - | - | - | 19 | 3 | 21 | - | - | 21 |
| | 4c.5 | Insurance | - | - | - | 194 | 29 | 223 | - | - | 223 |
| | 4c.6 | Corporate Support | - | - | - | - | - | - | - | - | - |
| | 4c.7 | Energy | - | - | - | 136 | 20 | 157 | - | - | 157 |
| | 4c.8 | Materials and Services | - | 230 | - | - | 34 | 264 | - | - | 264 |
| | 4c.9 | County Fees | - | - | - | - | - | - | - | - | - |
| | 4c.10 | FEMA Fees | - | - | - | - | - | - | - | - | - |
| **4c Total** | **Undistributed Costs for Site Restoration** | | **7,600** | **230** | **-** | **349** | **1,227** | **9,406** | **-** | **-** | **9,406** |
| **Period 4 Total** | **SITE RESTORATION** | | **20,609** | **5,968** | **136** | **2,777** | **4,423** | **33,913** | **-** | **-** | **33,913** |
| | 5a.1 | Procure Loading & Transfer Equipment (included in Period 1) | - | - | - | - | - | - | - | - | - |
| | 5a.2 | Procedures & Dry Runs (included in Period 1) | - | - | - | - | - | - | - | - | - |
| | 5a.3 | Remove (64) Fuel Casks from ISFSI & Load DOE Transport | 5,120 | 1,280 | - | - | 960 | 7,360 | - | 7,360 | - |
| | 5a.4 | Spent Fuel Transportation & Disposal (by DOE) | - | - | - | - | - | - | - | - | - |
| **5a Total** | **Dry Fuel Transfer to DOE during SAFSTOR** | | **5,120** | **1,280** | **-** | **-** | **960** | **7,360** | **-** | **7,360** | **-** |
| | 5b.1 | Remove GTCC Casks from ISFSI & Loadout | 480 | - | - | 120 | 180 | 780 | 780 | - | - |
| | 5b.2 | GTCC Transportation & Disposal | - | - | 16,448 | - | 2,467 | 18,915 | 18,915 | - | - |
| **5b Total** | **GTCC Waste Disposition** | | **480** | **-** | **16,448** | **120** | **2,647** | **19,695** | **19,695** | **-** | **-** |
| | 5c.1 | Utility Staff | 9,318 | - | - | - | 1,398 | 10,716 | - | 10,716 | - |
| | 5c.2 | Security Guard Force | 33,756 | - | - | - | 5,063 | 38,820 | - | 38,820 | - |
| | 5c.3 | General Contractor Staff | - | - | - | - | - | - | - | - | - |
| | 5c.4 | Property Taxes | - | - | - | - | - | - | - | - | - |
| | 5c.5 | Insurance | - | - | - | - | - | - | - | - | - |
| | 5c.6 | Corporate Support | - | - | - | - | - | - | - | - | - |
| | 5c.7 | Utility Staff HP Supplies | - | - | - | - | - | - | - | - | - |
| | 5c.8 | NRC Inspection Fee | - | - | - | - | - | - | - | - | - |
| | 5c.9 | Licensing Fees | - | - | - | - | - | - | - | - | - |

Appendix C-2

## Florida Power and Light
## St. Lucie Unit 2
## Scenario 2 - SAFSTOR

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5c.10 | County Fees | - | - | - | - | - | - | - | - | - |
| | 5c.11 | FEMA Fees | - | - | - | - | - | - | - | - | - |
| | 5c.12 | Energy | - | - | - | - | - | - | - | - | - |
| | 5c.13 | Materials and Services | - | - | - | - | - | - | - | - | - |
| | 5c.14 | ISFSI Operating Costs | - | - | - | 1,593 | 239 | 1,832 | - | 1,832 | - |
| **5c Total** | **Undistributed Costs for Dry Fuel / GTCC Storage & Transfer** | | **43,075** | **-** | **-** | **1,593** | **6,700** | **51,368** | **-** | **51,368** | **-** |
| | | | | | | | | | | | |
| **Period 5 Total** | **DRY FUEL / GTCC STORAGE & TRANSFER** | | **48,675** | **1,280** | **16,448** | **1,713** | **10,307** | **78,423** | **19,695** | **58,728** | **-** |
| | | | | | | | | | | | |
| | 6a.1 | Preparation and NRC Review of License Termination Plan | 45 | - | - | 64 | 16 | 125 | - | 125 | - |
| **6a Total** | **ISFSI D&D Planning & Preparations** | | **45** | **-** | **-** | **64** | **16** | **125** | **-** | **125** | **-** |
| | | | | | | | | | | | |
| | 6b.1 | Clean Demolition of ISFSI | 1,316 | 638 | - | - | 293 | 2,248 | - | 2,248 | - |
| | 6b.2 | Demolition of ISFSI Support Structures | 240 | 94 | - | - | 50 | 384 | - | 384 | - |
| **6b Total** | **ISFSI and Support Structure Clean Demolition** | | **1,556** | **732** | **-** | **-** | **343** | **2,632** | **-** | **2,632** | **-** |
| | | | | | | | | | | | |
| | 6c.1 | Verification Surveys | 81 | 22 | - | - | 15 | 119 | - | 119 | - |
| | 6c.2 | Preparation of Final Report on Decommissioning and NRC Review | 45 | - | - | - | 7 | 52 | - | 52 | - |
| **6c Total** | **ISFSI Final Status Surveys** | | **126** | **22** | **-** | **-** | **22** | **170** | **-** | **170** | **-** |
| | | | | | | | | | | | |
| | 6d.1 | Utility Staff | 318 | - | - | - | 48 | 365 | - | 365 | - |
| | 6d.2 | Security Guard Force | 152 | - | - | - | 23 | 175 | - | 175 | - |
| | 6d.3 | General Contractor Staff | 1,999 | - | - | - | 300 | 2,299 | - | 2,299 | - |
| | 6d.4 | Property Taxes | - | - | - | 44 | 7 | 51 | - | 51 | - |
| | 6d.5 | Insurance | - | - | - | 25 | 4 | 29 | - | 29 | - |
| | 6d.6 | Corporate Support | - | - | - | - | - | - | - | - | - |
| | 6d.7 | Utility Staff HP Supplies | - | - | - | - | - | - | - | - | - |
| | 6d.8 | Materials and Services | - | - | - | - | - | - | - | - | - |
| | 6d.9 | Energy | - | - | - | 36 | 5 | 42 | - | 42 | - |
| | 6d.10 | NRC Inspection Fee | - | - | - | 56 | 8 | 64 | - | 64 | - |
| | 6d.11 | Licensing Fees | - | - | - | 86 | 13 | 99 | - | 99 | - |
| | 6d.12 | County Fees | - | - | - | - | - | - | - | - | - |
| | 6d.13 | FEMA Fees | - | - | - | - | - | - | - | - | - |
| **6d Total** | **Undistributed Costs for ISFSI Decommissioning** | | **2,469** | **-** | **-** | **247** | **407** | **3,123** | **-** | **3,123** | **-** |
| | | | | | | | | | | | |
| **Period 6 Total** | **ISFSI DECOMMISSIONING** | | **4,196** | **754** | **-** | **311** | **789** | **6,050** | **-** | **6,050** | **-** |
| | | | | | | | | | | | |
| **GRAND TOTAL** | | | **392,291** | **106,510** | **179,047** | **82,903** | **121,358** | **882,108** | **641,710** | **206,485** | **33,913** |

**Appendix D-1**
**Florida Power and Light - St. Lucie Units 1 & 2**
**Scenario 1 - Unit 1 SAFSTOR, DECON both following Unit 2 Shutdown**

| **2020 Estimated Staff FTEs** | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 | 2051 | 2052 | 2053 | 2054 | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 / 2069 | 2070 | 2071 | 2072 | 2073 | 2074 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ◆ UNIT 1 SHUTDOWN | | | | | | | ◆ UNIT 2 SHUTDOWN | | | | | | | | | | ◆ DECOMMISSIONING & SITE RESTORATION COMPLETE | | | | | | | | | | | | | |
| | UNIT 1 ZIRC FIRE ENDS ◆ | | | | | | UNIT 2 ZIRC FIRE ENDS ◆ | | | | | ◆ UNIT 1 & 2 FUEL POOL EMPTY | | | | | | | | | | | | | | | | ◆ ISFSI EMPTY | | | |
| **Period 1 - Shutdown & Transition** | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 | 2051 | 2052 | 2053 | 2054 | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 / 2069 | 2070 | 2071 | 2072 | 2073 | 2074 |
| Administration | | 8 | 8 | 7 | 2 | | | | 12 | 12 | 7 | 4 | | | | - | - | - | | | | | | | | | | | | | |
| Engineering | | 40 | 40 | 20 | 12 | | | | 40 | 40 | 20 | 8 | | | | | | | | | | | | | | | | | | | |
| Health Physics/Rad Protection | | 30 | 30 | 24 | 6 | | | | 30 | 30 | 24 | 20 | | | | | | | | | | | | | | | | | | | |
| Management | | 5 | 5 | 5 | 2 | | | | 5 | 5 | 5 | 3 | | | | | | | | | | | | | | | | | | | |
| Maintenance & Operations | | 70 | 70 | 40 | 12 | | | | 70 | 60 | 40 | 20 | | | | | | | | | | | | | | | | | | | |
| Quality Assurance | | 3 | 3 | 2 | 2 | | | | 3 | 3 | 2 | 1 | | | | | | | | | | | | | | | | | | | |
| **Utility Staff** | - | **156** | **156** | **98** | **36** | - | - | - | **160** | **150** | **98** | **56** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| **General Contractor Staff** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

| **Period 2 - SAFSTOR** | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 | 2051 | 2052 | 2053 | 2054 | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 / 2069 | 2070 | 2071 | 2072 | 2073 | 2074 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Administration | | | | | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | | - | - | - | | | | | | | | | | | | | |
| Engineering | | | | | 3 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | | | | | | | | | | | | | | | | | | | |
| Health Physics/Rad Protection | | | | | 3 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | | | | | | | | | | | | | | | | | | | |
| Management | | | | | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | | | | | | | | | | | | | |
| Maintenance & Operations | | | | | 3 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | | | | | | | | | | | | | | | | | | | |
| Quality Assurance | | | | | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | | | | | | | | | | | | | |
| **Utility Staff** | - | - | - | - | **12** | **24** | **24** | **24** | **24** | **24** | **24** | **24** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| **General Contractor Staff** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

| **Period 3 & 4 - License Term & Site Restoration** | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 | 2051 | 2052 | 2053 | 2054 | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 / 2069 | 2070 | 2071 | 2072 | 2073 | 2074 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Administration | | | | | | | | | | | 4 | 4 | 10 | 12 | 12 | 12 | 12 | 7 | 2 | | | | | | | | | | | | |
| Engineering | | | | | | | | | | | 4 | 6 | 16 | 20 | 20 | 20 | 20 | 7 | 2 | | | | | | | | | | | | |
| Health Physics/Rad Protection | | | | | | | | | | | | 4 | 8 | 24 | 24 | 24 | 24 | 16 | 4 | | | | | | | | | | | | |
| Management | | | | | | | | | | | 1 | 1 | 4 | 5 | 5 | 4 | 4 | 4 | 2 | | | | | | | | | | | | |
| Maintenance & Operations | | | | | | | | | | | | | 10 | 24 | 24 | 20 | 20 | 8 | 2 | | | | | | | | | | | | |
| Quality Assurance | | | | | | | | | | | 1 | 1 | 2 | 3 | 3 | 2 | 2 | 2 | 1 | | | | | | | | | | | | |
| **Utility Staff** | - | - | - | - | - | - | - | - | - | - | **10** | **16** | **50** | **88** | **88** | **82** | **82** | **44** | **13** | - | - | - | - | - | - | - | - | - | - | - | - |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Project Management | | | | | | | | | | | 2 | 4 | 6 | 10 | 10 | 10 | 10 | 8 | 4 | | | | | | | | | | | | |
| Engineering | | | | | | | | | | | 4 | 6 | 6 | 12 | 12 | 10 | 10 | 7 | 2 | | | | | | | | | | | | |
| Health Physics/Rad Protection | | | | | | | | | | | | 4 | 8 | 16 | 16 | 16 | 16 | 12 | 6 | | | | | | | | | | | | |
| Administration | | | | | | | | | | | 2 | 3 | 6 | 12 | 12 | 12 | 12 | 8 | 4 | | | | | | | | | | | | |
| Maintenance & Operations | | | | | | | | | | | | | | - | - | - | - | - | - | | | | | | | | | | | | |
| Quality Assurance | | | | | | | | | | | 1 | 1 | 2 | 4 | 4 | 4 | 4 | 3 | 2 | | | | | | | | | | | | |
| Waste Management | | | | | | | | | | | | 1 | 2 | 12 | 12 | 12 | 12 | 12 | 4 | | | | | | | | | | | | |
| **General Contractor Staff** | - | - | - | - | - | - | - | - | - | - | **9** | **19** | **30** | **66** | **66** | **64** | **64** | **50** | **22** | - | - | - | - | - | - | - | - | - | - | - | - |

**Appendix D-1**
**Florida Power and Light - St. Lucie Units 1 & 2**
**Scenario 1 - Unit 1 SAFSTOR, DECON both following Unit 2 Shutdown**

| **2020 Estimated Staff FTEs** | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 | 2051 | 2052 | 2053 | 2054 | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 / 2069 | 2070 | 2071 | 2072 | 2073 | 2074 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ◆ UNIT 1 SHUTDOWN | | | | | | | ◆ UNIT 2 SHUTDOWN | | | | | | | | | | ◆ DECOMMISSIONING & SITE RESTORATION COMPLETE | | | | | | | | | | | | | |
| | UNIT 1 ZIRC FIRE ENDS ◆ | | | | | | UNIT 2 ZIRC FIRE ENDS ◆ | | | | | ◆ UNIT 1 & 2 FUEL POOL EMPTY | | | | | | | | | | | | | | | | ◆ ISFSI EMPTY | | | |
| **Period 5 - Dry Fuel / GTCC Storage & Transfer** | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 | 2051 | 2052 | 2053 | 2054 | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 / 2069 | 2070 | 2071 | 2072 | 2073 | 2074 |
| Administration | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Engineering | | | | | | | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| Health Physics/Rad Protection | | | | | | | | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| Management | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Maintenance & Operations | | | | | | | | | | | | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | | |
| Quality Assurance | | | | | | | | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| **Utility Staff** | - | - | - | - | - | - | - | - | - | - | - | **1** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **4** | - | - |
| **General Contractor Staff** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| **Period 6 - ISFSI Decommissioning** | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 | 2051 | 2052 | 2053 | 2054 | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 / 2069 | 2070 | 2071 | 2072 | 2073 | 2074 |
| Administration | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Engineering | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Health Physics/Rad Protection | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Management | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Maintenance & Operations | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Quality Assurance | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| **Utility Staff** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **4** | - |
| Project Management | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | |
| Engineering | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | |
| Health Physics/Rad Protection | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Administration | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Maintenance & Operations | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Quality Assurance | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | |
| Waste Management | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | |
| **General Contractor Staff** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **4** | **6** | - |

**Appendix D-2**
**Florida Power and Light - St. Lucie Units 1 & 2**
**Scenario 2 - SAFSTOR**

| 2020 Estimated Staff FTEs | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 | 2051 | 2052 | 2053 | 2054 | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 | 2061 | 2062 | 2063 | 2064 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ◆ UNIT 1 SHUTDOWN | | | | | | | ◆ UNIT 2 SHUTDOWN | | | | | | | | | | | | | | | | | | | | | |
| | | | ◆ UNIT 1 ZIRC FIRE ENDS | | | | ◆ UNIT 2 ZIRC FIRE ENDS | | | | | ◆ UNIT 1 & UNIT 2 FUEL POOL EMPTY | | | | | | | | | | | | | | | | | | | |
| **Period 1 - Shutdown & Transition** | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 | 2051 | 2052 | 2053 | 2054 | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 | 2061 | 2062 | 2063 | 2064 |
| Administration | | 8 | 8 | 7 | 2 | | | | 12 | 12 | 7 | 4 | | | | - | - | - | | | | | | | | | | | | |
| Engineering | | 40 | 40 | 20 | 12 | | | | 40 | 40 | 20 | 8 | | | | | | | | | | | | | | | | | | |
| Health Physics/Rad Protection | | 30 | 30 | 24 | 6 | | | | 30 | 30 | 24 | 20 | | | | | | | | | | | | | | | | | | |
| Management | | 5 | 5 | 5 | 2 | | | | 5 | 5 | 5 | 3 | | | | | | | | | | | | | | | | | | |
| Maintenance & Operations | | 70 | 70 | 40 | 12 | | | | 70 | 60 | 40 | 20 | | | | | | | | | | | | | | | | | | |
| Quality Assurance | | 3 | 3 | 2 | 2 | | | | 3 | 3 | 2 | 1 | | | | | | | | | | | | | | | | | | |
| **Utility Staff** | - | **156** | **156** | **98** | **36** | - | - | - | **160** | **150** | **98** | **56** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **General Contractor Staff** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Period 2 - SAFSTOR** | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 | 2051 | 2052 | 2053 | 2054 | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 | 2061 | 2062 | 2063 | 2064 |
| Administration | | | | | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Engineering | | | | | 3 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Health Physics/Rad Protection | | | | | 3 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Management | | | | | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | | | | | | | | | | | | |
| Maintenance & Operations | | | | | 3 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Quality Assurance | | | | | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | | | | | | | | | | | | |
| **Utility Staff** | - | - | - | - | **12** | **24** | **24** | **24** | **24** | **24** | **24** | **24** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **General Contractor Staff** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

| **Period 3 & 4 - License Term & Site Restoration** | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 | 2051 | 2052 | 2053 | 2054 | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 | 2061 | 2062 | 2063 | 2064 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Administration | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Engineering | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Health Physics/Rad Protection | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Management | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Maintenance & Operations | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Quality Assurance | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Utility Staff** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Project Management | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Engineering | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Health Physics/Rad Protection | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Administration | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Maintenance & Operations | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Quality Assurance | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Waste Management | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **General Contractor Staff** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

**Appendix D-2**
**Florida Power and Light - St. Lucie Units 1 &**
**Scenario 2 - SAFSTOR**

| **2020 Estimated Staff FTEs** | **2065** | **2066** | **2067** | **2068** | **2069** | **2070** | **2071** | **2072** | **2073** | **2074** | **2075 / 2084** | **2085** | **2086** | **2087** | **2088** | **2089** | **2090** | **2091** | **2092** | **2093** | **2094** | **2095** | **2096** | **2097** | **2098** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | DECOMMISSIONING & SITE RESTORATION COMPLETE ◆ | | | | | | | | | |
| | | | | | | | ◆ ISFSI EMPTY | | | | | | | | | | | | ISFSI DECOMMISSIONING COMPLETE ◆ | | | | | | |
| **Period 1 - Shutdown & Transition** | 2065 | 2066 | 2067 | 2068 | 2069 | 2070 | 2071 | 2072 | 2073 | 2074 | 2075 / 2084 | 2085 | 2086 | 2087 | 2088 | 2089 | 2090 | 2091 | 2092 | 2093 | 2094 | 2095 | 2096 | 2097 | 2098 |
| Administration | | | | | | | | | | | | | | | | | | | | | | | | | |
| Engineering | | | | | | | | | | | | | | | | | | | | | | | | | |
| Health Physics/Rad Protection | | | | | | | | | | | | | | | | | | | | | | | | | |
| Management | | | | | | | | | | | | | | | | | | | | | | | | | |
| Maintenance & Operations | | | | | | | | | | | | | | | | | | | | | | | | | |
| Quality Assurance | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Utility Staff** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| **General Contractor Staff** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Period 2 - SAFSTOR** | 2065 | 2066 | 2067 | 2068 | 2069 | 2070 | 2071 | 2072 | 2073 | 2074 | 2075 / 2084 | 2085 | 2086 | 2087 | 2088 | 2089 | 2090 | 2091 | 2092 | 2093 | 2094 | 2095 | 2096 | 2097 | 2098 |
| Administration | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | |
| Engineering | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | |
| Health Physics/Rad Protection | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | |
| Management | | | | | | | | | | | | | | | | | | | | | | | | | |
| Maintenance & Operations | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | | | | | | | | |
| Quality Assurance | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Utility Staff** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | - | - | - | - | - | - | - | - | - |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| **General Contractor Staff** | - | - | - | - | - | - | - | - | - | | | | | | - | - | - | - | - | - | - | - | - | - | - |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Period 3 & 4 - License Term & Site Restoration** | 2065 | 2066 | 2067 | 2068 | 2069 | 2070 | 2071 | 2072 | 2073 | 2074 | 2075 / 2084 | 2085 | 2086 | 2087 | 2088 | 2089 | 2090 | 2091 | 2092 | 2093 | 2094 | 2095 | 2096 | 2097 | 2098 |
| Administration | | | | | | | | | | | | | | | 4 | 4 | 10 | 12 | 12 | 12 | 12 | 7 | 2 | | |
| Engineering | | | | | | | | | | | | | | | 4 | 6 | 16 | 20 | 20 | 20 | 20 | 7 | 2 | | |
| Health Physics/Rad Protection | | | | | | | | | | | | | | | | 4 | 8 | 24 | 24 | 24 | 24 | 16 | 4 | | |
| Management | | | | | | | | | | | | | | | 1 | 1 | 4 | 5 | 5 | 4 | 4 | 4 | 2 | | |
| Maintenance & Operations | | | | | | | | | | | | | | | | | 10 | 24 | 24 | 20 | 20 | 8 | 2 | | |
| Quality Assurance | | | | | | | | | | | | | | | 1 | 1 | 2 | 3 | 3 | 2 | 2 | 2 | 1 | | |
| **Utility Staff** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **10** | **16** | **50** | **88** | **88** | **82** | **82** | **44** | **13** | - | - |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| Project Management | | | | | | | | | | | | | | | 2 | 4 | 6 | 10 | 10 | 10 | 10 | 8 | 4 | | |
| Engineering | | | | | | | | | | | | | | | 4 | 6 | 6 | 12 | 12 | 10 | 10 | 7 | 2 | | |
| Health Physics/Rad Protection | | | | | | | | | | | | | | | | 4 | 8 | 16 | 16 | 16 | 16 | 12 | 6 | | |
| Administration | | | | | | | | | | | | | | | 2 | 3 | 6 | 12 | 12 | 12 | 12 | 8 | 4 | | |
| Maintenance & Operations | | | | | | | | | | | | | | | | | | - | - | - | - | - | - | | |
| Quality Assurance | | | | | | | | | | | | | | | 1 | 1 | 2 | 4 | 4 | 4 | 4 | 3 | 2 | | |
| Waste Management | | | | | | | | | | | | | | | | 1 | 2 | 12 | 12 | 12 | 12 | 12 | 4 | | |
| **General Contractor Staff** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **9** | **19** | **30** | **66** | **66** | **64** | **64** | **50** | **22** | - | - |

**Appendix D-2**
**Florida Power and Light - St. Lucie Units 1 & 2**
**Scenario 2 - SAFSTOR**

| **2020 Estimated Staff FTEs** | **2035** | **2036** | **2037** | **2038** | **2039** | **2040** | **2041** | **2042** | **2043** | **2044** | **2045** | **2046** | **2047** | **2048** | **2049** | **2050** | **2051** | **2052** | **2053** | **2054** | **2055** | **2056** | **2057** | **2058** | **2059** | **2060** | **2061** | **2062** | **2063** | **2064** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ◆ UNIT 1 SHUTDOWN | | | | | | | ◆ UNIT 2 SHUTDOWN | | | | | | | | | | | | | | | | | | | | | |
| | | | ◆ UNIT 1 ZIRC FIRE ENDS | | | | UNIT 2 ZIRC FIRE ENDS ◆ | | | | | | ◆ UNIT 1 & UNIT 2 FUEL POOL EMPTY | | | | | | | | | | | | | | | | | |

| **Period 5 - Dry Fuel / GTCC Storage & Transfer** | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 | 2051 | 2052 | 2053 | 2054 | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 | 2061 | 2062 | 2063 | 2064 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Administration | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Engineering | | | | | | | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Health Physics/Rad Protection | | | | | | | | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Management | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Maintenance & Operations | | | | | | | | | | | | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Quality Assurance | | | | | | | | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| **Utility Staff** | - | - | - | - | - | - | - | - | - | - | - | **1** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **General Contractor Staff** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

| **Period 6 - ISFSI Decommissioning** | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 | 2051 | 2052 | 2053 | 2054 | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 | 2061 | 2062 | 2063 | 2064 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Administration | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Engineering | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Health Physics/Rad Protection | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Management | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Maintenance & Operations | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Quality Assurance | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Utility Staff** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Project Management | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Engineering | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Health Physics/Rad Protection | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Administration | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Maintenance & Operations | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Quality Assurance | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Waste Management | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **General Contractor Staff** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

**Appendix D-2**
**Florida Power and Light - St. Lucie Units 1 &**
**Scenario 2 - SAFSTOR**

| 2020 Estimated Staff FTEs | 2065 | 2066 | 2067 | 2068 | 2069 | 2070 | 2071 | 2072 | 2073 | 2074 | 2075 / 2084 | 2085 | 2086 | 2087 | 2088 | 2089 | 2090 | 2091 | 2092 | 2093 | 2094 | 2095 | 2096 | 2097 | 2098 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | DECOMMISSIONING & SITE RESTORATION COMPLETE ◆ | | | | | | | | | |
| | | | | | | | ◆ ISFSI EMPTY | | | | | | | | | | | | ISFSI DECOMMISSIONING COMPLETE ◆ | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Period 5 - Dry Fuel / GTCC Storage & Transfer** | 2065 | 2066 | 2067 | 2068 | 2069 | 2070 | 2071 | 2072 | 2073 | 2074 | 2075 / 2084 | 2085 | 2086 | 2087 | 2088 | 2089 | 2090 | 2091 | 2092 | 2093 | 2094 | 2095 | 2096 | 2097 | 2098 |
| Administration | | | | | | | | | | | | | | | | | | | | | | | | | |
| Engineering | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | |
| Health Physics/Rad Protection | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | |
| Management | | | | | | | | | | | | | | | | | | | | | | | | | |
| Maintenance & Operations | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | | | | | | | | | | | | | | | | | |
| Quality Assurance | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | |
| **Utility Staff** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **4** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| **General Contractor Staff** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Period 6 - ISFSI Decommissioning** | 2065 | 2066 | 2067 | 2068 | 2069 | 2070 | 2071 | 2072 | 2073 | 2074 | 2075 / 2084 | 2085 | 2086 | 2087 | 2088 | 2089 | 2090 | 2091 | 2092 | 2093 | 2094 | 2095 | 2096 | 2097 | 2098 |
| Administration | | | | | | | | | | | | | | | | | | | | | | | | | |
| Engineering | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Health Physics/Rad Protection | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Management | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Maintenance & Operations | | | | | | | | | | | | | | | | | | | | | | | | | |
| Quality Assurance | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| **Utility Staff** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **4** | **-** |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| Project Management | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | |
| Engineering | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | |
| Health Physics/Rad Protection | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Administration | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Maintenance & Operations | | | | | | | | | | | | | | | | | | | | | | | | | |
| Quality Assurance | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | |
| Waste Management | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | |
| **General Contractor Staff** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **4** | **6** | **-** |

## Appendix E-1 - Waste Disposal Summary
## St. Lucie Unit 1
## Scenario 1 - Unit 1 SAFSTOR, DECON both following Unit 2 Shutdown
**2020 Dollars**

| Facility | Waste Form | Waste Class | Waste Weight (LBs) | Waste Volume (CF) | Burial Volume (CF) | Packaging Cost | Transportation Cost | Base Burial Cost | Total Waste Cost |
|---|---|---|---|---|---|---|---|---|---|
| **BC Facility** | | | | | | | | | |
| WCS | Class BC | BC | 165,890 | 1,322 | 1,870 | $ 246,000 | $ 1,257,407 | $ 10,684,462 | $ 12,187,869 |
| | GTCC | GTCC | 265,013 | 1,171 | 2,886 | $ 7,062,000 | $ 1,879,885 | $ 14,568,239 | $ 23,510,125 |
| | | | **430,903** | **2,493** | **4,756** | **$ 7,308,000** | **$ 3,137,292** | **$ 25,252,702** | **$ 35,697,994** |
| **Bear Creek** | | | | | | | | | |
| | Containerized | A | 181,003 | 3,017 | 3,017 | $ - | $ 246,220 | $ 427,367 | $ 673,587 |
| | | | **181,003** | **3,017** | **3,017** | **$ -** | **$ 246,220** | **$ 427,367** | **$ 673,587** |
| **Energy*Solutions*** | | | | | | | | | |
| Clive | Debris | A | 104,609,142 | 1,267,102 | 1,267,493 | $ 2,233,230 | $ 13,930,009 | $ 83,922,232 | $ 100,085,471 |
| Clive | Debris, Oversized | A | 903,394 | 15,957 | 15,960 | $ 18,936 | $ 119,390 | $ 2,278,221 | $ 2,416,546 |
| Clive | Contaminated Soil | A | 104,669,850 | 1,045,756 | 1,046,699 | $ 2,205,996 | $ 13,755,932 | $ 39,843,000 | $ 55,804,928 |
| Clive | Containerized | A | 146,854 | 1,259 | 1,484 | $ 474,596 | $ 484,142 | $ 509,289 | $ 1,468,027 |
| Clive | Large Component | A | 2,272,329 | 28,397 | 28,397 | $ 2,148,897 | $ 1,446,394 | $ 11,018,549 | $ 14,613,841 |
| | | | **212,601,569** | **2,358,471** | **2,360,033** | **$ 7,081,655** | **$ 29,735,867** | **$ 137,571,291** | **$ 174,388,813** |
| **Other** | | | | | | | | | |
| Local Landfill | Clean/Exempt | F | 1,397,259 | 27,017 | 27,017 | $ - | $ 3,512 | $ 62,950 | $ 66,462 |
| Local Scrap Metal Recycler | Recycled Metals | F | 7,152,413 | 140,513 | 140,513 | $ - | $ 71,662 | $ - | $ 71,662 |
| On Site- Reuse | Clean/Reuse | F | 65,084,442 | 765,699 | 765,741 | $ - | $ - | $ - | $ - |
| | | | **73,634,115** | **933,229** | **933,271** | **$ -** | **$ 75,174** | **$ 62,950** | **$ 138,123** |
| **Grand Total** | | | **286,847,589** | **3,297,210** | **3,301,077** | **$ 14,389,655** | **$ 33,194,553** | **$ 163,314,310** | **$ 210,898,518** |

## Appendix E-1 - Waste Disposal Summary
## St. Lucie Unit 2
## Scenario 1 - Unit 1 SAFSTOR, DECON both following Unit 2 Shutdown
**2020 Dollars**

| Facility | Waste Form | Waste Class | Waste Weight (LBs) | Waste Volume (CF) | Burial Volume (CF) | Packaging Cost | Transportation Cost | Base Burial Cost | Total Waste Cost |
|---|---|---|---|---|---|---|---|---|---|
| **BC Facility** | | | | | | | | | |
| WCS | Class BC | BC | 190,782 | 1,321 | 1,870 | $ 228,000 | $ 1,203,662 | $ 10,109,820 | $ 11,541,482 |
| | GTCC | GTCC | 567,289 | 1,171 | 2,886 | $ 7,062,000 | $ 1,879,885 | $ 14,568,239 | $ 23,510,125 |
| | | | **758,071** | **2,492** | **4,756** | **$ 7,290,000** | **$ 3,083,547** | **$ 24,678,060** | **$ 35,051,607** |
| **Bear Creek** | | | | | | | | | |
| | Containerized | A | 142,652 | 3,463 | 3,463 | $ - | $ 274,630 | $ 476,679 | $ 751,309 |
| | | | **142,652** | **3,463** | **3,463** | **$ -** | **$ 274,630** | **$ 476,679** | **$ 751,309** |
| **Energy*Solutions*** | | | | | | | | | |
| Clive | Debris | A | 105,314,211 | 1,271,830 | 1,272,268 | $ 2,229,666 | $ 13,905,498 | $ 81,266,248 | $ 97,401,411 |
| Clive | Debris, Oversized | A | 903,408 | 16,307 | 16,310 | $ 18,936 | $ 119,390 | $ 2,278,221 | $ 2,416,546 |
| Clive | Contaminated Soil | A | 96,653,565 | 965,666 | 966,536 | $ 2,035,576 | $ 12,693,242 | $ 36,765,000 | $ 51,493,817 |
| Clive | Containerized | A | 148,494 | 1,273 | 1,484 | $ 474,596 | $ 484,142 | $ 509,289 | $ 1,468,027 |
| Clive | Large Component | A | 2,265,895 | 27,920 | 27,920 | $ 2,064,524 | $ 1,411,916 | $ 11,018,549 | $ 14,494,989 |
| | | | **205,285,573** | **2,282,996** | **2,284,518** | **$ 6,823,298** | **$ 28,614,187** | **$ 131,837,307** | **$ 167,274,792** |
| **Other** | | | | | | | | | |
| Local Landfill | Clean/Exempt | F | 1,397,259 | 27,017 | 23,300 | $ - | $ 3,029 | $ 54,289 | $ 57,318 |
| Local Scrap Metal Recycler | Recycled Metals | F | 7,854,582 | 160,773 | 161,352 | $ - | $ 82,290 | $ - | $ 82,290 |
| On Site- Reuse | Clean/Reuse | F | 64,403,676 | 758,862 | 757,694 | $ - | $ - | $ - | $ - |
| | | | **73,655,517** | **946,652** | **942,346** | **$ -** | **$ 85,319** | **$ 54,289** | **$ 139,608** |
| **Grand Total** | | | **279,841,813** | **3,235,604** | **3,235,083** | **14,113,298** | **32,057,683** | **157,046,335** | **203,217,315** |

## Appendix E-2 - Waste Disposal Summary
## St. Lucie Unit 1
## Scenario 2 - SAFSTOR
**2020 Dollars**

| Facility | Waste Form | Waste Class | Waste Weight (LBs) | Waste Volume (CF) | Burial Volume (CF) | Packaging Cost | Transportation Cost | Base Burial Cost | Total Waste Cost |
|---|---|---|---|---|---|---|---|---|---|
| **BC Facility** | | | | | | | | | |
| WCS | Class BC | BC | 114,109 | 1,327 | 1,144 | $ 132,000 | $ 969,313 | $ 7,328,167 | $ 8,429,480 |
| | GTCC | GTCC | 567,289 | 1,171 | 2,886 | $ 7,062,000 | $ 1,879,885 | $ 14,568,239 | $ 23,510,125 |
| | | | **681,398** | **2,498** | **4,030** | **$ 7,194,000** | **$ 2,849,198** | **$ 21,896,406** | **$ 31,939,604** |
| **Bear Creek** | | | | | | | | | |
| | Processed Waste | A | 149,533 | 2,492 | 2,492 | $ - | $ 198,870 | $ 345,181 | $ 544,051 |
| | | | **149,533** | **2,492** | **2,492** | **$ -** | **$ 198,870** | **$ 345,181** | **$ 544,051** |
| **Energy*Solutions*** | | | | | | | | | |
| Clive | Debris | A | 80,680,299 | 987,767 | 988,117 | $ 1,726,703 | $ 10,771,458 | $ 65,935,231 | $ 78,433,392 |
| Clive | Debris, Oversized | A | 870,347 | 15,670 | 15,673 | $ 18,936 | $ 119,390 | $ 2,278,221 | $ 2,416,546 |
| Clive | Contaminated Soil | A | 104,669,850 | 1,077,186 | 1,078,157 | $ 2,205,996 | $ 13,755,932 | $ 39,843,000 | $ 55,804,928 |
| Clive | Containerized | A | 145,628 | 1,248 | 1,460 | $ 474,596 | $ 484,142 | $ 509,289 | $ 1,468,027 |
| Clive | Large Component | A | 2,234,271 | 27,443 | 27,443 | $ 2,145,359 | $ 1,444,949 | $ 11,619,105 | $ 15,209,413 |
| | | | **188,600,395** | **2,109,314** | **2,110,849** | **$ 6,571,590** | **$ 26,575,870** | **$ 120,184,847** | **$ 153,332,307** |
| **Other** | | | | | | | | | |
| Local Landfill | Clean/Exempt | F | 1,424,276 | 40,760 | 23,767 | $ - | $ 3,090 | $ 55,376 | $ 58,466 |
| Local Scrap Metal Recycler | Recycled Metals | F | 6,432,014 | 127,037 | 127,332 | $ - | $ 64,939 | $ - | $ 64,939 |
| On Site- Reuse | Clean/Reuse | F | 99,479,373 | 1,159,586 | 1,170,635 | $ - | $ - | $ - | $ - |
| | | | **107,335,663** | **1,327,383** | **1,321,734** | **$ -** | **$ 68,029** | **$ 55,376** | **$ 123,405** |
| **Grand Total** | | | **296,766,989** | **3,441,687** | **3,439,105** | **$ 13,765,590** | **$ 29,691,967** | **$ 142,481,811** | **$ 185,939,368** |

## Appendix E-2 - Waste Disposal Summary
## St. Lucie Unit 2
## Scenario 2 - SAFSTOR
**2020 Dollars**

| Facility | Waste Form | Waste Class | Waste Weight (LBs) | Waste Volume (CF) | Burial Volume (CF) | Packaging Cost | Transportation Cost | Base Burial Cost | Total Waste Cost |
|---|---|---|---|---|---|---|---|---|---|
| **BC Facility** | | | | | | | | | |
| WCS | Class BC | BC | 114,109 | 1,327 | 1,144 | $ 132,000 | $ 969,313 | $ 7,328,167 | $ 8,429,480 |
| | GTCC | GTCC | 567,289 | 1,171 | 2,886 | $ 7,062,000 | $ 1,879,885 | $ 14,568,239 | $ 23,510,125 |
| | | | **681,398** | **2,498** | **4,030** | **$ 7,194,000** | **$ 2,849,198** | **$ 21,896,406** | **$ 31,939,604** |
| **Bear Creek** | | | | | | | | | |
| | Processed Waste | A | 151,370 | 2,523 | 2,523 | $ - | $ 208,340 | $ 361,619 | $ 569,959 |
| | | | **151,370** | **2,523** | **2,523** | **$ -** | **$ 208,340** | **$ 361,619** | **$ 569,959** |
| **Energy*Solutions*** | | | | | | | | | |
| Clive | Debris | A | 81,284,401 | 989,469 | 989,859 | $ 1,723,139 | $ 10,747,603 | $ 63,461,730 | $ 75,932,472 |
| Clive | Debris, Oversized | A | 884,519 | 15,900 | 15,903 | $ 18,936 | $ 119,390 | $ 2,278,221 | $ 2,416,546 |
| Clive | Contaminated Soil | A | 96,653,565 | 982,107 | 982,991 | $ 2,035,576 | $ 12,693,242 | $ 36,765,000 | $ 51,493,817 |
| Clive | Containerized | A | 145,628 | 1,248 | 1,460 | $ 474,596 | $ 484,142 | $ 509,289 | $ 1,468,027 |
| Clive | Large Component | A | 2,208,197 | 27,381 | 27,381 | $ 2,060,987 | $ 1,410,470 | $ 11,619,105 | $ 15,090,562 |
| | | | **181,176,310** | **2,016,104** | **2,017,595** | **$ 6,313,233** | **$ 25,454,847** | **$ 114,633,345** | **$ 146,401,425** |
| **Other** | | | | | | | | | |
| Local Landfill | Clean/Exempt | F | 1,397,259 | 27,017 | 23,300 | $ - | $ 3,029 | $ 54,289 | $ 57,318 |
| Local Scrap Metal Recycler | Recycled Metals | F | 7,416,077 | 152,711 | 153,576 | $ - | $ 78,324 | $ - | $ 78,324 |
| On Site- Reuse | Clean/Reuse | F | 99,321,815 | 1,157,733 | 1,168,518 | $ - | $ - | $ - | $ - |
| | | | **108,135,151** | **1,337,461** | **1,345,394** | **$ -** | **$ 81,353** | **$ 54,289** | **$ 135,642** |
| **Grand Total** | | | **290,144,229** | **3,358,586** | **3,369,541** | **13,507,233** | **$ 28,593,738** | **$ 136,945,659** | **$ 179,046,630** |

**Appendix F-1**

**Florida Power and Light - St. Lucie Units 1 & 2**

**SCENARIO 1 - Unit 1 SAFSTOR, DECON both following Unit 2 Shutdown**

**Estimated Annual Spending**

(thousands of 2020 dollars)

| Year | License Termination | Spent Fuel | Site Restoration | Total |
|---|---|---|---|---|
| 2033 | - | - | - | - |
| 2034 | - | - | - | - |
| 2035 | - | - | - | - |
| 2036 | 23,572 | 15,376 | - | 38,948 |
| 2037 | 27,199 | 14,821 | - | 42,020 |
| 2038 | 19,509 | 10,662 | - | 30,171 |
| 2039 | 17,125 | 8,628 | - | 25,754 |
| 2040 | 3,311 | 6,395 | - | 9,706 |
| 2041 | 3,311 | 6,395 | - | 9,706 |
| 2042 | 3,311 | 6,395 | - | 9,706 |
| 2043 | 22,515 | 23,378 | - | 45,893 |
| 2044 | 34,118 | 29,344 | - | 63,462 |
| 2045 | 50,004 | 66,937 | - | 116,941 |
| 2046 | 66,896 | 68,431 | - | 135,327 |
| 2047 | 130,129 | 6,292 | 6,375 | 142,796 |
| 2048 | 146,732 | 6,292 | 17,987 | 171,011 |
| 2049 | 167,580 | 6,292 | 21,713 | 195,586 |
| 2050 | 204,520 | 6,292 | 9,623 | 220,435 |
| 2051 | 191,785 | 6,292 | 3,813 | 201,890 |
| 2052 | 103,733 | 6,292 | 3,338 | 113,363 |
| 2053 | - | 6,292 | 561 | 6,854 |
| 2054 | - | 6,292 | - | 6,292 |
| 2055 | - | 6,292 | - | 6,292 |
| 2056 | - | 6,292 | - | 6,292 |
| 2057 | - | 6,292 | - | 6,292 |
| 2058 | - | 6,292 | - | 6,292 |
| 2059 | - | 6,292 | - | 6,292 |
| 2060 | - | 6,292 | - | 6,292 |
| 2061 | - | 6,292 | - | 6,292 |
| 2062 | - | 6,292 | - | 6,292 |
| 2063 | - | 6,292 | - | 6,292 |
| 2064 | - | 6,292 | - | 6,292 |
| 2065 | - | 6,292 | - | 6,292 |
| 2066 | - | 6,292 | - | 6,292 |
| 2067 | - | 6,292 | - | 6,292 |
| 2068 | - | 6,292 | - | 6,292 |
| 2069 | - | 6,292 | - | 6,292 |
| 2070 | 19,695 | 6,292 | - | 25,987 |
| 2071 | 19,695 | 6,292 | - | 25,987 |
| 2072 | - | 4,754 | - | 4,754 |
| 2073 | - | 8,485 | - | 8,485 |
| 2074 | - | - | - | - |
| Total | 1,254,740 | 427,313 | 63,409 | 1,745,462 |

**Appendix F-1**

**Florida Power and Light - St. Lucie Unit 1**

**SCENARIO 1 - Unit 1 SAFSTOR, DECON both following Unit 2 Shutdown**

**Estimated Annual Spending**

(thousands of 2020 dollars)

| Year | License Termination | Spent Fuel | Site Restoration | Total |
|---|---|---|---|---|
| 2033 | - | - | - | - |
| 2034 | - | - | - | - |
| 2035 | - | - | - | - |
| 2036 | 23,572 | 15,376 | - | 38,948 |
| 2037 | 27,199 | 14,821 | - | 42,020 |
| 2038 | 19,509 | 10,662 | - | 30,171 |
| 2039 | 17,125 | 8,628 | - | 25,754 |
| 2040 | 3,311 | 6,395 | - | 9,706 |
| 2041 | 3,311 | 6,395 | - | 9,706 |
| 2042 | 3,311 | 6,395 | - | 9,706 |
| 2043 | 3,311 | 6,395 | - | 9,706 |
| 2044 | 3,311 | 6,395 | - | 9,706 |
| 2045 | 24,337 | 31,395 | - | 55,732 |
| 2046 | 28,089 | 43,275 | - | 71,364 |
| 2047 | 72,071 | 3,196 | 2,715 | 77,982 |
| 2048 | 77,559 | 3,196 | 7,868 | 88,623 |
| 2049 | 85,642 | 3,196 | 10,435 | 99,273 |
| 2050 | 112,471 | 3,196 | 3,659 | 119,326 |
| 2051 | 79,884 | 3,196 | 1,972 | 85,052 |
| 2052 | 47,397 | 3,196 | 1,928 | 52,521 |
| 2053 | - | 3,196 | 335 | 3,531 |
| 2054 | - | 3,196 | - | 3,196 |
| 2055 | - | 3,196 | - | 3,196 |
| 2056 | - | 3,196 | - | 3,196 |
| 2057 | - | 3,196 | - | 3,196 |
| 2058 | - | 3,196 | - | 3,196 |
| 2059 | - | 3,196 | - | 3,196 |
| 2060 | - | 3,196 | - | 3,196 |
| 2061 | - | 3,196 | - | 3,196 |
| 2062 | - | 3,196 | - | 3,196 |
| 2063 | - | 3,196 | - | 3,196 |
| 2064 | - | 3,196 | - | 3,196 |
| 2065 | - | 3,196 | - | 3,196 |
| 2066 | - | 3,196 | - | 3,196 |
| 2067 | - | 3,196 | - | 3,196 |
| 2068 | - | 3,196 | - | 3,196 |
| 2069 | - | 3,196 | - | 3,196 |
| 2070 | 9,848 | 3,196 | - | 13,043 |
| 2071 | 9,848 | 3,196 | - | 13,043 |
| 2072 | - | 1,669 | - | 1,669 |
| 2073 | - | 5,683 | - | 5,683 |
| 2074 | - | - | - | - |
| Total | 651,106 | 243,383 | 28,912 | 923,401 |

**Appendix F-1**

**Florida Power and Light - St. Lucie Unit 2**

**SCENARIO 1 - Unit 1 SAFSTOR, DECON both following Unit 2 Shutdown**

**Estimated Annual Spending**

(thousands of 2020 dollars)

| Year | License Termination | Spent Fuel | Site Restoration | Total |
|---|---|---|---|---|
| 2033 | - | - | - | - |
| 2034 | - | - | - | - |
| 2035 | - | - | - | - |
| 2036 | - | - | - | - |
| 2037 | - | - | - | - |
| 2038 | - | - | - | - |
| 2039 | - | - | - | - |
| 2040 | - | - | - | - |
| 2041 | - | - | - | - |
| 2042 | - | - | - | - |
| 2043 | 19,204 | 16,983 | - | 36,186 |
| 2044 | 30,806 | 22,949 | - | 53,755 |
| 2045 | 25,667 | 35,542 | - | 61,209 |
| 2046 | 38,808 | 25,156 | - | 63,964 |
| 2047 | 58,057 | 3,096 | 3,660 | 64,814 |
| 2048 | 69,173 | 3,096 | 10,119 | 82,388 |
| 2049 | 81,938 | 3,096 | 11,278 | 96,313 |
| 2050 | 92,048 | 3,096 | 5,964 | 101,109 |
| 2051 | 111,901 | 3,096 | 1,840 | 116,838 |
| 2052 | 56,336 | 3,096 | 1,410 | 60,842 |
| 2053 | - | 3,096 | 226 | 3,323 |
| 2054 | - | 3,096 | - | 3,096 |
| 2055 | - | 3,096 | - | 3,096 |
| 2056 | - | 3,096 | - | 3,096 |
| 2057 | - | 3,096 | - | 3,096 |
| 2058 | - | 3,096 | - | 3,096 |
| 2059 | - | 3,096 | - | 3,096 |
| 2060 | - | 3,096 | - | 3,096 |
| 2061 | - | 3,096 | - | 3,096 |
| 2062 | - | 3,096 | - | 3,096 |
| 2063 | - | 3,096 | - | 3,096 |
| 2064 | - | 3,096 | - | 3,096 |
| 2065 | - | 3,096 | - | 3,096 |
| 2066 | - | 3,096 | - | 3,096 |
| 2067 | - | 3,096 | - | 3,096 |
| 2068 | - | 3,096 | - | 3,096 |
| 2069 | - | 3,096 | - | 3,096 |
| 2070 | 9,848 | 3,096 | - | 12,944 |
| 2071 | 9,848 | 3,096 | - | 12,944 |
| 2072 | - | 3,086 | - | 3,086 |
| 2073 | - | 2,802 | - | 2,802 |
| 2074 | - | - | - | - |
| Total | 603,633 | 183,930 | 34,497 | 822,060 |

**Appendix F-2**

**Florida Power and Light - St. Lucie Units 1 & 2**

**SCENARIO 2 - SAFSTOR**

**Estimated Annual Spending**

(thousands of 2020 dollars)

| Year | License Termination | Spent Fuel | Site Restoration | Total |
|---|---|---|---|---|
| 2033 | - | - | - | - |
| 2034 | - | - | - | - |
| 2035 | - | - | - | - |
| 2036 | 24,556 | 15,264 | - | 39,819 |
| 2037 | 27,698 | 14,679 | - | 42,377 |
| 2038 | 19,646 | 10,562 | - | 30,209 |
| 2039 | 17,124 | 8,541 | - | 25,665 |
| 2040 | 3,577 | 6,829 | - | 10,406 |
| 2041 | 3,577 | 6,829 | - | 10,406 |
| 2042 | 3,577 | 6,829 | - | 10,406 |
| 2043 | 26,530 | 23,814 | - | 50,344 |
| 2044 | 36,527 | 29,783 | - | 66,311 |
| 2045 | 26,066 | 67,375 | - | 93,441 |
| 2046 | 23,513 | 68,868 | - | 92,381 |
| 2047 | 2,245 | 8,004 | - | 10,249 |
| 2048 | 2,245 | 8,004 | - | 10,249 |
| 2049 | 2,245 | 8,004 | - | 10,249 |
| 2050 | 2,245 | 8,004 | - | 10,249 |
| 2051 | 2,245 | 8,004 | - | 10,249 |
| 2052 | 2,245 | 8,004 | - | 10,249 |
| 2053 | 2,245 | 8,004 | - | 10,249 |
| 2054 | 2,245 | 8,004 | - | 10,249 |
| 2055 | 2,245 | 8,004 | - | 10,249 |
| 2056 | 2,245 | 8,004 | - | 10,249 |
| 2057 | 2,245 | 8,004 | - | 10,249 |
| 2058 | 2,245 | 8,004 | - | 10,249 |
| 2059 | 2,245 | 8,004 | - | 10,249 |
| 2060 | 2,245 | 8,004 | - | 10,249 |
| 2061 | 2,245 | 8,004 | - | 10,249 |
| 2062 | 2,245 | 8,004 | - | 10,249 |
| 2063 | 2,245 | 8,004 | - | 10,249 |
| 2064 | 2,245 | 8,004 | - | 10,249 |
| 2065 | 2,245 | 8,004 | - | 10,249 |
| 2066 | 2,245 | 8,004 | - | 10,249 |
| 2067 | 2,245 | 8,004 | - | 10,249 |
| 2068 | 2,245 | 8,004 | - | 10,249 |
| 2069 | 2,245 | 8,004 | - | 10,249 |
| 2070 | 2,245 | 8,004 | - | 10,249 |
| 2071 | 2,245 | 8,004 | - | 10,249 |

**Appendix F-2**

**Florida Power and Light - St. Lucie Units 1 & 2**
**SCENARIO 2 - SAFSTOR**
**Estimated Annual Spending**
(thousands of 2020 dollars)

| Year | License Termination | Spent Fuel | Site Restoration | Total |
|---|---|---|---|---|
| 2072 | 4,067 | - | - | 4,067 |
| 2073 | 4,067 | - | - | 4,067 |
| 2074 | 4,067 | - | - | 4,067 |
| 2075 | 4,067 | - | - | 4,067 |
| 2076 | 4,067 | - | - | 4,067 |
| 2077 | 4,067 | - | - | 4,067 |
| 2078 | 4,067 | - | - | 4,067 |
| 2079 | 4,067 | - | - | 4,067 |
| 2080 | 4,067 | - | - | 4,067 |
| 2081 | 4,067 | - | - | 4,067 |
| 2082 | 4,067 | - | - | 4,067 |
| 2083 | 4,067 | - | - | 4,067 |
| 2084 | 4,067 | - | - | 4,067 |
| 2085 | 4,067 | - | - | 4,067 |
| 2086 | 4,067 | - | - | 4,067 |
| 2087 | 4,067 | - | - | 4,067 |
| 2088 | 9,268 | - | - | 9,268 |
| 2089 | 63,526 | - | - | 63,526 |
| 2090 | 105,323 | - | 2,418 | 107,741 |
| 2091 | 137,570 | - | 16,134 | 153,704 |
| 2092 | 146,822 | - | 20,485 | 167,307 |
| 2093 | 166,481 | - | 12,688 | 179,169 |
| 2094 | 184,561 | - | 6,131 | 190,692 |
| 2095 | 145,891 | 598 | 3,458 | 149,947 |
| 2096 | 26,469 | 12,101 | 787 | 39,357 |
| 2097 | - | 867 | - | 867 |
| 2098 | - | - | - | - |
| Total | 1,319,504 | 473,029 | 62,101 | 1,854,633 |

**Appendix F-2**

**Florida Power and Light - St. Lucie Unit 1**

**SCENARIO 2 - SAFSTOR**

**Estimated Annual Spending**

(thousands of 2020 dollars)

| Year | License Termination | Spent Fuel | Site Restoration | Total |
|---|---|---|---|---|
| 2033 | - | - | - | - |
| 2034 | - | - | - | - |
| 2035 | - | - | - | - |
| 2036 | 24,556 | 15,264 | - | 39,819 |
| 2037 | 27,698 | 14,679 | - | 42,377 |
| 2038 | 19,646 | 10,562 | - | 30,209 |
| 2039 | 17,124 | 8,541 | - | 25,665 |
| 2040 | 3,577 | 6,829 | - | 10,406 |
| 2041 | 3,577 | 6,829 | - | 10,406 |
| 2042 | 3,577 | 6,829 | - | 10,406 |
| 2043 | 3,577 | 6,829 | - | 10,406 |
| 2044 | 3,577 | 6,829 | - | 10,406 |
| 2045 | 3,577 | 31,829 | - | 35,406 |
| 2046 | 3,577 | 43,709 | - | 47,286 |
| 2047 | 1,079 | 4,012 | - | 5,091 |
| 2048 | 1,079 | 4,012 | - | 5,091 |
| 2049 | 1,079 | 4,012 | - | 5,091 |
| 2050 | 1,079 | 4,012 | - | 5,091 |
| 2051 | 1,079 | 4,012 | - | 5,091 |
| 2052 | 1,079 | 4,012 | - | 5,091 |
| 2053 | 1,079 | 4,012 | - | 5,091 |
| 2054 | 1,079 | 4,012 | - | 5,091 |
| 2055 | 1,079 | 4,012 | - | 5,091 |
| 2056 | 1,079 | 4,012 | - | 5,091 |
| 2057 | 1,079 | 4,012 | - | 5,091 |
| 2058 | 1,079 | 4,012 | - | 5,091 |
| 2059 | 1,079 | 4,012 | - | 5,091 |
| 2060 | 1,079 | 4,012 | - | 5,091 |
| 2061 | 1,079 | 4,012 | - | 5,091 |
| 2062 | 1,079 | 4,012 | - | 5,091 |
| 2063 | 1,079 | 4,012 | - | 5,091 |
| 2064 | 1,079 | 4,012 | - | 5,091 |
| 2065 | 1,079 | 4,012 | - | 5,091 |
| 2066 | 1,079 | 4,012 | - | 5,091 |
| 2067 | 1,079 | 4,012 | - | 5,091 |
| 2068 | 1,079 | 4,012 | - | 5,091 |
| 2069 | 1,079 | 4,012 | - | 5,091 |
| 2070 | 1,079 | 4,012 | - | 5,091 |
| 2071 | 1,079 | 4,012 | - | 5,091 |

**Appendix F-2**

## Florida Power and Light - St. Lucie Unit 1
## SCENARIO 2 - SAFSTOR
## Estimated Annual Spending

(thousands of 2020 dollars)

| Year | License Termination | Spent Fuel | Site Restoration | Total |
|---|---|---|---|---|
| 2072 | 2,033 | - | - | 2,033 |
| 2073 | 2,033 | - | - | 2,033 |
| 2074 | 2,033 | - | - | 2,033 |
| 2075 | 2,033 | - | - | 2,033 |
| 2076 | 2,033 | - | - | 2,033 |
| 2077 | 2,033 | - | - | 2,033 |
| 2078 | 2,033 | - | - | 2,033 |
| 2079 | 2,033 | - | - | 2,033 |
| 2080 | 2,033 | - | - | 2,033 |
| 2081 | 2,033 | - | - | 2,033 |
| 2082 | 2,033 | - | - | 2,033 |
| 2083 | 2,033 | - | - | 2,033 |
| 2084 | 2,033 | - | - | 2,033 |
| 2085 | 2,033 | - | - | 2,033 |
| 2086 | 2,033 | - | - | 2,033 |
| 2087 | 2,033 | - | - | 2,033 |
| 2088 | 6,455 | - | - | 6,455 |
| 2089 | 38,251 | - | - | 38,251 |
| 2090 | 61,248 | - | 1,025 | 62,273 |
| 2091 | 70,706 | - | 6,423 | 77,129 |
| 2092 | 76,010 | - | 9,804 | 85,814 |
| 2093 | 83,644 | - | 6,167 | 89,811 |
| 2094 | 93,235 | - | 2,373 | 95,608 |
| 2095 | 63,939 | 315 | 1,945 | 66,199 |
| 2096 | 10,724 | 6,724 | 451 | 17,899 |
| 2097 | - | 476 | - | 476 |
| 2098 | - | - | - | - |
| Total | 677,793 | 266,544 | 28,188 | 972,525 |

**Appendix F-2**

**Florida Power and Light - St. Lucie Unit 2**

**SCENARIO 2 - SAFSTOR**

**Estimated Annual Spending**

(thousands of 2020 dollars)

| Year | License Termination | Spent Fuel | Site Restoration | Total |
|---|---|---|---|---|
| 2033 | - | - | - | - |
| 2034 | - | - | - | - |
| 2035 | - | - | - | - |
| 2036 | - | - | - | - |
| 2037 | - | - | - | - |
| 2038 | - | - | - | - |
| 2039 | - | - | - | - |
| 2040 | - | - | - | - |
| 2041 | - | - | - | - |
| 2042 | - | - | - | - |
| 2043 | 22,953 | 16,985 | - | 39,938 |
| 2044 | 32,951 | 22,954 | - | 55,905 |
| 2045 | 22,489 | 35,546 | - | 58,035 |
| 2046 | 19,936 | 25,159 | - | 45,096 |
| 2047 | 1,166 | 3,992 | - | 5,157 |
| 2048 | 1,166 | 3,992 | - | 5,157 |
| 2049 | 1,166 | 3,992 | - | 5,157 |
| 2050 | 1,166 | 3,992 | - | 5,157 |
| 2051 | 1,166 | 3,992 | - | 5,157 |
| 2052 | 1,166 | 3,992 | - | 5,157 |
| 2053 | 1,166 | 3,992 | - | 5,157 |
| 2054 | 1,166 | 3,992 | - | 5,157 |
| 2055 | 1,166 | 3,992 | - | 5,157 |
| 2056 | 1,166 | 3,992 | - | 5,157 |
| 2057 | 1,166 | 3,992 | - | 5,157 |
| 2058 | 1,166 | 3,992 | - | 5,157 |
| 2059 | 1,166 | 3,992 | - | 5,157 |
| 2060 | 1,166 | 3,992 | - | 5,157 |
| 2061 | 1,166 | 3,992 | - | 5,157 |
| 2062 | 1,166 | 3,992 | - | 5,157 |
| 2063 | 1,166 | 3,992 | - | 5,157 |
| 2064 | 1,166 | 3,992 | - | 5,157 |
| 2065 | 1,166 | 3,992 | - | 5,157 |
| 2066 | 1,166 | 3,992 | - | 5,157 |
| 2067 | 1,166 | 3,992 | - | 5,157 |
| 2068 | 1,166 | 3,992 | - | 5,157 |
| 2069 | 1,166 | 3,992 | - | 5,157 |
| 2070 | 1,166 | 3,992 | - | 5,157 |
| 2071 | 1,166 | 3,992 | - | 5,157 |

**Appendix F-2**

**Florida Power and Light - St. Lucie Unit 2**

**SCENARIO 2 - SAFSTOR**

**Estimated Annual Spending**

thousands of 2020 dollars)

| Year | License Termination | Spent Fuel | Site Restoration | Total |
|---|---|---|---|---|
| 2072 | 2,033 | - | - | 2,033 |
| 2073 | 2,033 | - | - | 2,033 |
| 2074 | 2,033 | - | - | 2,033 |
| 2075 | 2,033 | - | - | 2,033 |
| 2076 | 2,033 | - | - | 2,033 |
| 2077 | 2,033 | - | - | 2,033 |
| 2078 | 2,033 | - | - | 2,033 |
| 2079 | 2,033 | - | - | 2,033 |
| 2080 | 2,033 | - | - | 2,033 |
| 2081 | 2,033 | - | - | 2,033 |
| 2082 | 2,033 | - | - | 2,033 |
| 2083 | 2,033 | - | - | 2,033 |
| 2084 | 2,033 | - | - | 2,033 |
| 2085 | 2,033 | - | - | 2,033 |
| 2086 | 2,033 | - | - | 2,033 |
| 2087 | 2,033 | - | - | 2,033 |
| 2088 | 2,813 | - | - | 2,813 |
| 2089 | 25,275 | - | - | 25,275 |
| 2090 | 44,074 | - | 1,394 | 45,468 |
| 2091 | 66,864 | - | 9,711 | 76,575 |
| 2092 | 70,812 | - | 10,680 | 81,492 |
| 2093 | 82,838 | - | 6,521 | 89,359 |
| 2094 | 91,326 | - | 3,758 | 95,084 |
| 2095 | 81,952 | 283 | 1,513 | 83,748 |
| 2096 | 15,745 | 5,377 | 336 | 21,458 |
| 2097 | - | 391 | - | 391 |
| 2098 | - | - | - | - |
| Total | 641,710 | 206,485 | 33,913 | 882,108 |

**Appendix F-3**

**Florida Power and Light Units 1 & 2**

**SCENARIO 1 - Unit 1 SAFSTOR, DECON both following Unit 2 Shutdown**

**Estimated Annual Spending**

**Labor, Material/Equip, Waste, Other Direct Cost**

(thousands of 2020 dollars)

| Year | Labor | Material & Equipment | Waste Packaging & Transportation | Waste Disposal | Other Direct Cost | Total |
|---|---|---|---|---|---|---|
| 2033 | - | - | - | - | - | - |
| 2034 | - | - | - | - | - | - |
| 2035 | - | - | - | - | - | - |
| 2036 | 32,205 | 3,115 | - | - | 3,628 | 38,948 |
| 2037 | 34,682 | 2,930 | - | - | 4,408 | 42,020 |
| 2038 | 23,684 | 2,195 | - | - | 4,292 | 30,171 |
| 2039 | 19,676 | 1,812 | - | - | 4,265 | 25,754 |
| 2040 | 7,003 | 417 | - | - | 2,287 | 9,706 |
| 2041 | 7,003 | 417 | - | - | 2,287 | 9,706 |
| 2042 | 7,003 | 417 | - | - | 2,287 | 9,706 |
| 2043 | 38,405 | 1,987 | - | - | 5,501 | 45,893 |
| 2044 | 54,802 | 2,020 | - | - | 6,640 | 63,462 |
| 2045 | 62,841 | 37,223 | 5,550 | - | 11,327 | 116,941 |
| 2046 | 78,270 | 31,649 | 8,164 | - | 17,244 | 135,327 |
| 2047 | 78,817 | 37,831 | 2,367 | 7,295 | 16,486 | 142,796 |
| 2048 | 96,417 | 40,011 | 4,640 | 17,901 | 12,041 | 171,011 |
| 2049 | 109,059 | 37,937 | 9,804 | 30,367 | 8,419 | 195,585 |
| 2050 | 57,478 | 26,745 | 23,253 | 106,178 | 6,781 | 220,435 |
| 2051 | 32,784 | 17,213 | 30,584 | 115,125 | 6,184 | 201,890 |
| 2052 | 12,432 | 5,582 | 21,945 | 68,982 | 4,422 | 113,363 |
| 2053 | 4,763 | 351 | - | - | 1,740 | 6,854 |
| 2054 | 4,509 | 138 | - | - | 1,645 | 6,292 |
| 2055 | 4,509 | 138 | - | - | 1,645 | 6,292 |
| 2056 | 4,509 | 138 | - | - | 1,645 | 6,292 |
| 2057 | 4,509 | 138 | - | - | 1,645 | 6,292 |
| 2058 | 4,509 | 138 | - | - | 1,645 | 6,292 |
| 2059 | 4,509 | 138 | - | - | 1,645 | 6,292 |
| 2060 | 4,509 | 138 | - | - | 1,645 | 6,292 |
| 2061 | 4,509 | 138 | - | - | 1,645 | 6,292 |
| 2062 | 4,509 | 138 | - | - | 1,645 | 6,292 |
| 2063 | 4,509 | 138 | - | - | 1,645 | 6,292 |
| 2064 | 4,509 | 138 | - | - | 1,645 | 6,292 |
| 2065 | 4,509 | 138 | - | - | 1,645 | 6,292 |
| 2066 | 4,509 | 138 | - | - | 1,645 | 6,292 |
| 2067 | 4,509 | 138 | - | - | 1,645 | 6,292 |
| 2068 | 4,509 | 138 | - | - | 1,645 | 6,292 |
| 2069 | 4,509 | 138 | - | - | 1,645 | 6,292 |
| 2070 | 5,079 | 138 | 2,169 | 16,812 | 1,789 | 25,988 |
| 2071 | 5,079 | 138 | 2,169 | 16,812 | 1,789 | 25,988 |
| 2072 | 4,389 | - | - | - | 365 | 4,755 |
| 2073 | 6,256 | 2,169 | - | - | 60 | 8,485 |
| 2074 | - | - | - | - | - | - |
| Total | 850,272 | 254,507 | 110,645 | 379,472 | 150,565 | 1,745,462 |

## Appendix F-3

**Florida Power and Light Unit 1**

**SCENARIO 1 - Unit 1 SAFSTOR, DECON both following Unit 2 Shutdown**

**Estimated Annual Spending**

**Labor, Material/Equip, Waste, Other Direct Cost**

(thousands of 2020 dollars)

| Year | Labor | Material & Equipment | Waste Packaging & Transportation | Waste Disposal | Other Direct Cost | Total |
|---|---|---|---|---|---|---|
| 2033 | - | - | - | - | - | - |
| 2034 | - | - | - | - | - | - |
| 2035 | - | - | - | - | - | - |
| 2036 | 32,205 | 3,115 | - | - | 3,628 | 38,948 |
| 2037 | 34,682 | 2,930 | - | - | 4,408 | 42,020 |
| 2038 | 23,684 | 2,195 | - | - | 4,292 | 30,171 |
| 2039 | 19,676 | 1,812 | - | - | 4,265 | 25,754 |
| 2040 | 7,003 | 417 | - | - | 2,287 | 9,706 |
| 2041 | 7,003 | 417 | - | - | 2,287 | 9,706 |
| 2042 | 7,003 | 417 | - | - | 2,287 | 9,706 |
| 2043 | 7,003 | 417 | - | - | 2,287 | 9,706 |
| 2044 | 7,003 | 417 | - | - | 2,287 | 9,706 |
| 2045 | 29,380 | 15,987 | 4,353 | - | 6,012 | 55,732 |
| 2046 | 35,615 | 25,881 | 1,204 | - | 8,663 | 71,364 |
| 2047 | 35,910 | 27,744 | 1,789 | 3,792 | 8,747 | 77,982 |
| 2048 | 48,878 | 19,397 | 3,474 | 11,058 | 5,815 | 88,622 |
| 2049 | 53,729 | 21,876 | 4,844 | 14,371 | 4,452 | 99,273 |
| 2050 | 25,364 | 13,037 | 12,839 | 64,383 | 3,705 | 119,326 |
| 2051 | 14,411 | 3,465 | 14,219 | 49,451 | 3,506 | 85,052 |
| 2052 | 4,617 | 857 | 11,250 | 33,750 | 2,048 | 52,521 |
| 2053 | 2,442 | 204 | - | - | 885 | 3,531 |
| 2054 | 2,295 | 79 | - | - | 822 | 3,196 |
| 2055 | 2,295 | 79 | - | - | 822 | 3,196 |
| 2056 | 2,295 | 79 | - | - | 822 | 3,196 |
| 2057 | 2,295 | 79 | - | - | 822 | 3,196 |
| 2058 | 2,295 | 79 | - | - | 822 | 3,196 |
| 2059 | 2,295 | 79 | - | - | 822 | 3,196 |
| 2060 | 2,295 | 79 | - | - | 822 | 3,196 |
| 2061 | 2,295 | 79 | - | - | 822 | 3,196 |
| 2062 | 2,295 | 79 | - | - | 822 | 3,196 |
| 2063 | 2,295 | 79 | - | - | 822 | 3,196 |
| 2064 | 2,295 | 79 | - | - | 822 | 3,196 |
| 2065 | 2,295 | 79 | - | - | 822 | 3,196 |
| 2066 | 2,295 | 79 | - | - | 822 | 3,196 |
| 2067 | 2,295 | 79 | - | - | 822 | 3,196 |
| 2068 | 2,295 | 79 | - | - | 822 | 3,196 |
| 2069 | 2,295 | 79 | - | - | 822 | 3,196 |
| 2070 | 2,580 | 79 | 1,085 | 8,406 | 894 | 13,043 |
| 2071 | 2,580 | 79 | 1,085 | 8,406 | 894 | 13,043 |
| 2072 | 1,498 | - | - | - | 171 | 1,669 |
| 2073 | 4,321 | 1,302 | - | - | 60 | 5,684 |
| 2074 | - | - | - | - | - | - |
| Total | 443,308 | 143,311 | 56,142 | 193,616 | 87,025 | 923,401 |

**Appendix F-3**
**Florida Power and Light Unit 2**
**SCENARIO 1 - Unit 1 SAFSTOR, DECON both following Unit 2 Shutdown**
**Estimated Annual Spending**
**Labor, Material/Equip, Waste, Other Direct Cost**
(thousands of 2020 dollars)

| Year | Labor | Material & Equipment | Waste Packaging & Transportation | Waste Disposal | Other Direct Cost | Total |
|---|---|---|---|---|---|---|
| 2033 | - | - | - | - | - | - |
| 2034 | - | - | - | - | - | - |
| 2035 | - | - | - | - | - | - |
| 2036 | - | - | - | - | - | - |
| 2037 | - | - | - | - | - | - |
| 2038 | - | - | - | - | - | - |
| 2039 | - | - | - | - | - | - |
| 2040 | - | - | - | - | - | - |
| 2041 | - | - | - | - | - | - |
| 2042 | - | - | - | - | - | - |
| 2043 | 31,403 | 1,570 | - | - | 3,214 | 36,186 |
| 2044 | 47,799 | 1,603 | - | - | 4,354 | 53,755 |
| 2045 | 33,461 | 21,237 | 1,197 | - | 5,314 | 61,209 |
| 2046 | 42,655 | 5,768 | 6,960 | - | 8,581 | 63,964 |
| 2047 | 42,907 | 10,087 | 578 | 3,504 | 7,738 | 64,814 |
| 2048 | 47,539 | 20,614 | 1,166 | 6,843 | 6,226 | 82,388 |
| 2049 | 55,330 | 16,061 | 4,959 | 15,996 | 3,967 | 96,312 |
| 2050 | 32,115 | 13,708 | 10,414 | 41,796 | 3,077 | 101,109 |
| 2051 | 18,373 | 13,749 | 16,365 | 65,674 | 2,678 | 116,838 |
| 2052 | 7,815 | 4,726 | 10,695 | 35,232 | 2,375 | 60,842 |
| 2053 | 2,321 | 147 | - | - | 855 | 3,323 |
| 2054 | 2,214 | 59 | - | - | 824 | 3,096 |
| 2055 | 2,214 | 59 | - | - | 824 | 3,096 |
| 2056 | 2,214 | 59 | - | - | 824 | 3,096 |
| 2057 | 2,214 | 59 | - | - | 824 | 3,096 |
| 2058 | 2,214 | 59 | - | - | 824 | 3,096 |
| 2059 | 2,214 | 59 | - | - | 824 | 3,096 |
| 2060 | 2,214 | 59 | - | - | 824 | 3,096 |
| 2061 | 2,214 | 59 | - | - | 824 | 3,096 |
| 2062 | 2,214 | 59 | - | - | 824 | 3,096 |
| 2063 | 2,214 | 59 | - | - | 824 | 3,096 |
| 2064 | 2,214 | 59 | - | - | 824 | 3,096 |
| 2065 | 2,214 | 59 | - | - | 824 | 3,096 |
| 2066 | 2,214 | 59 | - | - | 824 | 3,096 |
| 2067 | 2,214 | 59 | - | - | 824 | 3,096 |
| 2068 | 2,214 | 59 | - | - | 824 | 3,096 |
| 2069 | 2,214 | 59 | - | - | 824 | 3,096 |
| 2070 | 2,499 | 59 | 1,085 | 8,406 | 896 | 12,944 |
| 2071 | 2,499 | 59 | 1,085 | 8,406 | 896 | 12,944 |
| 2072 | 2,892 | - | - | - | 194 | 3,086 |
| 2073 | 1,935 | 867 | - | - | - | 2,802 |
| 2074 | - | - | - | - | - | - |
| Total | 406,964 | 111,197 | 54,503 | 185,856 | 63,540 | 822,060 |

**Appendix F-4**
**Florida Power and Light - St. Lucie Units 1 & 2**
**SCENARIO 2 - SAFSTOR**
**Estimated Annual Spending**
**Labor, Material/Equip, Waste, Other Direct Cost**
(thousands of 2020 dollars)

| Year | Labor | Material & Equipment | Waste Packaging & Transportation | Waste Disposal | Other Direct Cost | Total |
|---|---|---|---|---|---|---|
| 2033 | - | - | - | - | - | - |
| 2034 | - | - | - | - | - | - |
| 2035 | - | - | - | - | - | - |
| 2036 | 33,138 | 3,054 | - | - | 3,628 | 39,819 |
| 2037 | 35,154 | 2,815 | - | - | 4,407 | 42,377 |
| 2038 | 23,811 | 2,106 | - | - | 4,291 | 30,209 |
| 2039 | 19,673 | 1,727 | - | - | 4,265 | 25,665 |
| 2040 | 6,761 | 417 | - | - | 3,228 | 10,406 |
| 2041 | 6,761 | 417 | - | - | 3,228 | 10,406 |
| 2042 | 6,761 | 417 | - | - | 3,228 | 10,406 |
| 2043 | 41,480 | 2,422 | - | - | 6,442 | 50,344 |
| 2044 | 56,453 | 2,275 | - | - | 7,582 | 66,311 |
| 2045 | 44,271 | 41,680 | - | - | 7,490 | 93,441 |
| 2046 | 53,891 | 30,458 | - | - | 8,033 | 92,381 |
| 2047 | 6,544 | 729 | - | - | 2,975 | 10,249 |
| 2048 | 6,544 | 729 | - | - | 2,975 | 10,249 |
| 2049 | 6,544 | 729 | - | - | 2,975 | 10,249 |
| 2050 | 6,544 | 729 | - | - | 2,975 | 10,249 |
| 2051 | 6,544 | 729 | - | - | 2,975 | 10,249 |
| 2052 | 6,544 | 729 | - | - | 2,975 | 10,249 |
| 2053 | 6,544 | 729 | - | - | 2,975 | 10,249 |
| 2054 | 6,544 | 729 | - | - | 2,975 | 10,249 |
| 2055 | 6,544 | 729 | - | - | 2,975 | 10,249 |
| 2056 | 6,544 | 729 | - | - | 2,975 | 10,249 |
| 2057 | 6,544 | 729 | - | - | 2,975 | 10,249 |
| 2058 | 6,544 | 729 | - | - | 2,975 | 10,249 |
| 2059 | 6,544 | 729 | - | - | 2,975 | 10,249 |
| 2060 | 6,544 | 729 | - | - | 2,975 | 10,249 |
| 2061 | 6,544 | 729 | - | - | 2,975 | 10,249 |
| 2062 | 6,544 | 729 | - | - | 2,975 | 10,249 |
| 2063 | 6,544 | 729 | - | - | 2,975 | 10,249 |
| 2064 | 6,544 | 729 | - | - | 2,975 | 10,249 |
| 2065 | 6,544 | 729 | - | - | 2,975 | 10,249 |
| 2066 | 6,544 | 729 | - | - | 2,975 | 10,249 |
| 2067 | 6,544 | 729 | - | - | 2,975 | 10,249 |
| 2068 | 6,544 | 729 | - | - | 2,975 | 10,249 |
| 2069 | 6,544 | 729 | - | - | 2,975 | 10,249 |
| 2070 | 6,544 | 729 | - | - | 2,975 | 10,249 |
| 2071 | 6,544 | 729 | - | - | 2,975 | 10,249 |
| 2072 | 1,694 | 403 | - | - | 1,969 | 4,067 |
| 2073 | 1,694 | 403 | - | - | 1,969 | 4,067 |
| 2074 | 1,694 | 403 | - | - | 1,969 | 4,067 |
| 2075 | 1,694 | 403 | - | - | 1,969 | 4,067 |

**Appendix F-4**
**Florida Power and Light - St. Lucie Units 1 & 2**
**SCENARIO 2 - SAFSTOR**
**Estimated Annual Spending**
**Labor, Material/Equip, Waste, Other Direct Cost**
(thousands of 2020 dollars)

| Year | Labor | Material & Equipment | Waste Packaging & Transportation | Waste Disposal | Other Direct Cost | Total |
|---|---|---|---|---|---|---|
| 2076 | 1,694 | 403 | - | - | 1,969 | 4,067 |
| 2077 | 1,694 | 403 | - | - | 1,969 | 4,067 |
| 2078 | 1,694 | 403 | - | - | 1,969 | 4,067 |
| 2079 | 1,694 | 403 | - | - | 1,969 | 4,067 |
| 2080 | 1,694 | 403 | - | - | 1,969 | 4,067 |
| 2081 | 1,694 | 403 | - | - | 1,969 | 4,067 |
| 2082 | 1,694 | 403 | - | - | 1,969 | 4,067 |
| 2083 | 1,694 | 403 | - | - | 1,969 | 4,067 |
| 2084 | 1,694 | 403 | - | - | 1,969 | 4,067 |
| 2085 | 1,694 | 403 | - | - | 1,969 | 4,067 |
| 2086 | 1,694 | 403 | - | - | 1,969 | 4,067 |
| 2087 | 1,694 | 403 | - | - | 1,969 | 4,067 |
| 2088 | 4,915 | 751 | - | - | 3,602 | 9,268 |
| 2089 | 35,627 | 3,297 | 14,293 | - | 10,309 | 63,526 |
| 2090 | 52,922 | 35,085 | 1,965 | 5,711 | 12,058 | 107,741 |
| 2091 | 86,644 | 44,022 | 3,150 | 10,553 | 9,335 | 153,704 |
| 2092 | 101,196 | 30,370 | 6,621 | 23,125 | 5,994 | 167,306 |
| 2093 | 74,062 | 27,336 | 15,367 | 58,509 | 3,895 | 179,169 |
| 2094 | 34,046 | 15,516 | 28,759 | 109,139 | 3,232 | 190,692 |
| 2095 | 12,616 | 4,554 | 26,735 | 103,418 | 2,624 | 149,947 |
| 2096 | 11,144 | 2,659 | 3,814 | 20,775 | 965 | 39,357 |
| 2097 | 678 | 63 | - | - | 126 | 867 |
| 2098 | - | - | - | - | - | - |
| Total | 932,720 | 276,127 | 100,703 | 331,230 | 213,853 | 1,854,633 |

**Appendix F-4**

**Florida Power and Light - St. Lucie Unit 1**

**SCENARIO 2 - SAFSTOR**

**Estimated Annual Spending**

**Labor, Material/Equip, Waste, Other Direct Cost**

(thousands of 2020 dollars)

| Year | Labor | Material & Equipment | Waste Packaging & Transportation | Waste Disposal | Other Direct Cost | Total |
|---|---|---|---|---|---|---|
| 2033 | - | - | - | - | - | - |
| 2034 | - | - | - | - | - | - |
| 2035 | - | - | - | - | - | - |
| 2036 | 33,138 | 3,054 | - | - | 3,628 | 39,819 |
| 2037 | 35,154 | 2,815 | - | - | 4,407 | 42,377 |
| 2038 | 23,811 | 2,106 | - | - | 4,291 | 30,209 |
| 2039 | 19,673 | 1,727 | - | - | 4,265 | 25,665 |
| 2040 | 6,761 | 417 | - | - | 3,228 | 10,406 |
| 2041 | 6,761 | 417 | - | - | 3,228 | 10,406 |
| 2042 | 6,761 | 417 | - | - | 3,228 | 10,406 |
| 2043 | 6,761 | 417 | - | - | 3,228 | 10,406 |
| 2044 | 6,761 | 417 | - | - | 3,228 | 10,406 |
| 2045 | 6,761 | 25,417 | - | - | 3,228 | 35,406 |
| 2046 | 22,630 | 21,086 | - | - | 3,570 | 47,286 |
| 2047 | 3,269 | 295 | - | - | 1,528 | 5,091 |
| 2048 | 3,269 | 295 | - | - | 1,528 | 5,091 |
| 2049 | 3,269 | 295 | - | - | 1,528 | 5,091 |
| 2050 | 3,269 | 295 | - | - | 1,528 | 5,091 |
| 2051 | 3,269 | 295 | - | - | 1,528 | 5,091 |
| 2052 | 3,269 | 295 | - | - | 1,528 | 5,091 |
| 2053 | 3,269 | 295 | - | - | 1,528 | 5,091 |
| 2054 | 3,269 | 295 | - | - | 1,528 | 5,091 |
| 2055 | 3,269 | 295 | - | - | 1,528 | 5,091 |
| 2056 | 3,269 | 295 | - | - | 1,528 | 5,091 |
| 2057 | 3,269 | 295 | - | - | 1,528 | 5,091 |
| 2058 | 3,269 | 295 | - | - | 1,528 | 5,091 |
| 2059 | 3,269 | 295 | - | - | 1,528 | 5,091 |
| 2060 | 3,269 | 295 | - | - | 1,528 | 5,091 |
| 2061 | 3,269 | 295 | - | - | 1,528 | 5,091 |
| 2062 | 3,269 | 295 | - | - | 1,528 | 5,091 |
| 2063 | 3,269 | 295 | - | - | 1,528 | 5,091 |
| 2064 | 3,269 | 295 | - | - | 1,528 | 5,091 |
| 2065 | 3,269 | 295 | - | - | 1,528 | 5,091 |
| 2066 | 3,269 | 295 | - | - | 1,528 | 5,091 |
| 2067 | 3,269 | 295 | - | - | 1,528 | 5,091 |
| 2068 | 3,269 | 295 | - | - | 1,528 | 5,091 |
| 2069 | 3,269 | 295 | - | - | 1,528 | 5,091 |
| 2070 | 3,269 | 295 | - | - | 1,528 | 5,091 |
| 2071 | 3,269 | 295 | - | - | 1,528 | 5,091 |
| 2072 | 847 | 202 | - | - | 985 | 2,033 |
| 2073 | 847 | 202 | - | - | 985 | 2,033 |
| 2074 | 847 | 202 | - | - | 985 | 2,033 |
| 2075 | 847 | 202 | - | - | 985 | 2,033 |
| 2076 | 847 | 202 | - | - | 985 | 2,033 |

**Appendix F-4**

**Florida Power and Light - St. Lucie Unit 1**

**SCENARIO 2 - SAFSTOR**

**Estimated Annual Spending**

**Labor, Material/Equip, Waste, Other Direct Cost**

(thousands of 2020 dollars)

| Year | Labor | Material & Equipment | Waste Packaging & Transportation | Waste Disposal | Other Direct Cost | Total |
|---|---|---|---|---|---|---|
| 2077 | 847 | 202 | - | - | 985 | 2,033 |
| 2078 | 847 | 202 | - | - | 985 | 2,033 |
| 2079 | 847 | 202 | - | - | 985 | 2,033 |
| 2080 | 847 | 202 | - | - | 985 | 2,033 |
| 2081 | 847 | 202 | - | - | 985 | 2,033 |
| 2082 | 847 | 202 | - | - | 985 | 2,033 |
| 2083 | 847 | 202 | - | - | 985 | 2,033 |
| 2084 | 847 | 202 | - | - | 985 | 2,033 |
| 2085 | 847 | 202 | - | - | 985 | 2,033 |
| 2086 | 847 | 202 | - | - | 985 | 2,033 |
| 2087 | 847 | 202 | - | - | 985 | 2,033 |
| 2088 | 3,654 | 528 | - | - | 2,272 | 6,455 |
| 2089 | 23,092 | 2,415 | 6,484 | - | 6,259 | 38,251 |
| 2090 | 28,660 | 21,836 | 1,588 | 4,367 | 5,822 | 62,273 |
| 2091 | 42,644 | 23,532 | 1,706 | 5,331 | 3,916 | 77,129 |
| 2092 | 49,608 | 14,126 | 4,255 | 15,042 | 2,783 | 85,814 |
| 2093 | 31,937 | 12,824 | 8,774 | 34,432 | 1,844 | 89,811 |
| 2094 | 17,388 | 4,815 | 15,038 | 56,801 | 1,566 | 95,608 |
| 2095 | 6,450 | 1,612 | 12,592 | 44,259 | 1,287 | 66,199 |
| 2096 | 6,158 | 1,667 | 814 | 8,775 | 486 | 17,899 |
| 2097 | 375 | 38 | - | - | 63 | 476 |
| 2098 | - | - | - | - | - | - |
| Total | 480,208 | 152,279 | 51,251 | 169,007 | 119,780 | 972,525 |

**Appendix F-4**

**Florida Power and Light - St. Lucie Unit 2**

**SCENARIO 2 - SAFSTOR**

**Estimated Annual Spending**

**Labor, Material/Equip, Waste, Other Direct Cost**

(thousands of 2020 dollars)

| Year | Labor | Material & Equipment | Waste Packaging & Transportation | Waste Disposal | Other Direct Cost | Total |
|---|---|---|---|---|---|---|
| 2033 | - | - | - | - | - | - |
| 2034 | - | - | - | - | - | - |
| 2035 | - | - | - | - | - | - |
| 2036 | - | - | - | - | - | - |
| 2037 | - | - | - | - | - | - |
| 2038 | - | - | - | - | - | - |
| 2039 | - | - | - | - | - | - |
| 2040 | - | - | - | - | - | - |
| 2041 | - | - | - | - | - | - |
| 2042 | - | - | - | - | - | - |
| 2043 | 34,719 | 2,005 | - | - | 3,214 | 39,938 |
| 2044 | 49,692 | 1,859 | - | - | 4,354 | 55,905 |
| 2045 | 37,510 | 16,263 | - | - | 4,262 | 58,035 |
| 2046 | 31,261 | 9,371 | - | - | 4,463 | 45,096 |
| 2047 | 3,276 | 434 | - | - | 1,447 | 5,157 |
| 2048 | 3,276 | 434 | - | - | 1,447 | 5,157 |
| 2049 | 3,276 | 434 | - | - | 1,447 | 5,157 |
| 2050 | 3,276 | 434 | - | - | 1,447 | 5,157 |
| 2051 | 3,276 | 434 | - | - | 1,447 | 5,157 |
| 2052 | 3,276 | 434 | - | - | 1,447 | 5,157 |
| 2053 | 3,276 | 434 | - | - | 1,447 | 5,157 |
| 2054 | 3,276 | 434 | - | - | 1,447 | 5,157 |
| 2055 | 3,276 | 434 | - | - | 1,447 | 5,157 |
| 2056 | 3,276 | 434 | - | - | 1,447 | 5,157 |
| 2057 | 3,276 | 434 | - | - | 1,447 | 5,157 |
| 2058 | 3,276 | 434 | - | - | 1,447 | 5,157 |
| 2059 | 3,276 | 434 | - | - | 1,447 | 5,157 |
| 2060 | 3,276 | 434 | - | - | 1,447 | 5,157 |
| 2061 | 3,276 | 434 | - | - | 1,447 | 5,157 |
| 2062 | 3,276 | 434 | - | - | 1,447 | 5,157 |
| 2063 | 3,276 | 434 | - | - | 1,447 | 5,157 |
| 2064 | 3,276 | 434 | - | - | 1,447 | 5,157 |
| 2065 | 3,276 | 434 | - | - | 1,447 | 5,157 |
| 2066 | 3,276 | 434 | - | - | 1,447 | 5,157 |
| 2067 | 3,276 | 434 | - | - | 1,447 | 5,157 |
| 2068 | 3,276 | 434 | - | - | 1,447 | 5,157 |
| 2069 | 3,276 | 434 | - | - | 1,447 | 5,157 |
| 2070 | 3,276 | 434 | - | - | 1,447 | 5,157 |
| 2071 | 3,276 | 434 | - | - | 1,447 | 5,157 |
| 2072 | 847 | 202 | - | - | 985 | 2,033 |
| 2073 | 847 | 202 | - | - | 985 | 2,033 |
| 2074 | 847 | 202 | - | - | 985 | 2,033 |
| 2075 | 847 | 202 | - | - | 985 | 2,033 |
| 2076 | 847 | 202 | - | - | 985 | 2,033 |

**Appendix F-4**

**Florida Power and Light - St. Lucie Unit 2**

**SCENARIO 2 - SAFSTOR**

**Estimated Annual Spending**

**Labor, Material/Equip, Waste, Other Direct Cost**

(thousands of 2020 dollars)

| Year | Labor | Material & Equipment | Waste Packaging & Transportation | Waste Disposal | Other Direct Cost | Total |
|---|---|---|---|---|---|---|
| 2077 | 847 | 202 | - | - | 985 | 2,033 |
| 2078 | 847 | 202 | - | - | 985 | 2,033 |
| 2079 | 847 | 202 | - | - | 985 | 2,033 |
| 2080 | 847 | 202 | - | - | 985 | 2,033 |
| 2081 | 847 | 202 | - | - | 985 | 2,033 |
| 2082 | 847 | 202 | - | - | 985 | 2,033 |
| 2083 | 847 | 202 | - | - | 985 | 2,033 |
| 2084 | 847 | 202 | - | - | 985 | 2,033 |
| 2085 | 847 | 202 | - | - | 985 | 2,033 |
| 2086 | 847 | 202 | - | - | 985 | 2,033 |
| 2087 | 847 | 202 | - | - | 985 | 2,033 |
| 2088 | 1,261 | 223 | - | - | 1,330 | 2,813 |
| 2089 | 12,534 | 882 | 7,808 | - | 4,050 | 25,275 |
| 2090 | 24,262 | 13,249 | 377 | 1,344 | 6,236 | 45,468 |
| 2091 | 43,999 | 20,491 | 1,444 | 5,222 | 5,419 | 76,574 |
| 2092 | 51,587 | 16,244 | 2,366 | 8,083 | 3,212 | 81,492 |
| 2093 | 42,125 | 14,512 | 6,593 | 24,077 | 2,051 | 89,359 |
| 2094 | 16,658 | 10,701 | 13,721 | 52,338 | 1,666 | 95,084 |
| 2095 | 6,167 | 2,943 | 14,143 | 59,159 | 1,337 | 83,748 |
| 2096 | 4,986 | 993 | 3,000 | 12,000 | 479 | 21,458 |
| 2097 | 303 | 25 | - | - | 63 | 391 |
| 2098 | - | - | - | - | - | - |
| Total | 452,512 | 123,848 | 49,453 | 162,223 | 94,073 | 882,108 |

**Appendix F-5**

**Florida Power and Light Units 1 & 2**

**SCENARIO 1 - Unit 1 SAFSTOR, DECON both following Unit 2 Shutdown**

**Estimated DOE Reimbursement**

**Labor, Material/Equip, Waste, Other Direct Cost**

(thousands of 2020 dollars)

| Year | Labor | Material & Equipment | Waste Transportation & Disposal | Other Direct Cost | Total |
|---|---|---|---|---|---|
| 2033 | - | - | - | - | - |
| 2034 | - | - | - | - | - |
| 2035 | - | - | - | - | - |
| 2036 | - | - | - | - | - |
| 2037 | 12,314 | 2,431 | - | 631 | 15,376 |
| 2038 | 11,687 | 2,366 | - | 768 | 14,821 |
| 2039 | 8,076 | 1,841 | - | 745 | 10,662 |
| 2040 | 6,321 | 1,567 | - | 740 | 8,628 |
| 2041 | 4,896 | 312 | - | 1,187 | 6,395 |
| 2042 | 4,896 | 312 | - | 1,187 | 6,395 |
| 2043 | 4,896 | 312 | - | 1,187 | 6,395 |
| 2044 | 19,882 | 1,769 | - | 1,727 | 23,378 |
| 2045 | 25,659 | 1,765 | - | 1,921 | 29,344 |
| 2046 | 21,153 | 43,882 | - | 1,903 | 66,937 |
| 2047 | 38,107 | 27,977 | - | 2,348 | 68,431 |
| 2048 | 4,509 | 138 | - | 1,645 | 6,292 |
| 2049 | 4,509 | 138 | - | 1,645 | 6,292 |
| 2050 | 4,509 | 138 | - | 1,645 | 6,292 |
| 2051 | 4,509 | 138 | - | 1,645 | 6,292 |
| 2052 | 4,509 | 138 | - | 1,645 | 6,292 |
| 2053 | 4,509 | 138 | - | 1,645 | 6,292 |
| 2054 | 4,509 | 138 | - | 1,645 | 6,292 |
| 2055 | 4,509 | 138 | - | 1,645 | 6,292 |
| 2056 | 4,509 | 138 | - | 1,645 | 6,292 |
| 2057 | 4,509 | 138 | - | 1,645 | 6,292 |
| 2058 | 4,509 | 138 | - | 1,645 | 6,292 |
| 2059 | 4,509 | 138 | - | 1,645 | 6,292 |
| 2060 | 4,509 | 138 | - | 1,645 | 6,292 |
| 2061 | 4,509 | 138 | - | 1,645 | 6,292 |
| 2062 | 4,509 | 138 | - | 1,645 | 6,292 |
| 2063 | 4,509 | 138 | - | 1,645 | 6,292 |
| 2064 | - | - | - | - | - |
| 2065 | - | - | - | - | - |
| 2066 | - | - | - | - | - |
| 2067 | - | - | - | - | - |
| 2068 | - | - | - | - | - |
| 2069 | - | - | - | - | - |
| 2070 | - | - | - | - | - |
| 2071 | - | - | - | - | - |
| 2072 | - | - | - | - | - |
| 2073 | - | - | - | - | - |
| 2074 | - | - | - | - | - |
| Total | 230,033 | 86,743 | - | | 357,441 |

**Appendix F-5**

**Florida Power and Light Unit 1**

**SCENARIO 1 - Unit 1 SAFSTOR, DECON both following Unit 2 Shutdown**

**Estimated DOE Reimbursement**

**Labor, Material/Equip, Waste, Other Direct Cost**

(thousands of 2020 dollars)

| Year | Labor | Material & Equipment | Waste Transportation & Disposal | Other Direct Cost | Total |
|---|---|---|---|---|---|
| 2033 | - | - | - | - | - |
| 2034 | - | - | - | - | - |
| 2035 | - | - | - | - | - |
| 2036 | - | - | - | - | - |
| 2037 | 12,314 | 2,431 | - | 631 | 15,376 |
| 2038 | 11,687 | 2,366 | - | 768 | 14,821 |
| 2039 | 8,076 | 1,841 | - | 745 | 10,662 |
| 2040 | 6,321 | 1,567 | - | 740 | 8,628 |
| 2041 | 4,896 | 312 | - | 1,187 | 6,395 |
| 2042 | 4,896 | 312 | - | 1,187 | 6,395 |
| 2043 | 4,896 | 312 | - | 1,187 | 6,395 |
| 2044 | 4,896 | 312 | - | 1,187 | 6,395 |
| 2045 | 4,896 | 312 | - | 1,187 | 6,395 |
| 2046 | 7,396 | 22,812 | - | 1,187 | 31,395 |
| 2047 | 18,225 | 23,615 | - | 1,435 | 43,275 |
| 2048 | 2,295 | 79 | - | 822 | 3,196 |
| 2049 | 2,295 | 79 | - | 822 | 3,196 |
| 2050 | 2,295 | 79 | - | 822 | 3,196 |
| 2051 | 2,295 | 79 | - | 822 | 3,196 |
| 2052 | 2,295 | 79 | - | 822 | 3,196 |
| 2053 | 2,295 | 79 | - | 822 | 3,196 |
| 2054 | 2,295 | 79 | - | 822 | 3,196 |
| 2055 | 2,295 | 79 | - | 822 | 3,196 |
| 2056 | 2,295 | 79 | - | 822 | 3,196 |
| 2057 | 2,295 | 79 | - | 822 | 3,196 |
| 2058 | 2,295 | 79 | - | 822 | 3,196 |
| 2059 | 2,295 | 79 | - | 822 | 3,196 |
| 2060 | 2,295 | 79 | - | 822 | 3,196 |
| 2061 | 2,295 | 79 | - | 822 | 3,196 |
| 2062 | 2,295 | 79 | - | 822 | 3,196 |
| 2063 | 2,295 | 79 | - | 822 | 3,196 |
| 2064 | - | - | - | - | - |
| 2065 | - | - | - | - | - |
| 2066 | - | - | - | - | - |
| 2067 | - | - | - | - | - |
| 2068 | - | - | - | - | - |
| 2069 | - | - | - | - | - |
| 2070 | - | - | - | - | - |
| 2071 | - | - | - | - | - |
| 2072 | - | - | - | - | - |
| 2073 | - | - | - | - | - |
| 2074 | - | - | - | - | - |
| Total | 125,221 | 57,461 | - | 24,585 | 207,268 |

**Appendix F-5**

**Florida Power and Light Unit 2**

**SCENARIO 1 - Unit 1 SAFSTOR, DECON both following Unit 2 Shutdown**

**Estimated DOE Reimbursement**

**Labor, Material/Equip, Waste, Other Direct Cost**

(thousands of 2020 dollars)

| Year | Labor | Material & Equipment | Waste Transportation & Disposal | Other Direct Cost | Total |
|---|---|---|---|---|---|
| 2033 | - | - | - | - | - |
| 2034 | - | - | - | - | - |
| 2035 | - | - | - | - | - |
| 2036 | - | - | - | - | - |
| 2037 | - | - | - | - | - |
| 2038 | - | - | - | - | - |
| 2039 | - | - | - | - | - |
| 2040 | - | - | - | - | - |
| 2041 | - | - | - | - | - |
| 2042 | - | - | - | - | - |
| 2043 | - | - | - | - | - |
| 2044 | 14,986 | 1,457 | - | 540 | 16,983 |
| 2045 | 20,763 | 1,452 | - | 734 | 22,949 |
| 2046 | 13,757 | 21,070 | - | 716 | 35,542 |
| 2047 | 19,882 | 4,361 | - | 913 | 25,156 |
| 2048 | 2,214 | 59 | - | 824 | 3,096 |
| 2049 | 2,214 | 59 | - | 824 | 3,096 |
| 2050 | 2,214 | 59 | - | 824 | 3,096 |
| 2051 | 2,214 | 59 | - | 824 | 3,096 |
| 2052 | 2,214 | 59 | - | 824 | 3,096 |
| 2053 | 2,214 | 59 | - | 824 | 3,096 |
| 2054 | 2,214 | 59 | - | 824 | 3,096 |
| 2055 | 2,214 | 59 | - | 824 | 3,096 |
| 2056 | 2,214 | 59 | - | 824 | 3,096 |
| 2057 | 2,214 | 59 | - | 824 | 3,096 |
| 2058 | 2,214 | 59 | - | 824 | 3,096 |
| 2059 | 2,214 | 59 | - | 824 | 3,096 |
| 2060 | 2,214 | 59 | - | 824 | 3,096 |
| 2061 | 2,214 | 59 | - | 824 | 3,096 |
| 2062 | 2,214 | 59 | - | 824 | 3,096 |
| 2063 | 2,214 | 59 | - | 824 | 3,096 |
| 2064 | - | - | - | - | - |
| 2065 | - | - | - | - | - |
| 2066 | - | - | - | - | - |
| 2067 | - | - | - | - | - |
| 2068 | - | - | - | - | - |
| 2069 | - | - | - | - | - |
| 2070 | - | - | - | - | - |
| 2071 | - | - | - | - | - |
| 2072 | - | - | - | - | - |
| 2073 | - | - | - | - | - |
| 2074 | - | - | - | - | - |
| Total | 104,812 | 29,282 | - | 16,080 | 150,174 |

**Appendix F-6**

**Florida Power and Light - St. Lucie Units 1 & 2**

**SCENARIO 2 - SAFSTOR**

**Estimated DOE Reimbursement**

**Labor, Material/Equip, Waste, Other Direct Cost**

(thousands of 2020 dollars)

| Year | Labor | Material & Equipment | Waste Transportation & Disposal | Other Direct Cost | Total |
|---|---|---|---|---|---|
| 2033 | - | - | - | - | - |
| 2034 | - | - | - | - | - |
| 2035 | - | - | - | - | - |
| 2036 | - | - | - | - | - |
| 2037 | 12,297 | 2,336 | - | 631 | 15,264 |
| 2038 | 11,678 | 2,233 | - | 768 | 14,679 |
| 2039 | 8,071 | 1,747 | - | 745 | 10,562 |
| 2040 | 6,319 | 1,481 | - | 740 | 8,541 |
| 2041 | 4,762 | 287 | - | 1,781 | 6,829 |
| 2042 | 4,762 | 287 | - | 1,781 | 6,829 |
| 2043 | 4,762 | 287 | - | 1,781 | 6,829 |
| 2044 | 19,747 | 1,746 | - | 2,321 | 23,814 |
| 2045 | 25,524 | 1,744 | - | 2,515 | 29,783 |
| 2046 | 28,518 | 36,360 | - | 2,497 | 67,375 |
| 2047 | 30,462 | 35,437 | - | 2,969 | 68,868 |
| 2048 | 5,817 | 429 | - | 1,757 | 8,004 |
| 2049 | 5,817 | 429 | - | 1,757 | 8,004 |
| 2050 | 5,817 | 429 | - | 1,757 | 8,004 |
| 2051 | 5,817 | 429 | - | 1,757 | 8,004 |
| 2052 | 5,817 | 429 | - | 1,757 | 8,004 |
| 2053 | 5,817 | 429 | - | 1,757 | 8,004 |
| 2054 | 5,817 | 429 | - | 1,757 | 8,004 |
| 2055 | 5,817 | 429 | - | 1,757 | 8,004 |
| 2056 | 5,817 | 429 | - | 1,757 | 8,004 |
| 2057 | 5,817 | 429 | - | 1,757 | 8,004 |
| 2058 | 5,817 | 429 | - | 1,757 | 8,004 |
| 2059 | 5,817 | 429 | - | 1,757 | 8,004 |
| 2060 | 5,817 | 429 | - | 1,757 | 8,004 |
| 2061 | 5,817 | 429 | - | 1,757 | 8,004 |
| 2062 | 5,817 | 429 | - | 1,757 | 8,004 |
| 2063 | 5,817 | 429 | - | 1,757 | 8,004 |
| 2064 | - | - | - | - | - |
| 2065 | - | - | - | - | - |
| 2066 | - | - | - | - | - |
| 2067 | - | - | - | - | - |
| 2068 | - | - | - | - | - |
| 2069 | - | - | - | - | - |
| 2070 | - | - | - | - | - |

**Appendix F-6**

**Florida Power and Light - St. Lucie Units 1 & 2**

**SCENARIO 2 - SAFSTOR**

**Estimated DOE Reimbursement**

**Labor, Material/Equip, Waste, Other Direct Cost**

(thousands of 2020 dollars)

| Year | Labor | Material & Equipment | Waste Transportation & Disposal | Other Direct Cost | Total |
|---|---|---|---|---|---|
| 2071 | - | - | - | - | - |
| 2072 | - | - | - | - | - |
| 2073 | - | - | - | - | - |
| 2074 | - | - | - | - | - |
| 2075 | - | - | - | - | - |
| 2076 | - | - | - | - | - |
| 2077 | - | - | - | - | - |
| 2078 | - | - | - | - | - |
| 2079 | - | - | - | - | - |
| 2080 | - | - | - | - | - |
| 2081 | - | - | - | - | - |
| 2082 | - | - | - | - | - |
| 2083 | - | - | - | - | - |
| 2084 | - | - | - | - | - |
| 2085 | - | - | - | - | - |
| 2086 | - | - | - | - | - |
| 2087 | - | - | - | - | - |
| 2088 | - | - | - | - | - |
| 2089 | - | - | - | - | - |
| 2090 | - | - | - | - | - |
| 2091 | - | - | - | - | - |
| 2092 | - | - | - | - | - |
| 2093 | - | - | - | - | - |
| 2094 | - | - | - | - | - |
| 2095 | - | - | - | - | - |
| 2096 | - | - | - | - | - |
| 2097 | - | - | - | - | - |
| 2098 | - | - | - | - | - |
| **Total** | **249,977** | **90,816** | **-** | **46,637** | **387,430** |

**Appendix F-6**
**Florida Power and Light - St. Lucie Unit 1**
**SCENARIO 2 - SAFSTOR**
**Estimated DOE Reimbursement**
**Labor, Material/Equip, Waste, Other Direct Cost**
(thousands of 2020 dollars)

| Year | Labor | Material & Equipment | Waste Transportation & Disposal | Other Direct Cost | Total |
|---|---|---|---|---|---|
| 2033 | - | - | - | - | - |
| 2034 | - | - | - | - | - |
| 2035 | - | - | - | - | - |
| 2036 | - | - | - | - | - |
| 2037 | 12,297 | 2,336 | - | 631 | 15,264 |
| 2038 | 11,678 | 2,233 | - | 768 | 14,679 |
| 2039 | 8,071 | 1,747 | - | 745 | 10,562 |
| 2040 | 6,319 | 1,481 | - | 740 | 8,541 |
| 2041 | 4,762 | 287 | - | 1,781 | 6,829 |
| 2042 | 4,762 | 287 | - | 1,781 | 6,829 |
| 2043 | 4,762 | 287 | - | 1,781 | 6,829 |
| 2044 | 4,762 | 287 | - | 1,781 | 6,829 |
| 2045 | 4,762 | 287 | - | 1,781 | 6,829 |
| 2046 | 9,762 | 20,287 | - | 1,781 | 31,829 |
| 2047 | 15,580 | 26,073 | - | 2,056 | 43,709 |
| 2048 | 2,925 | 163 | - | 924 | 4,012 |
| 2049 | 2,925 | 163 | - | 924 | 4,012 |
| 2050 | 2,925 | 163 | - | 924 | 4,012 |
| 2051 | 2,925 | 163 | - | 924 | 4,012 |
| 2052 | 2,925 | 163 | - | 924 | 4,012 |
| 2053 | 2,925 | 163 | - | 924 | 4,012 |
| 2054 | 2,925 | 163 | - | 924 | 4,012 |
| 2055 | 2,925 | 163 | - | 924 | 4,012 |
| 2056 | 2,925 | 163 | - | 924 | 4,012 |
| 2057 | 2,925 | 163 | - | 924 | 4,012 |
| 2058 | 2,925 | 163 | - | 924 | 4,012 |
| 2059 | 2,925 | 163 | - | 924 | 4,012 |
| 2060 | 2,925 | 163 | - | 924 | 4,012 |
| 2061 | 2,925 | 163 | - | 924 | 4,012 |
| 2062 | 2,925 | 163 | - | 924 | 4,012 |
| 2063 | 2,925 | 163 | - | 924 | 4,012 |
| 2064 | - | - | - | - | - |
| 2065 | - | - | - | - | - |
| 2066 | - | - | - | - | - |
| 2067 | - | - | - | - | - |
| 2068 | - | - | - | - | - |
| 2069 | - | - | - | - | - |
| 2070 | - | - | - | - | - |

**Appendix F-6**

**Florida Power and Light - St. Lucie Unit 1**

**SCENARIO 2 - SAFSTOR**

**Estimated DOE Reimbursement**

**Labor, Material/Equip, Waste, Other Direct Cost**

(thousands of 2020 dollars)

| Year | Labor | Material & Equipment | Waste Transportation & Disposal | Other Direct Cost | Total |
|---|---|---|---|---|---|
| 2071 | - | - | - | - | - |
| 2072 | - | - | - | - | - |
| 2073 | - | - | - | - | - |
| 2074 | - | - | - | - | - |
| 2075 | - | - | - | - | - |
| 2076 | - | - | - | - | - |
| 2077 | - | - | - | - | - |
| 2078 | - | - | - | - | - |
| 2079 | - | - | - | - | - |
| 2080 | - | - | - | - | - |
| 2081 | - | - | - | - | - |
| 2082 | - | - | - | - | - |
| 2083 | - | - | - | - | - |
| 2084 | - | - | - | - | - |
| 2085 | - | - | - | - | - |
| 2086 | - | - | - | - | - |
| 2087 | - | - | - | - | - |
| 2088 | - | - | - | - | - |
| 2089 | - | - | - | - | - |
| 2090 | - | - | - | - | - |
| 2091 | - | - | - | - | - |
| 2092 | - | - | - | - | - |
| 2093 | - | - | - | - | - |
| 2094 | - | - | - | - | - |
| 2095 | - | - | - | - | - |
| 2096 | - | - | - | - | - |
| 2097 | - | - | - | - | - |
| 2098 | - | - | - | - | - |
| **Total** | **134,317** | **58,201** | **-** | **30,403** | **222,921** |

**Appendix F-6**

**Florida Power and Light - St. Lucie Unit 2**

**SCENARIO 2 - SAFSTOR**

**Estimated DOE Reimbursement**

**Labor, Material/Equip, Waste, Other Direct Cost**

(thousands of 2020 dollars)

| Year | Labor | Material & Equipment | Waste Transportation & Disposal | Other Direct Cost | Total |
|---|---|---|---|---|---|
| 2033 | - | - | - | - | - |
| 2034 | - | - | - | - | - |
| 2035 | - | - | - | - | - |
| 2036 | - | - | - | - | - |
| 2037 | - | - | - | - | - |
| 2038 | - | - | - | - | - |
| 2039 | - | - | - | - | - |
| 2040 | - | - | - | - | - |
| 2041 | - | - | - | - | - |
| 2042 | - | - | - | - | - |
| 2043 | - | - | - | - | - |
| 2044 | 14,986 | 1,459 | - | 540 | 16,985 |
| 2045 | 20,763 | 1,457 | - | 734 | 22,954 |
| 2046 | 18,757 | 16,073 | - | 716 | 35,546 |
| 2047 | 14,882 | 9,365 | - | 913 | 25,159 |
| 2048 | 2,892 | 266 | - | 833 | 3,992 |
| 2049 | 2,892 | 266 | - | 833 | 3,992 |
| 2050 | 2,892 | 266 | - | 833 | 3,992 |
| 2051 | 2,892 | 266 | - | 833 | 3,992 |
| 2052 | 2,892 | 266 | - | 833 | 3,992 |
| 2053 | 2,892 | 266 | - | 833 | 3,992 |
| 2054 | 2,892 | 266 | - | 833 | 3,992 |
| 2055 | 2,892 | 266 | - | 833 | 3,992 |
| 2056 | 2,892 | 266 | - | 833 | 3,992 |
| 2057 | 2,892 | 266 | - | 833 | 3,992 |
| 2058 | 2,892 | 266 | - | 833 | 3,992 |
| 2059 | 2,892 | 266 | - | 833 | 3,992 |
| 2060 | 2,892 | 266 | - | 833 | 3,992 |
| 2061 | 2,892 | 266 | - | 833 | 3,992 |
| 2062 | 2,892 | 266 | - | 833 | 3,992 |
| 2063 | 2,892 | 266 | - | 833 | 3,992 |
| 2064 | - | - | - | - | - |
| 2065 | - | - | - | - | - |
| 2066 | - | - | - | - | - |
| 2067 | - | - | - | - | - |
| 2068 | - | - | - | - | - |
| 2069 | - | - | - | - | - |
| 2070 | - | - | - | - | - |

**Appendix F-6**

**Florida Power and Light - St. Lucie Unit 2**

**SCENARIO 2 - SAFSTOR**

**Estimated DOE Reimbursement**

**Labor, Material/Equip, Waste, Other Direct Cost**

(thousands of 2020 dollars)

| Year | Labor | Material & Equipment | Waste Transportation & Disposal | Other Direct Cost | Total |
|---|---|---|---|---|---|
| 2071 | - | - | - | - | - |
| 2072 | - | - | - | - | - |
| 2073 | - | - | - | - | - |
| 2074 | - | - | - | - | - |
| 2075 | - | - | - | - | - |
| 2076 | - | - | - | - | - |
| 2077 | - | - | - | - | - |
| 2078 | - | - | - | - | - |
| 2079 | - | - | - | - | - |
| 2080 | - | - | - | - | - |
| 2081 | - | - | - | - | - |
| 2082 | - | - | - | - | - |
| 2083 | - | - | - | - | - |
| 2084 | - | - | - | - | - |
| 2085 | - | - | - | - | - |
| 2086 | - | - | - | - | - |
| 2087 | - | - | - | - | - |
| 2088 | - | - | - | - | - |
| 2089 | - | - | - | - | - |
| 2090 | - | - | - | - | - |
| 2091 | - | - | - | - | - |
| 2092 | - | - | - | - | - |
| 2093 | - | - | - | - | - |
| 2094 | - | - | - | - | - |
| 2095 | - | - | - | - | - |
| 2096 | - | - | - | - | - |
| 2097 | - | - | - | - | - |
| 2098 | - | - | - | - | - |
| **Total** | **115,661** | **32,616** | **-** | **16,234** | **164,510** |

**Appendix G**

# Summary of Costs Shared Structures

(thousands, 2020 dollars)

| | Unit 1 | Unit 2 | Total |
|---|---|---|---|
| **Structures** | | | |
| Contaminated Soil | 68,949 | 63,636 | 132,585 |
| Site Paving | 1,299 | 1,299 | 2,598 |
| Clean Concrete Processing | 1,928 | 2,792 | 4,720 |
| Security Improvements | 1,144 | 1,144 | 2,288 |
| Shared Miscellaneous Site Structures | - | 5,063 | 5,063 |
| Steam Generator Blowdown Facility | - | 831 | 831 |
| | **73,320** | **74,765** | **148,085** |

# SECTION 12

# COMPARISON REPORT:
# Comparative Analysis of Cost Studies
# 2015 & 2020 Cost Studies

ENERGYSOLUTIONS

# COMPARISON REPORT 2015 - 2020
# of the
# St. Lucie Nuclear Plant, Units 1 and 2

**Project No. 164086-01** **Rev. 1**

**Prepared for:**
Florida Power & Light Company

**Prepared by:**
EnergySolutions, LLC
121 W. Trade Street, Suite 2700
Charlotte, NC 28202

Authored By: Kevin M. Kirkley, Sr. Estimator — Date: 11/19/2020

Approved By: Jake H. Oleksiak, Project Controls Manager — Date: 11/19/20

- [X] New Report
- [ ] Title Change
- [ ] Report Revision
- [ ] Report Rewrite

Effective Date: November 19, 2020

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# SUMMARY

This document provides a comparative discussion on Decommissioning Cost Estimates (DCEs) prepared for the St. Lucie Nuclear Plant Units 1 and 2 (St. Lucie) in 2015 (by TLG Services, Inc.) and prepared in 2020 (by Energy*Solutions*). The estimates described in this document were constructed for a prompt decommissioning scenario (Prompt DECON) following the scheduled cessation of operations, recognizing that there is a seven-year offset in the scheduled shutdown dates for the two nuclear units. The scope of the two estimates is consistent, including cost subcategories for license termination, spent fuel management and site restoration activities.

The estimates were generated in 2015 and 2020 dollars, respectively. The 2020, or current estimate, was developed using the basic inventory and plant design information from the 2010 cost model. The data, estimating assumptions and site-specific considerations were reviewed for the 2015 analysis. The cost model was modified where new information was available, updated site-specific information was obtained, or experience from past decommissioning programs justified such changes.

The overall estimate to decommission St. Lucie (for the Integrated DECON alternative) decreased 3.4% over the five-year period between estimates or approximately a 0.7% decrease annually. The decrease (or increase) in the individual cost subcategories is shown in Table 1.

The cost elements were assigned to one of three subcategories: License Termination, Spent Fuel Management, and Site Restoration. Delegation of cost elements into these categories was for the purpose of comparison (e.g., with NRC financial guidelines) or to permit specific financial treatment [e.g., Asset Retirement Obligation (ARO) determinations]. In reality, there can be considerable interaction or overlap between the activities in the three subcategories.

**Table 1 – Cost Subcategory Comparison Between 2015 and 2020 Estimates**

| Cost Subcategory | 2015 ($1,000s) | 2020 ($1,000s) | Delta ($1,000s) | Percent Change | Annual Change |
|---|---|---|---|---|---|
| License Termination | 1,208,237 | 1,254,740 | 46,503 | 3.8% | 0.8% |
| Spent Fuel Management | 486,705 | 427,313 | (59,392) | -12.2% | -2.6% |
| Site Restoration | 111,537 | 63,409 | (48,128) | -43.1% | -10.7% |
| Total | **1,806,479** | **1,745,462** | **(61,017)** | **-3.4%** | **-0.7%** |

The subcategory License Termination was used to accumulate costs that are consistent with the NRC's definition of decommissioning in its financial assurance regulations (i.e., 10 CFR Part 50.75, Reporting and recordkeeping for decommissioning planning, etc.). The cost reported for this subcategory is generally sufficient to terminate the operating licenses for the two reactors, recognizing that there may be some additional cost impact from spent fuel management. The cost associated with St. Lucie License Termination activities increased 3.8% over the five years or approximately 0.8% increase annually. The primary driver is Energy*Solutions'* 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 exposure to dose, increase general site safety, and provide schedule certainty. Within the 2020 DCE are shifts in scope from the 2015 TLG study with the movement of the Reactor, Auxiliary Buildings, and the Fuel Handling Buildings to the License Termination subcategory from the Site

Restoration subcategory. The additional costs associated with the debris waste generated from this methodology is offset by the reduction in labor cost from avoiding extensive decontamination and survey efforts in structures. Disposal rates for all waste have been updated based on the 2020 LOP rates provided by FPL.

The Spent Fuel Management subcategory contains costs anticipated to be incurred once the nuclear units cease operation for the off-loading of the spent fuel from the pools either directly to the Department of Energy (DOE) or to an Independent Spent Fuel Storage Installation (ISFSI) for interim storage, and the eventual transfer of fuel from the ISFSI to the DOE. The 2020 DCE includes equipment and transfer costs only for shipment of spent fuel to the DOE prior to the cessation of the units, however any staffing costs that are deemed necessary for this work prior to cessation of the units is assumed to be covered by plant operating costs. Costs were also included for the operation of the ISFSI until such time that the transfer of all fuel from this facility to an off-site location (e.g., geologic repository or interim facility) is complete. The costs assigned to this subcategory decreased by 12.2% over the five years or approximately 2.6% decrease annually. A portion of this difference could be attributed to the number of canisters transferred directly to the DOE from the spent fuel pool (see Table 8). Energy*Solutions* assumes a certain split on allocated (undistributed) costs both in the Planning & Transition Period and the SAFSTOR period. It is unclear if this split on allocated costs is similar to what TLG utilized in the 2015 cost study. Also, the 2015 estimate includes the cost to expand the existing ISFSI (approximately $0.8M), but the 2020 cost estimate does not. In addition, while the number of canisters to be purchased for spent fuel to be transferred to the ISFSI increased by 12 (as shown in Table 8), the cost is offset by the 25% reduction on costs due to the “bulk” purchase of the canisters. It is unclear if TLG included the transfer of spent fuel to the DOE from the Spent Fuel Pool prior the permanent shut down of the facility in the 2015 DCE. This cost has been excluded in the Energy*Solutions* 2020 DCE.

Site Restoration was 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. Structures that have been exposed to radioactive material and require decontamination such as the Reactor Buildings, Auxiliary Buildings and the Fuel Handling Buildings are included in the License Termination subcategory of the 2020 DCE. Structures are removed to a depth of three feet below grade and backfilled to conform to local grade. The costs assigned to the Site Restoration subcategory decreased 43.1% decrease over the five years or approximately 10.7% decrease annually. The primary driver in this difference is the movement of the Reactor, Auxiliary Buildings, and the Fuel Handling Buildings to the License Termination subcategory. In addition, it is unclear how the TLG allocated costs (staffing, insurances, taxes, etc.) were derived. The majority of these costs in the 2020 study between Period 3 (License Termination) and Period 4 (Site Restoration) are split 93% to License Termination and 7% to Site Restoration.

# COMPARATIVE ANAYLSIS

TLG completed a decommissioning cost analysis for St. Lucie in 2015. The analysis provided the Florida Power & Light Company (FPL), the owner and operator of the two nuclear units, with the projected costs (in 2015 dollars) to completely decontaminate and dismantle the station following the normal cessation of plant operations. For purposes of this comparison, this analysis is referred to as the 2015 estimate or previous analysis.

In 2020, Energy*Solutions* performed a new cost analysis for FPL. The current analysis uses the physical plant inventory and information provided by FPL to complete the current analysis. This data was reviewed, along with the assumptions from the previous anaylsis and other site-specific considerations. Based on experience from previous and ongoing decomissioning projects and previous proposal efforts, the St. Lucie cost analysis has been revised.

In 2015, the estimate to promptly decommission St. Lucie (Integrated DECON alternative) was estimated at approximately $1,806.5 million (in 2015 dollars). The comparable cost in 2020 is $1,745.5 million (in 2020 dollars). This represents a 3.4% decrease in the overall cost.

The decommissioning scope of the current cost estimate has not significantly changed from that evaluated presented in 2015.

In an attempt to compare the estimates, the costs have been broken down into 15 separate cost elements as shown in the Table 2 below. A brief description of the change and primary contributing cost element factor(s) to the change is detailed within the following narrative. As a general note to the below cost element comparisons: Energy*Solutions* has attempted to group the elements similarly to the 2010-2015 Comparison Report; however, it is unclear if all cost elements contain similar information/costs.

**Table 2 – Cost Element Comparison Between 2015 and 2020 Estimates**

| Cost Element | 2015 ($1,000s) | 2020 ($1,000s) | Delta ($1,000s) | Percent Change | Annual Change |
|---|---|---|---|---|---|
| Characterization/Surveys | 43,144 | 20,549 | (22,595) | -52.4% | -13.8% |
| Corporate Support (Fixed Overhead) | 19,387 | 17,592 | (1,795) | -9.3% | -1.9% |
| Decontamination & Removal | 243,751 | 253,063 | 9,312 | 3.8% | 0.8% |
| Energy | 46,828 | 10,690 | (36,138) | -77.2% | -25.6% |
| Florida LLRW Inspection Fee | 5,130 | 10,429 | 5,299 | 103.3% | 15.2% |
| INPO, NEI Fees * | 10,187 | - | (10,187) | -100.0% | -100.0% |
| Insurance & Regulatory Fees | 47,247 | 101,658 | 54,411 | 115.2% | 16.6% |
| Misc. Equip/Site Services | 16,783 | 9,203 | (7,580) | -45.2% | -11.3% |
| Program Management | 562,822 | 509,493 | (53,329) | -9.5% | -2.0% |
| Property Taxes | 10,493 | 3,495 | (6,998) | -66.7% | -19.7% |
| Security | 181,472 | 149,156 | (32,316) | -17.8% | -3.8% |
| Spent Fuel Management | 280,964 | 142,650 | (138,314) | -49.2% | -12.7% |
| Spent Fuel Pool Isolation | 21,250 | 23,231 | 1,981 | 9.3% | 1.8% |
| Waste Packaging, Transportation & Disposal - Class A, B, C | 285,103 | 440,182 | 155,079 | 54.4% | 9.1% |
| Waste Packaging, Transportation & Disposal - GTCC | 31,918 | 54,073 | 22,155 | 69.4% | 11.1% |
| **Total** | **1,806,479** | **1,745,462** | **(61,017)** | **-3.4%** | **-0.7%** |
| *** Items assumed to not be required post shutdown** | | | | | |

Characterization / Surveys – 52.4% decrease over the five years or approximately 13.8% decrease annually. The primary driver of this decrease is due to the methodology change. While additional costs associated with the debris waste generated from this methodology these costs are offset by the reduction in labor cost from avoiding extensive decontamination and survey efforts in structures. The 2020 estimate is based on previous experience for Site Characterizations, baseline surveys, and Final Status Surveys.

Corporate Support (Fixed Overhead) – Annual site costs provided increased from $1.6 million in 2015 to $1.8 million in 2020. However, the 2020 DCE accounts for a reduced staff and reduced site costs accordingly. These costs are applied across the Periods 1-4 in the DCE estimate.

Decontamination & Removal – 3.8% increase over the five years or approximately 0.8% increase annually. This increase, primarily due to escalation, was minimized due to change in methodology of decommissioning between TLG and Energy*Solutions*.

Energy – 77.2% reduction over the five year or approximately a 25.6% reduction annually. Based on discussions with FPL, the 2015 DCE utilized the heavy oil energy usage cost. The 2020 DCE utilizes the gas energy usage cost provided. For comparison the cost per kilowatt hour in the 2015 DCE was $0.158 and the cost in the 2020 DCE is $0.0338 per kilowatt hour.

Florida LLRW Inspection Fee – 103.3% increase over the five-year period or approximately a 25.6% increase annually. The change in methodology drove this increase. Due to additional waste being generated, additional inspection fees will be required.

INPO, NEI Fees – It is assumed that these are no longer required once the plant has permanently shut down.

Insurance & Regulatory Fees – 115.2% increase over the five-year period or approximately 16.5% annually. The primary driver of this increase is that the insurance cost is carried out until the spent fuel is removed from the site, this is for Periods 1-5. The 2015 TLG comparison report states that the Nuclear Property Insurance Premiums were significantly reduced after plant shutdown, however, in the 2020 DCE this rate was reduced at multiple decommissioning milestones. See Table 3 for the rates at shutdown. The reduction of insurance premiums is based on current and previous experience from other projects in the industry. In addition, Emergency Planning Fees (County & FEMA fees in the 2020 DCE) cease once all spent fuel is removed from the spent fuel pool.

The 2020 rates shown below in Table 3 do not contain contingency.

**Table 3 – Insurance and Regulatory Comparison Between 2015 and 2020 Estimates**

| Annual Cost | 2015 | 2020 |
|---|---|---|
| Nuclear Liability Insurance Premium (per unit)* | $776,707 | $902,534 |
| Nuclear Property Insurance Premium (site)** | $3,870,000 | $2,321,400 |
| NRC License Fee (per unit) | $237,000 | $172,000 |
| Emergency Planning Fee (County & FEMA)*** | $917,488 | $1,563,868 |
| | | |
| NRC Hourly Rate | $268 | $278 |
| * 2020 rate assumes rate provide by FPL will be 50% at time of shutdown. Rate further reduced upon other decommissioning milestones.<br>** 2020 rate shown is once plants are shutdown. Rate further reduced upon other decommissioning milestones<br>*** assumed no fee required once spent fuel is removed from the SFP | | |

Misc. Equipment / Site Services – 45.2% decrease over the five-year period or 11.3% decrease annually. The majority of the difference is due to the major construction equipment costs being included in the decontamination and removal portion of the 2020 estimate. It is unclear in the 2015 DCE where the construction equipment is included.

Program Management – 9.5% decrease over the five years or 2.0% decrease annually. Reduction is due to difference in staffing plan models from the 2015 to 2020 DCEs.

Property Taxes – 66.7% decrease over the five-year period or 19.7% decrease annually. The 2020 DCE assumes land only taxes will be paid post shutdown of Unit 1 and Unit 2. These costs were also adjusted for the time gap between when Unit 1 and Unit 2 shut down. This cost is carried until the ISFSI demolition is complete. It is unclear how property taxes were calculated in the 2015 TLG DCE.

Security – 17.8% decrease over the five-year period or 3.8% decrease annually. The main contributor to this decrease is the difference in security staffing.

Spent Fuel Management – 49.2% decrease over the five years or 12.7% decrease annually. The current 2015) analysis assumes that the DOE will begin the process of removing spent fuel from the St. Lucie site in 2033 (based upon a 2030 industry-wide start date), however, the DCE only includes spent fuel transferred after the units have permanently shut down. The process is expected to be completed by the year 2071. The schedule is slightly changed from the one presented in the 2015 DCE (Table 5).

A portion of this difference is due to the anticipated savings by FPL of 25% for the container material and equipment due to bulk purchasing. It is unclear if the comparison is comparing like items due to the major difference. The 2020 DCE costs include the ISFSI maintenance, spent fuel maintenance, all spent fuel transfers (both to DOE and ISFSI post shut down), and demolition of the ISFSI pad. Table 4 identifies a few of the major items included in the Spent Fuel Management comparison. The 2020 DCE assumes that no ISFSI expansion is required.

**Table 4 – Spent Fuel Management Comparison Between 2015 and 2020 Estimates**

| Unit Costs (each) | 2015 | 2020 |
|---|---|---|
| Dry Storage Canister / Horizontal Storage Module | $1,254,928 | $1,015,163 |
| Loading / Transfer Cost | $392,600 | $480,000 |
| Pool to DOE Campaign Cost (Unit 1) | $3,280,100 | $3,374,000 |
| Pool to DOE Campaign Cost (Unit 2)* | - | $2,261,000 |
| Pool to ISFSI Cost** | $3,280,100 | - |
| ISFSI Unloading Cost | $196,300 | $115,000 |
| ISFSI Campaign Cost | $820,025 | - |
| * Cost for Pool to DOE for Unit 2. Assumes 33% savings on equipment.<br>** No fixed cost in 2020 DCE as the DCE assumes loading and transfer equipment for pool to DOE will be utilized for pool to ISFSI. Also, assumes a continuous operation, therefore no additional mobilization and demobilization will be required. | | |

**Table 5 – Spent Fuel Activity Comparison Between 2015 and 2020**

| Activity | 2015 | 2020 |
|---|---|---|
| DOE Repository Opening | 2030 | 2030 |
| Spent Fuel Transfer - Pool to DOE* | 51 canisters | 25 canisters |
| Spent Fuel Transfer - Pool to ISFSI | 50 canisters | 62 canisters |
| Spent Fuel Transfer - ISFSI to DOE | 129 canisters | 150 canisters |
| Final Year of DOE Pickup | 2073 | 2071 |
| ISFSI Operating Period (post unit 2 shutdown) (years) | 30 | 28 |
| | | |
| GTCC Canisters | 14 canisters | 12 canisters |
| * 2020 quantity reflects quantity post shutdown of Units | | |

Spent Fuel Pool Isolation – 9.3% increase over the five years or 1.8% increase annually. Difference is primarily due to escalation between the years 2015 through 2020.

Waste Packaging, Transportation & Disposal (Class A, B, & C) – 54.4% increase over the five-year period or 9.1% increase annually. This increase is primarily due to the additional debris added due to methodology change. As shown in Table 6 the LLRW burial volume increased significantly due to the methodology change. In addition, the soil price increase is based on the updated Life-of-Plant agreement between Energy*Solutions* and FPL. TLG noted that disposal costs were discounted due to soil volume, Energy*Solutions* also discounted this rate slightly. Also, the Florida LLRW inspection fee is included in the waste costs.

Waste Packaging, Transportation & Disposal (GTCC) – 69.4% increase over the five-year period or 11.1% increase annually. Included in the 2020 DCE are 12 containers versus the 14 included in the 2015 DCE. The cost for disposal is approximately $5,277 per cubic foot (including contingency) in the 2015 DCE as compared to approximately $5,805 per cubic foot (including contingency) in the 2020 DCE. This delta can be attributed to the assumed escalation of the 2015 disposal costs. The transportation costs of the GTCC material is included in the disposal cost in the 2015 DCE, while the 2020 DCE includes approximately $4.3M (including contingency) in transportation costs for GTCC in addition to the disposal cost. The packaging cost for GTCC between the 2015 DCE and 2020 DCE is significantly different. The

2015 DCE appears to include approximately $2.8M (excluding contingency) where the 2020 DCE includes approximately $14.1M (excluding contingency). The difference can be attributed to associated packaging cost captured in the other areas of the 2015 DCE (assumed to be included in the Reactor Vessel Internals packaging costs, but we are unable to verify the assumption).

**Table 6 – Waste Comparison Between 2015 and 2020 Estimates**

| | | | | Waste Volume (CF) | |
|---|---|---|---|---|---|
| **Waste Class** | **Waste Form** | **Cost Basis** | **Class** | **2015** | **2020*** |
| Low Level Radioactive Waste | Debris / Storm Drain ** | Energy*Solutions* | A | 409,201 | 2,637,826 |
| | Soil | Energy*Solutions* | A | 1,969,897 | 2,013,205 |
| | Debris | WCS | BC | 2,767 | 3,740 |
| Greater than Class C (GTCC) | Modified Dry Storage Containers (DSCs) | Spent Fuel Equivalent | GTCC | 5,772 | 5,772 |
| **Total Disposal Volume** | | | | **2,387,637** | **4,660,543** |
| | | | | | |
| Processed / Conditioned *** | Debris | Recycling Vendors | A | 332,863 | - |

* 2020 volume is burial volume.
** Delta in Debris / Storm Drain due to differing Decommissioning methodology between TLG and Energy*Solutions*. Quantity includes additional concrete debris that will be removed as Class A, in lieu of clean.
*** Delta due to differing methodology between TLG and Energy*Solutions*.

# CONCLUSION

The total cost to decommission the St. Lucie nuclear units decreased 3.4% over the five-year period between the 2015 and 2020 estimates or approximately 0.7% annually.

As shown in Table 1, License Termination costs (or the cost associated with "decommissioning" as defined by the NRC in its financial assurance regulations) increased 3.8% over the five-year period (for an average annual increase of 0.8%). The primary change in the cost increase is the result of the increase in the volume and cost for disposal of decommissioning waste streams (e.g. additional concrete debris generated due to change in methodology), as well as general increases in labor and material costs. In addition, the Reactor Buildings, Auxiliary Buildings, and Fuel Handling Buildings were moved from the Site Restoration subcategory to the License Termination subcategory.

The Spent Fuel Management subcategory contains costs associated with the interim storage of fuel at the St. Lucie site until such time that the DOE is able to take possession. The costs estimated for this activity decreased 12.2% from 2015. A portion of this difference could be attributed to the number of canisters transferred directly to the DOE from the spent fuel pool (see Table 5). Energy*Solutions* assumes a certain split on allocated (undistributed) costs both in the Planning & Transition Period and the SAFSTOR period. It is unclear if this split on allocated costs is similar to what TLG utilized in the 2015 cost study. Also, the 2015 estimate includes an expansion to the ISFSI, whereas the 2020 study does not. As noted in the spent fuel narrative, it is unclear if the TLG 2015 estimate included the spent fuel transfer to the DOE from the Spent Fuel Pool prior to shut down. This cost is excluded in the 2020 Energy*Solutions* DCE.

The Site Restoration subcategory showed a decrease of 43.1% over the five years. The primary contributor to this reduction is movement of the costs associated with the Reactor Buildings, Auxiliary Buildings, and Fuel Handling Buildings from the Site Restoration subcategory to the License Termination subcategory.

# FLORIDA POWER & LIGHT COMPANY

# 2020 DECOMMISSIONING STUDY

## TURKEY POINT NUCLEAR UNIT
## NOS. 3 & 4

**December 2020**

**Florida Power & Light Company**
**2020 Decommissioning Study**
**Turkey Point Nuclear Units**

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**Section Numbers:**

# SECTION 1

# EXECUTIVE SUMMARY

Overview

FPL's 2020 Nuclear Decommissioning Study results are based on estimates and assumptions that follow Nuclear Regulatory Commission ("NRC") requirements and industry guidelines for the development of the costs to remove and dismantle nuclear power plants years into the future. Funds are maintained and interest is reinvested in the decommissioning trusts as required by the NRC, Internal Revenue Service, Federal Energy Regulatory Commission ("FERC") and Florida Public Service Commission ("FPSC" or the "Commission"). Under federal law, these funds may only be used for nuclear decommissioning, are not available for any other use and do not earn a return or profit for FPL. The study is essentially a snapshot, which shows that based on current assumptions FPL's nuclear decommissioning trust funds are appropriately funded, i.e., the current fund balances exceed the expected costs of decommissioning on a present value basis. Compared to 2015, the currently calculated funding position has improved due in part to the Turkey Point license extension which will allow funds to grow for an additional twenty years as well as a slight decrease in future decommissioning costs. FPL customers have not contributed to the decommissioning trusts since 2005, and the study confirms that, as of December 31, 2020, the trusts continue to be adequately funded without additional FPL customer contributions.

Decommissioning studies represent the aggregation of numerous estimates for activities and costs that will not be incurred for at least 15 years. As such, they are highly dependent upon input assumptions that can and will change over time, such that future funding positions could differ from today's position. The 2020 Nuclear Decommissioning Study was prepared by EnergySolutions, LLC ("EnergySolutions"). As such adjustments to the underlying assumptions referenced above netted an overall reduction in cost of 23.5% for Turkey Point and 3.4% for St. Lucie between the 2020 and 2015 studies. The decrease in cost for Turkey Point is primarily a result of the license extension. A detailed analysis of the changes in assumptions is provided in the last section (Section 11 and 12) of each site reports. The current assumed long-term fund earnings rate of 4.0 percent is 0.3 percent higher than the assumption utilized in the 2015 study due to changes in the allocations in the investment portfolio plus the impact of the Turkey Point license extension. Such changes, regardless of direction, reaffirm the importance of maintaining adequate funding and the value of the periodic review of these studies as required by FPSC rule.

2020 Study Approach

The information contained in this 2020 Decommissioning Study is presented in compliance with Rule 25-6.04365, Florida Administrative Code, and prior Commission Orders. FPL contracted EnergySolutions, a company experienced in managing nuclear decommissioning activities and a leader in radioactive waste management and disposal, to prepare its 2020 site-specific nuclear decommissioning cost analysis and comparison reports, which are estimated based on NRC requirements, industry guidelines, and prior experience. EnergySolutions includes the most up-to-date actual decommissioning information available to ensure the methodology used to prepare the cost analysis is reasonable.

FPL selected the DECON (immediate dismantlement) decommissioning option for its units. The DECON method provides not only a lower cost, but also enables a coordinated sequence of decommissioning events, which allows for a one-time mobilization of contractor personnel and equipment. FPL's choice of the DECON method is consistent with the method in prior studies approved by the Commission for purposes of determining FPL's appropriate accrual and funding requirements.

Escalation Rate

The 2020 Decommissioning Study assumes that future decommissioning costs grow at an average rate of approximately 3.15 percent per year. This is a small decrease over the average escalation rate of 3.19 percent assumed in the 2015 study. While FPL believes that the current escalation rates are reasonable for the purpose of the 2020 Decommissioning Study, it should be noted that subsequent changes in the assumed escalation rate could increase, which would result in higher projected future decommissioning costs.

Spent Fuel Management

Consistent with prior studies and assumptions approved by the Commission, the decommissioning cost estimates include the cost associated with interim storage of spent nuclear fuel ("SNF") on site until such time the Department of Energy ("DOE") is able to remove SNF from the site. Consistent with the 2015 study, FPL reflects the reimbursements from the US. Government to cover the cost incurred for managing and storing SNF that would not have been incurred but for DOE's delay in SNF disposal. As such and for purposes of this study, the DOE is expected to make payments to FPL to cover spent fuel management costs incurred by FPL prior to 2063 for St. Lucie and 2059 for Turkey Point. The ultimate timing and amount of reimbursements will depend on many factors, including but not limited to, the DOE's ability to receive SNF and the Government's compliance with the terms of the Settlement Agreement.

Conclusion

The 2020 Decommissioning Study indicates that the trusts are at an adequate funding level given current assumptions and projections. FPL has earned its customers' trust by using careful, prudent investment strategies in all facets of its business including the management of its nuclear decommissioning trusts. Despite market volatility, the funds remain secure. As a result, FPL's current annual expense accrual requirements for decommissioning costs presented in this study support a zero accrual and funding requirement as of December 31, 2020.

In addition, as required by the Commission in Order Nos. FPSC-02-0055-PAA-EI and FPSC-10-0153-FOF-EI, FPL has updated its estimates for End-of-Life Nuclear Fuel Last Core and End-of-Life Materials and Supplies Inventory balances for each of its nuclear sites. This information is provided for informational purposes with this study. FPL is not requesting a change in accruals at this time. Rather, FPL believes that the results of these updated values should be addressed in FPL's next base rate proceeding and that the appropriate changes in accruals, if any, should be made at that time.

# SECTION 2

# ASSUMPTIONS

**Florida Power & Light Company**
**2020 Decommissioning Study**
**Turkey Point Nuclear Units**
**Assumptions**



Assumptions Summary

Following is a summary of the assumptions used to derive the annual accrual, and funding and revenue requirements. These assumptions are more fully developed on the following pages.

| | Unit No. 3 | Unit No. 4 |
|---|---|---|
| Decommissioning Method | DECON (Prompt Removal/ Dismantling) | DECON (Prompt Removal/ Dismantling) |
| Total Decommissioning Cost Per EnergySolutions, LLC *(Current cost estimate in 2020 $)* | $652,646,000 | $708,547,000 |
| FPL's Cost of Decommissioning - Jurisdictional *(Current cost estimate in 2020 $)* | $624,854,000 | $678,374,000 |
| Method of Funding (2020 – End) | Qualified/ Nonqualified | Qualified/ Nonqualified |
| Funding Periods (Years to License Expiration) | 31.54 | 32.29 |
| Assumed Fund Earnings rate | 4.0% | 4.0% |
| Average Escalation Rate for Decommissioning Costs (2020 – End) | 3.15% | 3.13% |
| FPL Ownership Allocation (%) | 100% | 100% |
| FPSC Jurisdictional Separation Factor (%) | 95.74% | 95.74% |
| Estimated Fund Balance: Qualified Fund (As of 12/31/20) | $526,785,000 | $603,540,000 |
| Estimated Fund Balance: Nonqualified Fund (As of 12/31/20) | $208,711,000 | $223,624,000 |

| | Unit No. 3 | Unit No. 4 |
|---|---|---|
| End of Life M & S Inventory Value:<br>(As of 12/31/20) | N/A | $42,881,138 |
| End of Life Nuclear Fuel Last Core Value:<br>(As of 12/31/20) | $65,300,000 | $63,800,000 |
| Year of Last Pick Up of Spent Fuel | 2073 | 2073 |
| Expected DOE Reimbursement<br>*(Current cost estimate in 2020 $)* | $90,821,000 | $86,040,000 |

Decommissioning Methods

For purposes of this analysis, decommissioning is defined as the activity whereby nuclear facilities are removed safely from service and residual radioactivity is reduced to a level that permits release of the property for unrestricted use and termination of the operating license granted under Title 10 CFR Part 50. 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.

The Nuclear Regulatory Commission (NRC) has defined three acceptable decommissioning methods: Prompt Removal/Dismantling (DECON); Safe Storage/Deferred Decontamination (SAFSTOR); and Entombment (ENTOMB). The study utilizes the NRC terminology, but also includes the additional activities required to accommodate the non-contaminated portion of the facilities.

The DECON and SAFSTOR alternatives were both examined and are presented in the (EnergySolutions) Decommissioning Cost Analysis (Section 10) of this filing. The ENTOMB alternative was not considered, because it is considered impractical for a facility which generates significant amounts of long-lived radioactive material due to neutron activation. FPL selected the DECON decommissioning option for Turkey Point Units 3 and 4. The DECON method provides not only a lower cost, but also enables a sequence of events, which allows for a one-time mobilization of contractor personnel and equipment. This method is consistent with the method in prior studies approved by the Commission for purposes of determining the appropriate accrual and funding requirements.

Total Decommissioning Costs

Below are the total estimated costs of decommissioning the Turkey Point facility as provided by FPL's consultant, EnergySolutions, LLC in 2020 dollars.

| Turkey Point Unit No. 3 | |
|---|---|
| Labor | $358,772,000 |
| Equip & Materials | 102,330,000 |
| Transportation | 27,505,000 |
| Burial | 104,067,000 |
| Other | 59,971,000 |
| **Total** | **$652,646,000** |

| Turkey Point Unit No. 4 | |
|---|---|
| Labor | $346,399,000 |
| Equip & Materials | 119,049,000 |
| Transportation | 37,180,000 |
| Burial | 149,327,000 |
| Other | 56,592,000 |
| **Total** | **$708,547,000** |

Funding Method

In Docket No. 810100-EU, Order No. 10987 issued July 13, 1982, the FPSC ordered FPL to establish a funded reserve. Beginning in 1983 FPL began making contributions, on a net of tax basis, to an externally funded reserve. In 1986, the Treasury Department issued temporary regulations under Internal Revenue Code Section 468A relating to the deductibility of contributions made to a qualified decommissioning fund. These regulations, which were finalized in March of 1988, provide for an annual election by the taxpayer to make tax-deductible contributions to a qualified nuclear decommissioning fund. Qualified nuclear decommissioning funds have been established by FPL for each of the four nuclear units. FPL elected to make contributions to the qualified funds, to the maximum allowed, for the years 1984 through 1987, 1992 through 2004 and for the year to date period ended August 31, 2005. Per the Stipulation and Settlement Agreement approved by the Commission in FPSC Order No. FPSC-05-0902-S-EI, FPL suspended accruals effective September 1, 2005, and as such, no additional contributions to the funds have been made subsequent to that date.

The funding analysis presented in Schedule G of this study indicates that no additional contributions

to the qualified and nonqualified funds are projected to be required through the remainder of the funding period that ends with the expiration of the unit's operating license. Only the after-tax earnings of the trust fund investments are assumed to continue to be reinvested and accumulated in the respective funds. Future decommissioning expenditures are assumed to be distributed from the qualified and nonqualified funds in proportion to the balance accumulated at the time of expenditure.

Funding Period

The funding period, to the extent funding is required, is that period over which revenues are collected from ratepayers for purposes of decommissioning the Turkey Point Units. Funding periods for both units end on the last day of the month in which the operating license for the unit is due to expire. The operating license expiration dates for the Turkey Point units are as follows.

- Turkey Point Unit No. 3 - July 19, 2052
- Turkey Point Unit No. 4 - April 10, 2053

Based on the results of the funding analysis presented in Support Schedule G, no additional funding is required at this time.

Fund Earnings Rate

For purposes of this 2020 study update and funding analysis, the projected annual funds earnings rate, net of taxes and all other administrative costs charged to the trust funds, for Units 3 and 4 qualified and nonqualified fund investments, is assumed to be 4.0%. This assumption is based on a projected real long-term, after tax and net of fees, earnings rate of 2.0% plus an estimated long term average inflation rate of 2.0%. The long-term, after tax and net of fees earnings rate reflects the projection of continued adequacy of the funds and assumes a conservative investment strategy where the funds are moved to 100% fixed income prior to the first year of decommissioning and a more conservative all bonds & cash asset mix in the final years of decommissioning. FPL recognizes that over the long-term period there will likely be periods when the earned return may be greater or less than the assumed 4.0%. Consistent with prior Commission practice and Rule 25-6.04365 F.A.C., the assumptions presented in this 2020 decommissioning study will be reviewed and updated as appropriate “at least once every five years”.

The annual rates of change in CPI were taken from “The U. S. Economy, The 30 – Year Outlook, August 2020”, published by Global Insight.

Escalation Rate

The annual escalation rates used to estimate total future dismantlement costs from 2020 through the final year of decommissioning are as follows:

| | Average Annual Escalation Rate |
|---|---|
| Turkey Point Unit No. 3 | 3.15% |
| Turkey Point Unit No. 4 | 3.13% |

The above rates were derived by applying separate inflation indices to each of the major cost components of Labor, Materials and Equipment, Transportation, Burial, and Other.

| Cost Component | Inflation Index |
|---|---|
| Labor | Compensation per Hour (Nonfarm) |
| Materials and Equipment | PPI - Intermediate Materials, Supplies, and Components |
| Transportation | GDP Deflator – Transportation Services |
| Burial | FPL Analysis & CPI |
| Other | GDP (Implicit) |

For purposes of this 2020 study update, the inflation indices were obtained from "The U.S. Economy, The 30 – Year Outlook, August 2020", published by Global Insight except for the burial index.

The burial cost estimates are assumed to escalate at an average annual rate of 2.0%. This is a decrease of 1.2% from the rate assumed in the 2015 study. FPL has an agreement with EnergySolutions which provides for the long-term disposal of Class A waste generated during decommissioning. As such, burial costs for disposal of Class A waste is estimated based on the EnergySolutions agreement. In addition, the cost estimates for processed/conditioned (at off-site recycling center) disposal of Class A waste is assumed to be at a competitive rate comparable to the EnergySolutions pricing. Burial cost rates for Class B and Class C waste, not covered by the EnergySolutions Agreement, are less certain and based on rates equivalent to published Low Level Waste (LLW) Burial Site rates. The escalation rate applicable to Class B and C waste is assumed to be 1.5% which approximates the historical rate of change of the most recently published NRC NUREG 1307, Revision 17 which assumes the cost for disposal of Class B and C is the same as that for the Texas disposal facility located in states not affiliated with the Texas Compact. The resulting annual escalation rate of 2.0% is a weighted average rate for both St. Lucie and Turkey Point.

For a more detail calculation of the overall weighted average escalation rate and annual rate of change for each component please refer to Support Schedule G ("Inflation and Funding Analysis").

FPSC Jurisdictional Factor

The factor applicable to both units is 95.7416%.

Fund Balances

Estimated/actual fund balances (qualified and nonqualified) at December 31, 2020[(a)] for each of the two Turkey Point Units are as Follows:

| | Qualified | Nonqualified |
|---|---|---|
| Unit No. 3 | $526,785,000 | $208,711,000 |
| Unit No. 4 | $603,540,000 | $223,624,000 |

(a) Excluding unrealized market gains/losses.

See support Schedule C ("Projected Fund and Reserve Balances") for detail composition and adjustments to the qualified and nonqualified fund balances.

End of Life Materials and Supplies Inventory Values

The decommissioning cost estimates contained in the EnergySolutions Decommissioning Cost Analysis (Section 10) of this study and in the funding analysis contained in Support Schedule G of this filing do not take into consideration the unrecovered value of any Materials and Supplies Inventories that will ultimately exist at the site following shut down of both units. Both FPL and this Commission have previously recognized that there will be a level of inventories that will remain at the end of life of Unit No. 4, the last unit to reach end of license, which must be recovered prior to the end of site operations. These inventories are unique and will have little value other than scrap value when the units are decommissioned. In Order No. FPSC-02-0055-PAA-EI, the Commission authorized FPL to begin recording the amortization of estimated end of life materials and supplies costs as a base rate fuel expense with a credit to a separate (unfunded) sub-account of Reserve Account 228. Additionally, the Commission directed the Company to address the costs associated with the materials and supplies in subsequent decommissioning studies so that the related annual accruals can be revised, if warranted. The annual expense/reserve accruals associated with End of Life Inventories are being accounted for, as directed by the Commission, in a separate (unfunded) sub-account of Reserve Account 228.

As provided in Support Schedule E of this study, the Materials and Supplies inventory balance, less estimated salvage, that is anticipated to remain at the end of life of Unit No. 4, the last unit to reach end of license, is projected to be $42,881,138. The actual balance accrued as of December 31, 2020 is $20,915,572. FPL is not requesting a change in accruals at this time. Rather, FPL believes that the results of these updated values for End of Life Materials and Supplies should be addressed in FPL's next base rate proceeding and the appropriate changes in accruals, if any, be made at that time.

End of Life Last Core Nuclear Fuel Values

FPL recognizes that there will be unburned fuel that will remain in the fuel assemblies at the end of the last operating cycle of each nuclear unit when it ceases operation. In Docket No 981246-EI the Commission found that the cost associated with the Last Core were costs that should be considered a base rate future obligation and that amortization of this obligation over the remaining life span of each nuclear unit ratably allocates the costs to those customers receiving the benefit of the nuclear generation and avoids a burdensome expense at the time of unit shut down. In Order No. FPSC-02-0055-PAA-EI the Commission authorized FPL to begin recording the amortization of estimated Last Core costs as a base rate fuel expense with a credit to a separate (unfunded) sub-account of Reserve Account 228. Additionally, the Commission directed the Company to address the costs associated with the Last Core in subsequent decommissioning studies so that the related annual accruals can be revised, if warranted. The annual expense/reserve accruals associated with End of Life Nuclear Fuel Last Core values are accounted for, as directed by the Commission, in a separate (unfunded) sub-account of Reserve Account 228.

As provided in Support Schedule F of this study, the estimated cost of unburned fuel remaining in the reactor at the end of life (end of license) for each unit is:

- Unit No. 3 $65,300,000
- Unit No. 4 $63,800,000

The actual balances accrued as of December 31, 2020 are:

- Unit No. 3 $38,235,239
- Unit No. 4 $33,626,367

FPL is not requesting a change in accruals at this time. Rather, FPL believes that the results of these updated values for End of Life Nuclear Fuel Last Core should be addressed in FPL's next base rate proceeding and the appropriate changes in accruals, if any, be made at that time.

Spent Nuclear Fuel Storage

The Nuclear Waste Policy Act of 1982 assigns to the Federal Government responsibility to provide for the permanent disposal of spent nuclear fuel (SNF) and high-level radioactive waste (HLW), and committed the DOE to begin acceptance of SNF/HLW not later than January 31, 1998 under terms of its Standard Disposal Contracts with waste generators. The DOE has not yet provided for SNF storage and is not accepting SNF as committed to under the contract.

In Docket No. 941350-EI, and No. 981246-EI, the FPSC recognized the impact on the decommissioning process and the potential costs of on-site dry fuel storage resulting from the inability of the DOE to provide for the timely removal of SNF. In Order Nos. PSC-95-1531-FOF-EI and PSC-02-0055-PAA-EI, the FPSC specifically approved the inclusion of costs associated with the dry storage of spent nuclear fuel following the end of each units operating license which were considered necessary to accommodate the timely decommissioning of each unit.

Consistent with the Commission's prior findings, 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 Turkey Point units. The potential cost impact of extended spent fuel storage that will exist subsequent to the license expiration of the Turkey Point nuclear units is presented in (Section 10) of the 2020 Decommissioning Cost Analysis for the Turkey Point Plant. The decommissioning cost estimates included in this filing are based on the EnergySolutions prepared Decommissioning Cost Analysis for the Turkey Point Plant, Units 3 and 4 dated November, 2020.

In addition, FPL and certain nuclear plant joint owners signed a settlement agreement (spent fuel settlement agreement) with the U.S. Government in 2009 agreeing to dismiss with prejudice lawsuits filed against the U.S. Government seeking damages caused by the DOE's failure to dispose of spent nuclear fuel from FPL's nuclear plants. As such, the DOE is expected to continue to make payments to FPL to cover the costs incurred for managing and storing the spent fuel that it would not have incurred but for DOE's delay in performance.

Below are the Turkey Point estimated costs of Decommissioning expected to be recovered from the DOE as provided by FPL's consultant, EnergySolutions, LLC in 2020 dollars.

| | |
|---|---|
| Turkey Point Unit No. 3 | |
| Labor | $60,401,000 |
| Equip & Materials | 24,713,000 |
| Other | 5,707,000 |
| **Total** | **$90,821,000** |
| | |
| Turkey Point Unit No. 4 | |
| Labor | $53,116,000 |
| Equip & Materials | 28,033,000 |
| Other | 4,891,000 |
| **Total** | **$86,040,000** |

Further discussion of the costs and assumptions regarding DOE reimbursement is contained in Section 5.0 of the Decommissioning Cost Analysis for the Turkey Point Plant, Units 3 and 4 dated November 2020. Consistent with prior Commission practice and Rule 25-6.04365 (FAC) the assumptions presented in this 2020 study related to DOE reimbursement will be reviewed and updated as appropriate "at least once every five years".

Annual Decommissioning Accrual Requirements

FPL's current annual expense accrual requirements for Turkey Point Nuclear Plant Decommissioning costs presented in this study support a zero accrual and funding requirement as of December 31, 2020. The decommissioning costs estimates, funding analysis, and supporting assumptions presented in this study were prepared in a manner consistent with prior Commission approved studies, methodologies and practices.

SECTION 3

SUPPORT SCHEDULE A
Nuclear Decommissioning Reserve Balance
December 31, 2015 through October 31, 2020

Florida Power & Light Company
2020 Decommissioning Study
Support Schedule: Nuclear Decommissioning Reserve Balances (1)
December 31, 2015 through October 31, 2020
$000

| December 31, 2015 | Beginning Balance | Revenues Collected | Earnings to Reserve | Ending Balance |
|---|---|---|---|---|
| NONQUALIFIED | | | | |
| Turkey Point Unit No. 3 | $284,009 | $0 | $9,261 | $293,270 |
| Turkey Point Unit No. 4 | 304,290 | 0 | 9,925 | 314,215 |
| St. Lucie Unit No. 1 | 255,915 | 0 | 8,344 | 264,259 |
| St. Lucie Unit No. 2 | 124,580 | 0 | 4,077 | 128,658 |
| TOTAL | $968,795 | $0 | $31,607 | $1,000,402 |
| QUALIFIED | | | | |
| Turkey Point Unit No. 3 | $413,367 | $0 | $16,479 | $429,846 |
| Turkey Point Unit No. 4 | 473,635 | 0 | 18,879 | 492,514 |
| St. Lucie Unit No. 1 | 535,493 | 0 | 21,345 | 556,838 |
| St. Lucie Unit No. 2 | 489,737 | 0 | 19,499 | 509,236 |
| TOTAL | $1,912,231 | $0 | $76,202 | $1,988,434 |
| TOTAL RESERVES | | | | |
| Turkey Point Unit No. 3 | $697,375 | $0 | $25,740 | $723,116 |
| Turkey Point Unit No. 4 | 777,925 | 0 | 28,804 | 806,729 |
| St. Lucie Unit No. 1 | 791,408 | 0 | 29,689 | 821,097 |
| St. Lucie Unit No. 2 | 614,317 | 0 | 23,576 | 637,894 |
| TOTAL | $2,881,026 | $0 | $107,810 | $2,988,836 |
| December 31, 2016 | | | | |
| NONQUALIFIED | | | | |
| Turkey Point Unit No. 3 | $293,270 | $0 | $11,772 | $305,041 |
| Turkey Point Unit No. 4 | 314,215 | 0 | 12,615 | 326,831 |
| St. Lucie Unit No. 1 | 264,259 | 0 | 10,606 | 274,866 |
| St. Lucie Unit No. 2 | 128,658 | 0 | 5,183 | 133,840 |
| TOTAL | $1,000,402 | $0 | $40,176 | $1,040,578 |
| QUALIFIED | | | | |
| Turkey Point Unit No. 3 | $429,846 | $0 | $16,640 | $446,486 |
| Turkey Point Unit No. 4 | 492,514 | 0 | 19,057 | 511,571 |
| St. Lucie Unit No. 1 | 556,838 | 0 | 21,541 | 578,379 |
| St. Lucie Unit No. 2 | 509,236 | 0 | 19,685 | 528,921 |
| TOTAL | $1,988,434 | $0 | $76,923 | $2,065,357 |
| TOTAL RESERVES | | | | |
| Turkey Point Unit No. 3 | $723,116 | $0 | $28,411 | $751,527 |
| Turkey Point Unit No. 4 | 806,729 | 0 | 31,672 | 838,402 |
| St. Lucie Unit No. 1 | 821,097 | 0 | 32,148 | 853,245 |
| St. Lucie Unit No. 2 | 637,894 | 0 | 24,868 | 662,761 |
| TOTAL | $2,988,836 | $0 | $117,099 | $3,105,935 |

Note 1: Balances exclude unrealized market gains/losses.

Florida Power & Light Company
2020 Decommissioning Study
Support Schedule: Nuclear Decommissioning Reserve Balances (1)
December 31, 2015 through October 31, 2020
$000

| December 31, 2017 | Beginning Balance | Revenues Collected | Earnings to Reserve | Ending Balance |
|---|---|---|---|---|
| NONQUALIFIED | | | | |
| Turkey Point Unit No. 3 | $305,041 | $0 | $7,893 | $312,934 |
| Turkey Point Unit No. 4 | 326,831 | 0 | 8,459 | 335,289 |
| St. Lucie Unit No. 1 | 274,866 | 0 | 7,112 | 281,978 |
| St. Lucie Unit No. 2 | 133,840 | 0 | 3,475 | 137,316 |
| TOTAL | $1,040,578 | $0 | $26,939 | $1,067,517 |
| QUALIFIED | | | | |
| Turkey Point Unit No. 3 | $446,486 | $0 | $21,023 | $467,509 |
| Turkey Point Unit No. 4 | 511,571 | 0 | 24,078 | 535,649 |
| St. Lucie Unit No. 1 | 578,379 | 0 | 27,221 | 605,600 |
| St. Lucie Unit No. 2 | 528,921 | 0 | 24,871 | 553,792 |
| TOTAL | $2,065,357 | $0 | $97,193 | $2,162,550 |
| TOTAL RESERVES | | | | |
| Turkey Point Unit No. 3 | $751,527 | $0 | $28,916 | $780,443 |
| Turkey Point Unit No. 4 | 838,402 | 0 | 32,537 | 870,938 |
| St. Lucie Unit No. 1 | 853,245 | 0 | 34,333 | 887,578 |
| St. Lucie Unit No. 2 | 662,761 | 0 | 28,346 | 691,107 |
| TOTAL | $3,105,935 | $0 | $124,132 | $3,230,067 |
| December 31, 2018 | | | | |
| NONQUALIFIED | | | | |
| Turkey Point Unit No. 3 | $312,934 | $0 | $8,190 | $321,124 |
| Turkey Point Unit No. 4 | 335,289 | 0 | 8,777 | 344,066 |
| St. Lucie Unit No. 1 | 281,978 | 0 | 7,379 | 289,357 |
| St. Lucie Unit No. 2 | 137,316 | 0 | 3,606 | 140,921 |
| TOTAL | $1,067,517 | $0 | $27,951 | $1,095,468 |
| QUALIFIED | | | | |
| Turkey Point Unit No. 3 | $467,509 | $0 | $15,703 | $483,212 |
| Turkey Point Unit No. 4 | 535,649 | 0 | 17,986 | 553,635 |
| St. Lucie Unit No. 1 | 605,600 | 0 | 20,335 | 625,935 |
| St. Lucie Unit No. 2 | 553,792 | 0 | 18,576 | 572,367 |
| TOTAL | $2,162,550 | $0 | $72,600 | $2,235,150 |
| TOTAL RESERVES | | | | |
| Turkey Point Unit No. 3 | $780,443 | $0 | $23,892 | $804,336 |
| Turkey Point Unit No. 4 | 870,938 | 0 | 26,763 | 897,701 |
| St. Lucie Unit No. 1 | 887,578 | 0 | 27,714 | 915,292 |
| St. Lucie Unit No. 2 | 691,107 | 0 | 22,181 | 713,289 |
| TOTAL | $3,230,067 | $0 | $100,551 | $3,330,618 |

Note 1: Balances exclude unrealized market gains/losses.

Florida Power & Light Company
2020 Decommissioning Study
Support Schedule: Nuclear Decommissioning Reserve Balances (1)
December 31, 2015 through October 31, 2020
$000

| December 31, 2019 | Beginning Balance | Revenues Collected | Earnings to Reserve | Ending Balance |
|---|---|---|---|---|
| NONQUALIFIED | | | | |
| Turkey Point Unit No. 3 | $321,124 | $0 | $9,206 | $330,331 |
| Turkey Point Unit No. 4 | 344,066 | 0 | 9,866 | 353,932 |
| St. Lucie Unit No. 1 | 289,357 | 0 | 8,295 | 297,652 |
| St. Lucie Unit No. 2 | 140,921 | 0 | 4,053 | 144,975 |
| TOTAL | $1,095,468 | $0 | $31,421 | $1,126,889 |
| QUALIFIED | | | | |
| Turkey Point Unit No. 3 | $483,212 | $0 | $22,002 | $505,214 |
| Turkey Point Unit No. 4 | 553,635 | 0 | 25,198 | 578,833 |
| St. Lucie Unit No. 1 | 625,935 | 0 | 28,486 | 654,421 |
| St. Lucie Unit No. 2 | 572,367 | 0 | 26,028 | 598,395 |
| TOTAL | $2,235,150 | $0 | $101,713 | $2,336,863 |
| TOTAL RESERVES | | | | |
| Turkey Point Unit No. 3 | $804,336 | $0 | $31,208 | $835,544 |
| Turkey Point Unit No. 4 | 897,701 | 0 | 35,064 | 932,765 |
| St. Lucie Unit No. 1 | 915,292 | 0 | 36,781 | 952,073 |
| St. Lucie Unit No. 2 | 713,289 | 0 | 30,081 | 743,370 |
| TOTAL | $3,330,618 | $0 | $133,135 | $3,463,752 |
| October 31, 2020 | | | | |
| NONQUALIFIED | | | | |
| Turkey Point Unit No. 3 | $330,331 | $0 | $3,697 | $334,027 |
| Turkey Point Unit No. 4 | 353,932 | 0 | 3,962 | 357,894 |
| St. Lucie Unit No. 1 | 297,652 | 0 | 3,331 | 300,983 |
| St. Lucie Unit No. 2 | 144,975 | 0 | 1,628 | 146,602 |
| TOTAL | $1,126,889 | $0 | $12,617 | $1,139,506 |
| QUALIFIED | | | | |
| Turkey Point Unit No. 3 | $505,214 | $0 | $17,976 | $523,190 |
| Turkey Point Unit No. 4 | 578,833 | 0 | 20,589 | 599,422 |
| St. Lucie Unit No. 1 | 654,421 | 0 | 23,277 | 677,698 |
| St. Lucie Unit No. 2 | 598,395 | 0 | 21,265 | 619,660 |
| TOTAL | $2,336,863 | $0 | $83,107 | $2,419,970 |
| TOTAL RESERVES | | | | |
| Turkey Point Unit No. 3 | $835,544 | $0 | $21,673 | $857,217 |
| Turkey Point Unit No. 4 | 932,765 | 0 | 24,550 | 957,316 |
| St. Lucie Unit No. 1 | 952,073 | 0 | 26,608 | 978,681 |
| St. Lucie Unit No. 2 | 743,370 | 0 | 22,892 | 766,262 |
| TOTAL | $3,463,752 | $0 | $95,724 | $3,559,476 |

Note 1: Balances exclude unrealized market gains/losses.

SECTION 4

SUPPORT SCHEDULE B
Nuclear Decommissioning Fund Balance
December 31, 2015 through October 31, 2020

Florida Power & Light Company
2020 Decommissioning Study
Support Schedule: Nuclear Decommissioning Fund Balances (1)
December 31, 2015 through October 31, 2020
$000

| | Beginning Balance | Contribution | Fund Earnings | Ending Balance |
|---|---|---|---|---|
| December 31, 2015 | | | | |
| NONQUALIFIED | | | | |
| Turkey Point Unit No. 3 | $174,452 | $0 | $5,689 | $180,141 |
| Turkey Point Unit No. 4 | 186,910 | 0 | 6,096 | 193,006 |
| St Lucie Unit No. 1 | 157,196 | 0 | 5,126 | 162,321 |
| St Lucie Unit No. 2 | 76,524 | 0 | 2,505 | 79,028 |
| Total | $595,081 | $0 | $19,415 | $614,496 |
| QUALIFIED | | | | |
| Turkey Point Unit No. 3 | $413,367 | $0 | $16,479 | $429,846 |
| Turkey Point Unit No. 4 | 473,635 | 0 | 18,879 | 492,514 |
| St Lucie Unit No. 1 | 535,493 | 0 | 21,345 | 556,838 |
| St Lucie Unit No. 2 | 489,737 | 0 | 19,499 | 509,236 |
| Total | $1,912,231 | $0 | $76,202 | $1,988,434 |
| TOTAL | | | | |
| Turkey Point Unit No. 3 | $587,819 | $0 | $22,168 | $609,987 |
| Turkey Point Unit No. 4 | 660,545 | 0 | 24,976 | 685,521 |
| St Lucie Unit No. 1 | 692,689 | 0 | 26,470 | 719,159 |
| St Lucie Unit No. 2 | 566,260 | 0 | 22,004 | 588,264 |
| Total | $2,507,313 | $0 | $95,617 | $2,602,930 |
| December 31, 2016 | | | | |
| NONQUALIFIED | | | | |
| Turkey Point Unit No. 3 | $180,141 | $0 | $7,231 | $187,372 |
| Turkey Point Unit No. 4 | 193,006 | 0 | 7,749 | 200,755 |
| St Lucie Unit No. 1 | 162,321 | 0 | 6,515 | 168,836 |
| St Lucie Unit No. 2 | 79,028 | 0 | 3,183 | 82,212 |
| Total | $614,496 | $0 | $24,678 | $639,175 |
| QUALIFIED | | | | |
| Turkey Point Unit No. 3 | $429,846 | $0 | $16,640 | $446,486 |
| Turkey Point Unit No. 4 | 492,514 | 0 | 19,057 | 511,571 |
| St Lucie Unit No. 1 | 556,838 | 0 | 21,541 | 578,379 |
| St Lucie Unit No. 2 | 509,236 | 0 | 19,685 | 528,921 |
| Total | $1,988,434 | $0 | $76,923 | $2,065,357 |
| TOTAL | | | | |
| Turkey Point Unit No. 3 | $609,987 | $0 | $23,871 | $633,857 |
| Turkey Point Unit No. 4 | 685,521 | 0 | 26,806 | 712,327 |
| St Lucie Unit No. 1 | 719,159 | 0 | 28,056 | 747,215 |
| St Lucie Unit No. 2 | 588,264 | 0 | 22,868 | 611,132 |
| Total | $2,602,930 | $0 | $101,601 | $2,704,531 |

Note 1: Balances exclude unrealized market gains/losses.

Florida Power & Light Company
2020 Decommissioning Study
Support Schedule: Nuclear Decommissioning Fund Balances (1)
December 31, 2015 through October 31, 2020
$000

| | Beginning Balance | Contribution | Fund Earnings | Ending Balance |
|---|---|---|---|---|
| December 31, 2017 | | | | |
| NONQUALIFIED | | | | |
| Turkey Point Unit No. 3 | $187,372 | $0 | $4,848 | $192,220 |
| Turkey Point Unit No. 4 | 200,755 | 0 | 5,196 | 205,951 |
| St Lucie Unit No. 1 | 168,836 | 0 | 4,368 | 173,205 |
| St Lucie Unit No. 2 | 82,212 | 0 | 2,135 | 84,346 |
| Total | $639,175 | $0 | $16,547 | $655,722 |
| QUALIFIED | | | | |
| Turkey Point Unit No. 3 | $446,486 | $0 | $21,023 | $467,509 |
| Turkey Point Unit No. 4 | 511,571 | 0 | 24,078 | 535,649 |
| St Lucie Unit No. 1 | 578,379 | 0 | 27,221 | 605,600 |
| St Lucie Unit No. 2 | 528,921 | 0 | 24,871 | 553,792 |
| Total | $2,065,357 | $0 | $97,193 | $2,162,550 |
| TOTAL | | | | |
| Turkey Point Unit No. 3 | $633,857 | $0 | $25,872 | $659,729 |
| Turkey Point Unit No. 4 | 712,327 | 0 | 29,274 | 741,600 |
| St Lucie Unit No. 1 | 747,215 | 0 | 31,590 | 778,805 |
| St Lucie Unit No. 2 | 611,132 | 0 | 27,005 | 638,138 |
| Total | $2,704,531 | $0 | $113,740 | $2,818,272 |
| December 31, 2018 | | | | |
| NONQUALIFIED | | | | |
| Turkey Point Unit No. 3 | $192,220 | $0 | $6,255 | $198,475 |
| Turkey Point Unit No. 4 | 205,951 | 0 | 6,704 | 212,655 |
| St Lucie Unit No. 1 | 173,205 | 0 | 5,636 | 178,841 |
| St Lucie Unit No. 2 | 84,346 | 0 | 2,754 | 87,100 |
| Total | $655,722 | $0 | $21,349 | $677,071 |
| QUALIFIED | | | | |
| Turkey Point Unit No. 3 | $467,509 | $0 | $15,703 | $483,212 |
| Turkey Point Unit No. 4 | 535,649 | 0 | 17,986 | 553,635 |
| St Lucie Unit No. 1 | 605,600 | 0 | 20,335 | 625,936 |
| St Lucie Unit No. 2 | 553,792 | 0 | 18,576 | 572,367 |
| Total | $2,162,550 | $0 | $72,600 | $2,235,150 |
| TOTAL | | | | |
| Turkey Point Unit No. 3 | $659,729 | $0 | $21,958 | $681,687 |
| Turkey Point Unit No. 4 | 741,600 | 0 | 24,690 | 766,290 |
| St Lucie Unit No. 1 | 778,805 | 0 | 25,971 | 804,776 |
| St Lucie Unit No. 2 | 638,138 | 0 | 21,330 | 659,467 |
| Total | $2,818,272 | $0 | $93,948 | $2,912,220 |

Note 1: Balances exclude unrealized market gains/losses.

Florida Power & Light Company
2020 Decommissioning Study
Support Schedule: Nuclear Decommissioning Fund Balances (1)
December 31, 2015 through October 31, 2020
$000

| | Beginning Balance | Contribution | Fund Earnings | Ending Balance |
|---|---|---|---|---|
| December 31, 2019 | | | | |
| NONQUALIFIED | | | | |
| Turkey Point Unit No. 3 | $198,475 | $0 | $6,888 | $205,363 |
| Turkey Point Unit No. 4 | 212,655 | 0 | 7,382 | 220,037 |
| St Lucie Unit No. 1 | 178,841 | 0 | 6,207 | 185,047 |
| St Lucie Unit No. 2 | 87,100 | 0 | 3,033 | 90,133 |
| Total | $677,071 | $0 | $23,510 | $700,580 |
| QUALIFIED | | | | |
| Turkey Point Unit No. 3 | $483,212 | $0 | $22,002 | $505,214 |
| Turkey Point Unit No. 4 | 553,635 | 0 | 25,198 | 578,833 |
| St Lucie Unit No. 1 | 625,936 | 0 | 28,486 | 654,421 |
| St Lucie Unit No. 2 | 572,367 | 0 | 26,028 | 598,395 |
| Total | $2,235,150 | $0 | $101,713 | $2,336,863 |
| TOTAL | | | | |
| Turkey Point Unit No. 3 | $681,687 | $0 | $28,890 | $710,577 |
| Turkey Point Unit No. 4 | 766,290 | 0 | 32,580 | 798,870 |
| St Lucie Unit No. 1 | 804,776 | 0 | 34,692 | 839,469 |
| St Lucie Unit No. 2 | 659,467 | 0 | 29,060 | 688,528 |
| Total | $2,912,220 | $0 | $125,223 | $3,037,443 |
| October 31, 2020 | | | | |
| NONQUALIFIED | | | | |
| Turkey Point Unit No. 3 | $205,363 | $0 | $2,789 | $208,153 |
| Turkey Point Unit No. 4 | 220,037 | 0 | 2,989 | 223,026 |
| St Lucie Unit No. 1 | 185,047 | 0 | 2,513 | 187,561 |
| St Lucie Unit No. 2 | 90,133 | 0 | 1,228 | 91,361 |
| Total | $700,580 | $0 | $9,520 | $710,100 |
| QUALIFIED | | | | |
| Turkey Point Unit No. 3 | $505,214 | $0 | $17,976 | $523,190 |
| Turkey Point Unit No. 4 | 578,833 | 0 | 20,589 | 599,422 |
| St Lucie Unit No. 1 | 654,421 | 0 | 23,277 | 677,699 |
| St Lucie Unit No. 2 | 598,395 | 0 | 21,265 | 619,660 |
| Total | $2,336,863 | $0 | $83,107 | $2,419,970 |
| TOTAL | | | | |
| Turkey Point Unit No. 3 | $710,577 | $0 | $20,765 | $731,343 |
| Turkey Point Unit No. 4 | 798,870 | 0 | 23,578 | 822,448 |
| St Lucie Unit No. 1 | 839,469 | 0 | 25,790 | 865,259 |
| St Lucie Unit No. 2 | 688,528 | 0 | 22,493 | 711,021 |
| Total | $3,037,443 | $0 | $92,627 | $3,130,070 |

Note 1: Balances exclude unrealized market gains/losses.

SECTION 5

SUPPORT SCHEDULE C
Projected Fund and Reserve Balance at December 31, 2020

Florida Power & Light Company
2020 Decommissioning Study
Support Schedule: Projected Fund and Reserve Balance at December 31, 2020 [(a)]
$000

| | TURKEY POINT UNIT 3 | TURKEY POINT UNIT 4 | ST. LUCIE UNIT 1 | ST. LUCIE UNIT 2 | TOTALS |
|---|---|---|---|---|---|
| NON-QUALIFIED FUND | | | | (Note 1) | |
| Actual Fund Balance @ 10/31/2020 | $208,153 | $223,026 | $187,561 | $91,361 | $710,100 |
| Add: Estimate Income Nov. & Dec. 2020 (after-tax) | 558 | 598 | 503 | 246 | 1,904 |
| Est/Actual Fund Balance @ 12/31/2020 | $208,711 | $223,624 | $188,063 | $91,606 | $712,004 |
| QUALIFIED FUND | | | | | |
| Actual Fund Balance @ 10/31/2020 | $523,190 | $599,422 | $677,699 | $619,660 | $2,419,970 |
| Add: Estimate Income Nov. & Dec. 2020 (after-tax) | 3,595 | 4,118 | 4,655 | 4,253 | 16,621 |
| Est/Actual Fund Balance @ 12/31/2020 | $526,785 | $603,540 | $682,354 | $623,913 | $2,436,591 |
| TOTAL FUND | | | | | |
| Actual Fund Balance @ 10/31/2020 | $731,343 | $822,448 | $865,259 | $711,021 | $3,130,070 |
| Add: Estimate Income Nov. & Dec. 2020 (after-tax) | 4,153 | 4,716 | 5,158 | 4,499 | 18,525 |
| Est/Actual Fund Balance @ 12/31/2020 | $735,496 | $827,163 | $870,417 | $715,519 | $3,148,595 |
| NON-QUALIFIED RESERVE | | | | | |
| Actual Reserve Balance @ 10/31/2020 | $334,027 | $357,894 | $300,983 | $146,602 | $1,139,506 |
| Add: Estimate Income Nov. & Dec. 2020 | 739 | 792 | 666 | 325 | 2,522 |
| Est/Actual Reserve Balance@12/31/2020 | $334,766 | $358,686 | $301,649 | $146,928 | $1,142,029 |
| QUALIFIED RESERVE | | | | | |
| Actual Reserve Balance @ 10/31/2020 | $523,190 | $599,422 | $677,698 | $619,660 | $2,419,970 |
| Add: Estimate Income Nov. & Dec. 2020 | 3,595 | 4,118 | 4,655 | 4,253 | 16,621 |
| Est/Actual Reserve Balance@12/31/2020 | $526,785 | $603,539 | $682,354 | $623,913 | $2,436,591 |
| TOTAL RESERVE | | | | | |
| Actual Reserve Balance @ 10/31/2020 | $857,217 | $957,316 | $978,681 | $766,262 | $3,559,476 |
| Add: Estimate Income Nov. & Dec. 2020 | 4,334 | 4,910 | 5,321 | 4,578 | 19,144 |
| Est/Actual Reserve Balance@12/31/2020 | $861,551 | $962,225 | $984,003 | $770,841 | $3,578,620 |

[(a)] Balances exclude unrealized market gains/losses.

Note 1: Amounts for St Lucie Common are included with Unit No. 2

SECTION 6

# SUPPORT SCHEDULE D
# Reconciliation of Projected Fund and Reserve Balance at December 31, 2020

Florida Power & Light Company
2020 Decommissioning Study
Support Schedule: Reconciliation of Projected Fund and Reserve Balance at December 31, 2020 [(a)]
$000

**RECONCILIATION FUND/RESERVE**
**Projected 12/31/2020**

| | TURKEY POINT UNIT 3 | TURKEY POINT UNIT 4 | ST. LUCIE UNIT 1 | ST. LUCIE UNIT 2 | TOTALS |
|---|---|---|---|---|---|
| **NON-QUALIFIED** | | | | (Note 1) | |
| Projected Fund Balance @12/31/2020 | $208,711 | $223,624 | $188,063 | $91,606 | $712,004 |
| Remeasurement of Deferred Tax - Federal (Note 2) | $41,402 | $44,359 | $37,305 | $18,166 | $141,232 |
| Remeasurement of Deferred Tax - State (Note 3) | ($193) | ($206) | ($172) | ($84) | ($654) |
| Deferred Tax @ 12/31/2020 | $84,847 | $90,909 | $76,453 | $37,239 | $289,447 |
| Projected Reserve Balance @ 12/31/2020 | $334,766 | $358,686 | $301,649 | $146,928 | $1,142,029 |
| **QUALIFIED** | | | | | |
| Projected Fund Balance @12/31/2020 | $526,785 | $603,540 | $682,354 | $623,913 | $2,436,591 |
| Deferred Tax @ 12/31/2020 | 0 | 0 | 0 | 0 | 0 |
| Projected Reserve Balance @ 12/31/2020 | $526,785 | $603,540 | $682,354 | $623,913 | $2,436,591 |
| **TOTAL** | | | | | |
| Projected Fund Balance @12/31/2020 | $735,496 | $827,163 | $870,417 | $715,519 | 3,148,595 |
| Re-measurement of Deferred Tax - Federal | $41,402 | $44,359 | $37,305 | $18,166 | 141,232 |
| Re-measurement of Deferred Tax - State | (193) | (206) | (172) | (84) | (654) |
| Deferred Tax @ 12/31/2020 | 84,847 | 90,909 | 76,453 | 37,239 | 289,447 |
| Projected Reserve Balance @ 12/31/2020 | $861,551 | $962,226 | $984,003 | $770,840 | $3,578,620 |

**DEFERRED TAXES**
**Projected balance @ 12/31/2020**

| | | | | | |
|---|---|---|---|---|---|
| **NON-QUALIFIED FUND** | | | | | |
| Balance @ 10/31/2020 (Fed & State) | $84,659 | $90,708 | $76,284 | $37,156 | $288,808 |
| Add: Tax on Earnings - November & December | 187 | 201 | 169 | 82 | 639 |
| Balance @ 12/31/2020 (Fed & State) | $84,847 | $90,909 | $76,453 | $37,239 | $289,447 |

(a) Balances exclude unrealized market gains/losses.

Note (1): Amounts for St Lucie Common are included with Unit No. 2

Note (2): In December 2017, new tax reform legislation was signed into law which reduced the federal corporate income tax rate from 35% to 21% effective January 1, 2018. As a result, 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. This amount was recorded as a regulatory asset.

Note (3): In 2019 the Florida corporate income tax rate was changed from 5.5% to 4.458%. The tax rate change was retroactive to Jan 1, 2018 and is for the periods of 2018 through 2021. The rate reverts back to 5.5% in 2022. Trust 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.

SECTION 7

SUPPORT SCHEDULE E
End-of-Life Materials and Supplies Inventory
Expense Accrual Calculation

**Florida Power and Light Company**
**2020 Decommissioning Study**
**Support Schedule: End-of-Life Materials and Supplies Inventory**

| Line Number | | Turkey Point Unit 4 |
|---|---|---|
| 1 | Adjusted Ending Inventory Value @ End of License | $ 43,794,727 |
| 2 | Estimated Salvage | (913,589) |
| 3 | **Inventory Subject to Write-off** | **$ 42,881,138** |
| 4 | | |
| 5 | **FPL's Ownership Share 100%** | **$ 42,881,138** |
| 6 | | |
| 7 | Actual Reserve Balance Accrued as of 12/31/20 | 20,915,572 |
| 8 | | |
| 9 | **Remaining Amount to be Recovered as of 12/31/20** | **$ 21,965,566** |
| 10 | | |
| 11 | | |
| 12 | Total Number of Months From: | |
| 13 | 12/31/20 to End of License 4/10/2053 | 387.5 |

SECTION 8

SUPPORT SCHEDULE F
End-of-Life Unamortized Nuclear Fuel
Expense Accrual Calculation

**Florida Power and Light Company**
**2020 Decommissioning Study**
**Support Schedule: End-of-Life Unamortized Nuclear Fuel**

| Line Number | | | Turkey Point Unit 3 | | Turkey Point Unit 4 |
|---|---|---|---|---|---|
| 1 | **Estimated Cost of Unburned Fuel @ End of License** | | | | |
| 2 | **FPL's Ownership Share (100%)** | **$** | **65,300,000** | **$** | **63,800,000** |
| 3 | | | | | |
| 4 | Actual Reserve Balance at 12/31/2020 | | 38,235,239 | | 33,626,367 |
| 5 | | | | | |
| 6 | **Remaining Amount to be Recovered at 12/31/2020** | **$** | **27,064,761** | **$** | **30,173,633** |
| 7 | | | | | |
| 8 | | | | | |
| 9 | Total Number of Months From: | | | | |
| 10 | **12/31/20 to End of License** | | 378.5 | | 387.5 |

SECTION 9

SUPPORT SCHEDULE G
Inflation and Funding Analysis

**INFLATION FORECAST**

The U.S. Economy
30 Year Outlook **(AUGUST 2020)**
GLOBAL INSIGHT

| | PCJPGDP | PCJWSSNF | PCWPISOP2000 | PCCSVTS | FPL (INTERNAL) | CPI | |
|---|---|---|---|---|---|---|---|
| YEAR | GDP | HRLY COMP | PPI INT M&S | GDP Transport | Burial | CPI | CPI MULTIPLIER |
| 2020 | 0.9% | 5.9% | -4.1% | -22.2% | 2.0% | 1.0% | 1.000 |
| 2021 | 1.1% | 0.5% | 2.3% | 18.0% | 2.0% | 1.7% | 1.017 |
| 2022 | 1.2% | 1.8% | 2.5% | 11.9% | 2.0% | 1.7% | 1.034 |
| 2023 | 1.5% | 2.2% | 1.7% | 9.6% | 2.0% | 0.8% | 1.042 |
| 2024 | 1.8% | 2.7% | 1.8% | 8.7% | 2.0% | 1.3% | 1.056 |
| 2025 | 2.1% | 3.3% | 1.4% | 6.2% | 2.0% | 2.0% | 1.076 |
| 2026 | 2.3% | 3.7% | 1.3% | 4.9% | 2.0% | 2.3% | 1.101 |
| 2027 | 2.4% | 4.0% | 1.2% | 4.3% | 2.0% | 2.5% | 1.129 |
| 2028 | 2.5% | 4.1% | 1.1% | 4.1% | 2.0% | 2.4% | 1.156 |
| 2029 | 2.4% | 4.1% | 0.9% | 4.4% | 2.0% | 2.3% | 1.183 |
| 2030 | 2.4% | 4.1% | 0.8% | 4.7% | 2.0% | 2.2% | 1.210 |
| 2031 | 2.3% | 4.0% | 0.8% | 4.3% | 2.0% | 2.1% | 1.235 |
| 2032 | 2.3% | 4.0% | 1.1% | 3.9% | 2.0% | 2.1% | 1.261 |
| 2033 | 2.2% | 4.0% | 0.9% | 3.8% | 2.0% | 2.0% | 1.286 |
| 2034 | 2.2% | 4.0% | 1.0% | 3.7% | 2.0% | 2.0% | 1.312 |
| 2035 | 2.2% | 4.0% | 1.1% | 3.5% | 2.0% | 2.0% | 1.338 |
| 2036 | 2.1% | 3.9% | 1.1% | 3.4% | 2.0% | 2.0% | 1.365 |
| 2037 | 2.1% | 3.9% | 1.4% | 3.2% | 2.0% | 2.0% | 1.393 |
| 2038 | 2.1% | 3.9% | 1.5% | 3.1% | 2.0% | 2.1% | 1.421 |
| 2039 | 2.1% | 3.9% | 1.3% | 3.1% | 2.0% | 2.0% | 1.450 |
| 2040 | 2.1% | 3.9% | 1.4% | 3.1% | 2.0% | 2.1% | 1.480 |
| 2041 | 2.2% | 3.9% | 1.4% | 3.1% | 2.0% | 2.1% | 1.511 |
| 2042 | 2.2% | 3.9% | 1.4% | 3.0% | 2.0% | 2.1% | 1.542 |
| 2043 | 2.2% | 3.9% | 1.3% | 3.0% | 2.0% | 2.1% | 1.574 |
| 2044 | 2.2% | 3.8% | 1.4% | 3.0% | 2.0% | 2.1% | 1.607 |
| 2045 | 2.2% | 3.8% | 1.5% | 3.0% | 2.0% | 2.1% | 1.642 |
| 2046 | 2.2% | 3.8% | 1.5% | 3.0% | 2.0% | 2.1% | 1.677 |
| 2047 | 2.2% | 3.8% | 1.5% | 3.0% | 2.0% | 2.2% | 1.713 |
| 2048 | 2.3% | 3.8% | 1.6% | 3.1% | 2.0% | 2.2% | 1.750 |
| 2049 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 1.788 |
| 2050 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 1.828 |
| 2051 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 1.868 |
| 2052 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 1.909 |
| 2053 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 1.951 |
| 2054 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 1.994 |
| 2055 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 2.038 |
| 2056 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 2.083 |
| 2057 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 2.129 |
| 2058 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 2.176 |
| 2059 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 2.223 |
| 2060 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 2.272 |
| 2061 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 2.322 |
| 2062 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 2.374 |
| 2063 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 2.426 |
| 2064 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 2.479 |
| 2065 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 2.534 |
| 2066 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 2.590 |
| 2067 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 2.647 |
| 2068 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 2.705 |
| 2069 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 2.764 |
| 2070 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 2.825 |
| 2071 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 2.887 |
| 2072 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 2.951 |
| 2073 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 3.016 |
| 2074 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 3.082 |
| 2075 | 2.3% | 3.8% | 1.7% | 3.1% | 2.0% | 2.2% | 3.150 |

2.11% = AVERAGE COMPOUND CPI INFLATION MULTILPLIER 2021-2074

**GENERAL ASSUMPTIONS**

| | |
|---|---|
| JURISDICTIONAL FACTOR = | 95.7416% |
| FPL'S SHARE OF ST. LUCIE 2 COST (NET OF PARTICIPANTS) | 86.44612% |
| CORPORATE TAX RATE | 24.522% |

| | ANNUAL | MONTHLY |
|---|---|---|
| EARNINGS RATE QUALIFIED FUND | 4.000% | 0.327374% |
| EARNINGS RATE NON-QUALIFIED FUND | 4.000% | 0.327374% |

| | **TP3** | **TP4** | **SL1** | **SL2** |
|---|---|---|---|---|
| Adjusted QUALIFIED FUNDING % (at 12/31/20) | 61.144% | 62.723% | 69.345% | 80.939% |
| FUND BALANCES ($000's) | | | | |
| A. QUALIFIED FUND BALANCE 10/31/20 | 523,190 | 599,422 | 677,699 | 619,660 |
| B. CONTRIBUTIONS - Nov. & Dec. 2020 | - | - | - | - |
| C. EARNINGS - Nov. & Dec. 2020 | 3,595 | 4,118 | 4,655 | 4,253 |
| **D. QUALIFIED FUND BALANCE 12/31/20** | **526,785** | **603,540** | **682,354** | **623,913** |
| E. JURISDICTIONAL FACTOR | 95.7416% | 95.7416% | 95.7416% | 95.7416% |
| **F. JURIS. QUAL. FUND BAL. 12/31/20** | **504,352** | **577,838** | **653,297** | **597,344** |
| A. NON-QUALIFIED FUND BALANCE 10/31/20 | 208,153 | 223,026 | 187,561 | 91,361 |
| B. CONTRIBUTIONS - Nov. & Dec. 2020 | - | - | - | - |
| C. EARNINGS - Nov. & Dec. 2020 | 558 | 598 | 503 | 246 |
| **D. NON-QUALIFIED FUND BALANCE 12/31/20** | **208,711** | **223,624** | **188,063** | **91,606** |
| E. JURISDICTIONAL FACTOR | 95.7416% | 95.7416% | 95.7416% | 95.7416% |
| **F. JURIS. NON-QUAL. FUND BAL. 12/31/20** | **199,823** | **214,101** | **180,055** | **87,705** |
| Juris. Est/Actual Fund Balance | 704,175 | 791,939 | 833,351 | 685,049 |
| Juris. Est/Actual Reserve Balance | 824,863 | 921,250 | 942,100 | 738,015 |

**Florida Power & Light Company**
**2020 Decommissioning Study**
**Turkey Point Nuclear Units**
**Support Schedule : Inflation and Funding Analysis**

| Turkey Point Nuclear Plant, Unit 3 DECON - Total Decommissioning Cost (thousands, 2020 dollars) | | | | | | | Turkey Point Nuclear Plant, Unit 3 DECON - Total Decommissioning Cost (thousands, Future dollars) | | | | | | | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Labor | Equipment & Materials | Transportation | LLRW Disposal | Other | Yearly Totals | Year | Labor | Equipment & Materials | Transportation | Burial | Other | Yearly Totals | Inflation Rate |
| 2052 | 10,954 | 1,126 | - | - | 2,274 | 14,354 | 2052 | 34,074.51 | 1,762.21 | - | - | 4,476.37 | 40,313 | 3.28% |
| 2053 | 37,627 | 2,718 | - | - | 5,003 | 45,347 | 2053 | 121,462 | 4,327 | - | - | 10,073 | 135,863 | 3.38% |
| 2054 | 21,953 | 1,870 | - | - | 4,754 | 28,577 | 2054 | 73,541 | 3,029 | - | - | 9,791 | 86,361 | 3.31% |
| 2055 | 21,340 | 16,698 | - | - | 5,523 | 43,561 | 2055 | 74,185 | 27,516 | - | - | 11,636 | 113,337 | 2.77% |
| 2056 | 42,576 | 4,771 | 4,645 | - | 8,933 | 60,925 | 2056 | 153,594 | 7,999 | 22,200 | - | 19,252 | 203,046 | 3.40% |
| 2057 | 31,594 | 17,117 | 664 | 4,893 | 7,383 | 61,651 | 2057 | 118,275 | 29,196 | 3,271 | 10,356 | 16,277 | 177,376 | 2.90% |
| 2058 | 35,477 | 17,787 | 1,304 | 7,024 | 3,876 | 65,469 | 2058 | 137,826 | 30,867 | 6,630 | 15,171 | 8,742 | 199,236 | 2.97% |
| 2059 | 48,420 | 17,650 | 2,471 | 8,676 | 4,166 | 81,382 | 2059 | 195,206 | 31,161 | 12,960 | 19,121 | 9,609 | 268,058 | 3.10% |
| 2060 | 43,447 | 10,895 | 7,676 | 27,972 | 2,924 | 92,914 | 2060 | 181,767 | 19,570 | 41,521 | 62,913 | 6,900 | 312,670 | 3.08% |
| 2061 | 22,351 | 6,145 | 8,359 | 33,167 | 2,605 | 72,627 | 2061 | 97,040 | 11,229 | 46,638 | 76,123 | 6,287 | 237,317 | 2.93% |
| 2062 | 11,619 | 2,769 | 2,385 | 8,796 | 2,389 | 27,958 | 2062 | 52,348 | 5,149 | 13,727 | 20,602 | 5,898 | 97,723 | 3.02% |
| 2063 | 3,827 | 559 | - | - | 1,572 | 5,958 | 2063 | 17,895 | 1,058 | - | - | 3,970 | 22,922 | 3.18% |
| 2064 | 2,236 | 94 | - | - | 867 | 3,198 | 2064 | 10,850 | 181 | - | - | 2,241 | 13,273 | 3.29% |
| 2065 | 2,236 | 94 | - | - | 867 | 3,198 | 2065 | 11,260 | 184 | - | - | 2,292 | 13,737 | 3.29% |
| 2066 | 2,236 | 94 | - | - | 867 | 3,198 | 2066 | 11,685 | 187 | - | - | 2,345 | 14,217 | 3.30% |
| 2067 | 2,236 | 94 | - | - | 867 | 3,198 | 2067 | 12,126 | 191 | - | - | 2,399 | 14,715 | 3.30% |
| 2068 | 2,236 | 94 | - | - | 867 | 3,198 | 2068 | 12,583 | 194 | - | - | 2,454 | 15,231 | 3.31% |
| 2069 | 2,236 | 94 | - | - | 867 | 3,198 | 2069 | 13,058 | 197 | - | - | 2,510 | 15,766 | 3.31% |
| 2070 | 2,236 | 94 | - | - | 867 | 3,198 | 2070 | 13,551 | 201 | - | - | 2,567 | 16,319 | 3.31% |
| 2071 | 2,334 | 94 | - | 3,385 | 892 | 6,705 | 2071 | 14,674 | 205 | - | 9,513 | 2,702 | 27,094 | 2.78% |
| 2072 | 2,626 | 96 | - | 6,774 | 994 | 10,489 | 2072 | 17,134 | 212 | - | 19,428 | 3,080 | 39,854 | 2.60% |
| 2073 | 6,588 | 1,336 | - | 3,381 | 590 | 11,895 | 2073 | 44,612 | 3,002 | - | 9,897 | 1,869 | 59,380 | 3.08% |
| 2074 | 386 | 39 | - | - | 23 | 448 | 2074 | 2,713 | 90 | - | - | 74 | 2,878 | 3.50% |
| 2075 | - | - | - | - | - | - | 2075 | - | - | - | - | - | - | |
| **Total** | **358,772** | **102,330** | **27,505** | **104,067** | **59,971** | **652,646** | **Total** | **1,421,461** | **177,707** | **146,947** | **243,125** | **137,445** | **2,126,685** | **3.15%** |

**NOTE:** The 2020 cash flows are inflated to the year of expenditure based on the indices provided on Support Schedule G, page 1 of 8

**Florida Power & Light Company**
**2020 Decommissioning Study**
**Turkey Point Nuclear Units**
**Support Schedule : Inflation and Funding Analysis**

| Turkey Point Nuclear Plant, Unit 4 DECON - Total Decommissioning Cost (thousands, 2020 dollars) | | | | | | | Turkey Point Nuclear Plant, Unit 4 DECON - Total Decommissioning Cost (thousands, Future dollars) | | | | | | | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Labor | Equipment & Materials | Transportation | LLRW Disposal | Other | Yearly Totals | Year | Labor | Equipment & Materials | Transportation | Burial | Other | Yearly Totals | Inflation Rate |
| 2053 | 19,611 | 1,954 | - | - | 3,529 | 25,093 | 2053 | 63,304.54 | 3,110.66 | - | - | 7,105.11 | 73,520 | 3.31% |
| 2054 | 27,303 | 2,331 | - | - | 4,859 | 34,493 | 2054 | 91,461 | 3,776 | - | - | 10,009 | 105,246 | 3.34% |
| 2055 | 23,262 | 21,937 | - | - | 6,470 | 51,669 | 2055 | 80,867 | 36,149 | - | - | 13,633 | 130,648 | 2.69% |
| 2056 | 35,827 | 3,559 | 3,868 | - | 7,237 | 50,491 | 2056 | 129,246 | 5,966 | 18,485 | - | 15,598 | 169,296 | 3.42% |
| 2057 | 32,202 | 11,965 | 1,401 | 3,750 | 6,980 | 56,299 | 2057 | 120,554 | 20,409 | 6,906 | 7,937 | 15,389 | 171,195 | 3.05% |
| 2058 | 34,874 | 13,746 | 1,780 | 3,992 | 5,341 | 59,733 | 2058 | 135,482 | 23,854 | 9,053 | 8,621 | 12,044 | 189,055 | 3.08% |
| 2059 | 48,696 | 19,347 | 2,539 | 10,778 | 4,689 | 86,049 | 2059 | 196,320 | 34,157 | 13,313 | 23,756 | 10,816 | 278,362 | 3.06% |
| 2060 | 47,020 | 18,470 | 5,140 | 18,957 | 2,824 | 92,411 | 2060 | 196,718 | 33,175 | 27,802 | 42,637 | 6,664 | 306,997 | 3.05% |
| 2061 | 31,130 | 16,283 | 14,003 | 66,744 | 2,542 | 130,702 | 2061 | 135,152 | 29,756 | 78,122 | 153,188 | 6,137 | 402,355 | 2.78% |
| 2062 | 16,566 | 7,175 | 7,025 | 27,567 | 2,361 | 60,695 | 2062 | 74,639 | 13,339 | 40,427 | 64,566 | 5,831 | 198,801 | 2.87% |
| 2063 | 3,252 | 439 | 1,424 | 3,999 | 1,532 | 10,647 | 2063 | 15,205 | 831 | 8,452 | 9,558 | 3,869 | 37,915 | 3.00% |
| 2064 | 2,259 | 100 | - | - | 835 | 3,193 | 2064 | 10,959 | 192 | - | - | 2,158 | 13,308 | 3.30% |
| 2065 | 2,259 | 100 | - | - | 835 | 3,193 | 2065 | 11,372 | 195 | - | - | 2,207 | 13,774 | 3.30% |
| 2066 | 2,259 | 100 | - | - | 835 | 3,193 | 2066 | 11,801 | 199 | - | - | 2,258 | 14,257 | 3.31% |
| 2067 | 2,259 | 100 | - | - | 835 | 3,193 | 2067 | 12,247 | 202 | - | - | 2,309 | 14,758 | 3.31% |
| 2068 | 2,259 | 100 | - | - | 835 | 3,193 | 2068 | 12,709 | 205 | - | - | 2,362 | 15,277 | 3.31% |
| 2069 | 2,259 | 100 | - | - | 835 | 3,193 | 2069 | 13,188 | 209 | - | - | 2,417 | 15,814 | 3.32% |
| 2070 | 2,259 | 100 | - | - | 835 | 3,193 | 2070 | 13,686 | 213 | - | - | 2,472 | 16,371 | 3.32% |
| 2071 | 2,356 | 100 | - | 3,385 | 860 | 6,700 | 2071 | 14,814 | 217 | - | 9,513 | 2,604 | 27,148 | 2.78% |
| 2072 | 2,633 | 101 | - | 6,773 | 944 | 10,451 | 2072 | 17,182 | 224 | - | 19,428 | 2,922 | 39,756 | 2.60% |
| 2073 | 5,555 | 917 | - | 3,382 | 555 | 10,409 | 2073 | 37,619 | 2,060 | - | 9,899 | 1,759 | 51,337 | 3.06% |
| 2074 | 302 | 27 | - | - | 23 | 351 | 2074 | 2,121 | 61 | - | - | 74 | 2,256 | 3.50% |
| 2075 | - | - | - | - | - | - | 2075 | - | - | - | - | - | - | |
| **Total** | **346,399** | **119,049** | **37,180** | **149,327** | **56,592** | **708,547** | **Total** | **1,396,647** | **208,501** | **202,559** | **349,103** | **130,637** | **2,287,447** | **3.13%** |

NOTE: The 2020 cash flows are inflated to the year of expenditure based on the indices provided on Support Schedule G, page 1 of 8

**Florida Power & Light Company**
**2020 Decommissioning Study**
**Turkey Point Nuclear Units**
**Support Schedule : Inflation and Funding Analysis**

**Turkey Point Nuclear Plant, Unit 3**
**DECON**
**Costs Recovered for Spent Fuel Management**
**(thousands, 2020 dollars)**

| Year | Labor | Equipment & Materials | Energy | LLRW Disposal | Other | Yearly Totals |
|---|---|---|---|---|---|---|
| 2052 | - | - | - | - | - | - |
| 2053 | 6,377 | 1,000 | - | - | 385 | 7,762 |
| 2054 | 17,895 | 2,335 | - | - | 864 | 21,095 |
| 2055 | 10,545 | 1,662 | - | - | 817 | 13,024 |
| 2056 | 8,202 | 16,433 | - | - | 809 | 25,444 |
| 2057 | 12,909 | 3,094 | - | - | 1,097 | 17,100 |
| 2058 | 2,236 | 94 | - | - | 867 | 3,198 |
| 2059 | 2,236 | 94 | - | - | 867 | 3,198 |
| 2060 | - | - | - | - | - | - |
| **Total** | **60,401** | **24,713** | **-** | **-** | **5,707** | **90,821** |

**Turkey Point Nuclear Plant, Unit 3**
**DECON**
**Costs Recovered for Spent Fuel Management**
**(thousands, Future dollars)**

| Year | Labor | Equipment & Materials | Transport | Burial | Other | Yearly Totals |
|---|---|---|---|---|---|---|
| 2052 | - | - | - | - | - | - |
| 2053 | 20,585 | 1,592 | - | - | 775 | 22,953 |
| 2054 | 59,947 | 3,782 | - | - | 1,780 | 65,510 |
| 2055 | 36,659 | 2,739 | - | - | 1,721 | 41,119 |
| 2056 | 29,589 | 27,551 | - | - | 1,743 | 58,883 |
| 2057 | 48,328 | 5,277 | - | - | 2,418 | 56,023 |
| 2058 | 8,688 | 163 | - | - | 1,956 | 10,807 |
| 2059 | 9,016 | 166 | - | - | 2,001 | 11,183 |
| 2060 | - | - | - | - | - | - |
| **Total** | **212,812** | **41,271** | **-** | **-** | **12,395** | **266,478** |

NOTE: The 2020 cash flows are inflated to the year of expenditure based on the indices provided on Support Schedule G, page 1 of 8

**Florida Power & Light Company**
**2020 Decommissioning Study**
**Turkey Point Nuclear Units**
**Support Schedule : Inflation and Funding Analysis**

**Turkey Point Nuclear Plant, Unit 4**
**DECON**
**Costs Recovered for Spent Fuel Management**
**(thousands, 2020 dollars)**

| Year | Labor | Equipment & Materials | Energy | LLRW Disposal | Other | Yearly Totals |
|---|---|---|---|---|---|---|
| 2052 | - | - | - | - | - | - |
| 2053 | - | - | - | - | - | - |
| 2054 | 10,684 | 1,730 | - | - | 603 | 13,017 |
| 2055 | 13,534 | 1,990 | - | - | 836 | 16,359 |
| 2056 | 9,308 | 21,535 | - | - | 795 | 31,638 |
| 2057 | 15,073 | 2,579 | - | - | 987 | 18,639 |
| 2058 | 2,259 | 100 | - | - | 835 | 3,193 |
| 2059 | 2,259 | 100 | - | - | 835 | 3,193 |
| 2060 | - | - | - | - | - | - |
| **Total** | **53,116** | **28,033** | **-** | **-** | **4,891** | **86,040** |

**Turkey Point Nuclear Plant, Unit 4**
**DECON**
**Costs Recovered for Spent Fuel Management**
**(thousands, Future dollars)**

| Year | Labor | Equipment & Materials | Transport | Burial | Other | Yearly Totals |
|---|---|---|---|---|---|---|
| 2052 | - | - | - | - | - | - |
| 2053 | - | - | - | - | - | - |
| 2054 | 35,791 | 2,802 | - | - | 1,243 | 39,836 |
| 2055 | 47,047 | 3,279 | - | - | 1,761 | 52,086 |
| 2056 | 33,579 | 36,105 | - | - | 1,713 | 71,396 |
| 2057 | 56,430 | 4,398 | - | - | 2,175 | 63,003 |
| 2058 | 8,775 | 173 | - | - | 1,883 | 10,831 |
| 2059 | 9,106 | 176 | - | - | 1,926 | 11,208 |
| 2060 | - | - | - | - | - | - |
| **Total** | **190,726** | **46,932** | **-** | **-** | **10,702** | **248,360** |

NOTE: The 2020 cash flows are inflated to the year of expenditure based on the indices provided on Support Schedule G, page 1 of 8

## TURKEY POINT UNIT 3

| | NOMINAL ANNUAL | NOMINAL MONTHLY |
|---|---|---|
| EARNINGS RATE QUALIFIED FUND | 4.000% | 0.327374% |
| EARNINGS RATE NON-QUALIFIED FUND | 4.000% | 0.327374% |

CORPORATE TAX RATE 24.522%

FPL'S SHARE OF COST (NET OF PARTICIPANTS) 100.000%
JURISDICTIONAL FACTOR 95.7416%

Adjusted QUALIFIED % 61.144%

LICENSE ENDS 07/19/2052

| YEAR | SPENDING CURVE | ESTIMATED COST IN ($2020) | ESTIMATED COST IN NOMINAL $ | ESTIMATED DOE RECOVERY NOMINAL $ | NET NOMINAL $ | JURISDICTIONAL AMOUNT | QUALIFIED AMOUNT | NON-QUAL AMOUNT | TAX SAVINGS | PV @ 4.0% QUALIFIED AMOUNT | PV @ 4.0% NON-QUAL AMOUNT |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2052 | 2.1994% | $ 14,354,167 | $ 40,313,093 | $ - | $ 40,313,093 | $ 38,596,400 | $ 23,599,293 | $ 11,319,543 | $ 3,677,564 | $ 6,727,166 | $ 3,226,726 |
| 2053 | 6.9482% | 45,347,350 | $ 135,862,684 | $ 22,952,726 | 112,909,959 | 108,101,801 | 66,097,514 | 31,704,071 | 10,300,216 | 18,116,944 | 8,689,901 |
| 2054 | 4.3786% | 28,576,683 | $ 86,360,710 | $ 65,509,790 | 20,850,920 | 19,963,004 | 12,206,133 | 5,854,745 | 1,902,126 | 3,216,952 | 1,543,030 |
| 2055 | 6.6745% | 43,560,522 | $ 113,337,089 | $ 41,119,013 | 72,218,076 | 69,142,741 | 42,276,477 | 20,278,167 | 6,588,097 | 10,713,513 | 5,138,801 |
| 2056 | 9.3351% | 60,925,202 | $ 203,045,693 | $ 58,882,848 | 144,162,845 | 138,023,815 | 84,392,961 | 40,479,592 | 13,151,261 | 20,563,925 | 9,863,611 |
| 2057 | 9.4462% | 61,650,506 | $ 177,376,398 | $ 56,023,098 | 121,353,300 | 116,185,591 | 71,040,248 | 34,074,883 | 11,070,460 | 16,644,506 | 7,983,638 |
| 2058 | 10.0313% | 65,469,003 | $ 199,236,159 | $ 10,807,412 | 188,428,747 | 180,404,697 | 110,306,229 | 52,909,048 | 17,189,420 | 24,850,386 | 11,919,638 |
| 2059 | 12.4696% | 81,382,368 | $ 268,058,386 | $ 11,182,957 | 256,875,429 | 245,936,645 | 150,374,932 | 72,128,242 | 23,433,471 | 32,574,309 | 15,624,464 |
| 2060 | 14.2365% | 92,914,049 | $ 312,670,161 | $ - | 312,670,161 | 299,355,415 | 183,037,180 | 87,794,887 | 28,523,348 | 38,124,639 | 18,286,713 |
| 2061 | 11.1280% | 72,626,640 | $ 237,316,655 | $ - | 237,316,655 | 227,210,763 | 138,925,222 | 66,636,320 | 21,649,222 | 27,823,655 | 13,345,784 |
| 2062 | 4.2838% | 27,958,217 | $ 97,722,693 | $ - | 97,722,693 | 93,561,269 | 57,206,885 | 27,439,627 | 8,914,757 | 11,016,612 | 5,284,184 |
| 2063 | 0.9129% | 5,958,321 | $ 22,922,314 | $ - | 22,922,314 | 21,946,190 | 13,418,727 | 6,436,373 | 2,091,089 | 2,484,722 | 1,191,812 |
| 2064 | 0.4900% | 3,197,818 | $ 13,272,540 | $ - | 13,272,540 | 12,707,342 | 7,769,748 | 3,726,806 | 1,210,788 | 1,383,375 | 663,544 |
| 2065 | 0.4900% | 3,197,818 | $ 13,736,531 | $ - | 13,736,531 | 13,151,574 | 8,041,368 | 3,857,091 | 1,253,116 | 1,376,669 | 660,328 |
| 2066 | 0.4900% | 3,197,818 | $ 14,217,207 | $ - | 14,217,207 | 13,611,781 | 8,322,756 | 3,992,060 | 1,296,965 | 1,370,041 | 657,148 |
| 2067 | 0.4900% | 3,197,818 | $ 14,715,179 | $ - | 14,715,179 | 14,088,547 | 8,614,269 | 4,131,886 | 1,342,393 | 1,363,488 | 654,005 |
| 2068 | 0.4900% | 3,197,818 | $ 15,231,080 | $ - | 15,231,080 | 14,582,480 | 8,916,278 | 4,276,746 | 1,389,456 | 1,357,011 | 650,898 |
| 2069 | 0.4900% | 3,197,818 | $ 15,765,569 | $ - | 15,765,569 | 15,094,208 | 9,229,168 | 4,426,826 | 1,438,215 | 1,350,607 | 647,827 |
| 2070 | 0.4900% | 3,197,818 | $ 16,319,327 | $ - | 16,319,327 | 15,624,385 | 9,553,338 | 4,582,316 | 1,488,731 | 1,344,275 | 644,790 |
| 2071 | 1.0273% | 6,704,873 | $ 27,093,749 | $ - | 27,093,749 | 25,939,988 | 15,860,686 | 7,607,674 | 2,471,628 | 2,145,960 | 1,029,323 |
| 2072 | 1.6072% | 10,489,418 | $ 39,853,604 | $ - | 39,853,604 | 38,156,478 | 23,330,309 | 11,190,523 | 3,635,647 | 3,035,197 | 1,455,850 |
| 2073 | 1.8226% | 11,894,985 | $ 59,379,899 | $ - | 59,379,899 | 56,851,266 | 34,761,006 | 16,673,326 | 5,416,934 | 4,348,359 | 2,085,716 |
| 2074 | 0.0687% | 448,490 | $ 2,877,780 | $ - | 2,877,780 | 2,755,233 | 1,684,653 | 808,054 | 262,526 | 202,633 | 97,194 |
| 2075 | 0.0000% | - | $ - | $ - | - | - | - | - | - | - | - |
| | **100.0000%** | **$ 652,645,521** | **$ 2,126,684,500** | **$ 266,477,844** | **$ 1,860,206,656** | **$ 1,780,991,616** | **$ 1,088,965,380** | **$ 522,328,808** | **$ 169,697,428** | **$ 232,134,945** | **$ 111,344,925** |

| | QUALIFIED | NON-QUAL | TOTAL |
|---|---|---|---|
| NPV @12/31/20 | $ 232,134,945 | $ 111,344,925 | $ 343,479,870 |
| LESS BALANCE @ 12/31/20 | 504,352,385 | 199,822,850 | 704,175,236 |
| PV OF FUNDING REQUIREMENTS | $ (272,217,441) | $ (88,477,925) | $ (360,695,365) |
| MONTHLY FUNDING REQUIREMENT | - | - | - |
| ANNUAL FUNDING REQUIREMENT | - | - | - |
| MONTHLY ACCRUAL | - | - | - |
| ANNUAL ACCRUAL | - | - | - |

## TURKEY POINT UNIT 4

| | NOMINAL ANNUAL | NOMINAL MONTHLY |
|---|---|---|
| EARNINGS RATE QUALIFIED FUND | 4.000% | 0.327374% |
| EARNINGS RATE NON-QUALIFIED FUND | 4.000% | 0.327374% |

CORPORATE TAX RATE 24.522%

FPL'S SHARE OF COST (NET OF PARTICIPANTS) 100.000%
JURISDICTIONAL FACTOR 95.7416%

Adjusted QUALIFIED % 62.723%

LICENSE ENDS 04/10/2053

| YEAR | SPENDING CURVE | ESTIMATED COST IN ($2020) | ESTIMATED COST IN NOMINAL $ | ESTIMATED DOE RECOVERY NOMINAL $ | NET NOMINAL $ | JURISDICTIONAL AMOUNT | QUALIFIED AMOUNT | NON-QUAL AMOUNT | TAX SAVINGS | PV @ 4.0% QUALIFIED AMOUNT | PV @ 4.0% NON-QUAL AMOUNT |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2053 | 3.5415% | $ 25,093,029 | $ 73,520,309 | $ - | $ 73,520,309 | $ 70,389,520 | $ 44,150,633 | $ 19,804,634 | $ 6,434,253 | $ 12,101,431 | $ 5,428,335 |
| 2054 | 4.8681% | 34,493,006 | $ 105,245,719 | $ 39,835,750 | 65,409,969 | 62,624,551 | 39,280,188 | 17,619,901 | 5,724,463 | 10,352,376 | 4,643,762 |
| 2055 | 7.2923% | 51,669,035 | $ 130,648,293 | $ 52,086,494 | 78,561,799 | 75,216,324 | 47,178,164 | 21,162,693 | 6,875,467 | 11,955,677 | 5,362,954 |
| 2056 | 7.1259% | 50,490,667 | $ 169,295,740 | $ 71,396,367 | 97,899,373 | 93,730,426 | 58,790,821 | 26,371,778 | 8,567,827 | 14,325,484 | 6,425,978 |
| 2057 | 7.9457% | 56,298,721 | $ 171,194,893 | $ 63,002,855 | 108,192,038 | 103,584,788 | 64,971,802 | 29,144,379 | 9,468,607 | 15,222,688 | 6,828,436 |
| 2058 | 8.4303% | 59,732,890 | $ 189,054,716 | $ 10,830,848 | 178,223,869 | 170,634,383 | 107,027,524 | 48,009,300 | 15,597,560 | 24,111,742 | 10,815,796 |
| 2059 | 12.1444% | 86,048,684 | $ 278,362,094 | $ 11,208,159 | 267,153,936 | 255,777,453 | 160,432,070 | 71,964,959 | 23,380,423 | 34,752,892 | 15,589,093 |
| 2060 | 13.0423% | 92,411,134 | $ 306,996,581 | $ - | 306,996,581 | 293,923,439 | 184,358,493 | 82,697,627 | 26,867,319 | 38,399,854 | 17,225,010 |
| 2061 | 18.4465% | 130,701,899 | $ 402,355,476 | $ - | 402,355,476 | 385,221,570 | 241,623,698 | 108,385,060 | 35,212,812 | 48,391,893 | 21,707,135 |
| 2062 | 8.5661% | 60,694,950 | $ 198,801,202 | $ - | 198,801,202 | 190,335,452 | 119,384,685 | 53,552,348 | 17,398,419 | 22,990,497 | 10,312,840 |
| 2063 | 1.5026% | 10,646,502 | $ 37,915,392 | $ - | 37,915,392 | 36,300,803 | 22,769,063 | 10,213,511 | 3,318,229 | 4,216,107 | 1,891,217 |
| 2064 | 0.4507% | 3,193,394 | $ 13,307,970 | $ - | 13,307,970 | 12,741,263 | 7,991,741 | 3,584,853 | 1,164,669 | 1,422,900 | 638,270 |
| 2065 | 0.4507% | 3,193,394 | $ 13,774,315 | $ - | 13,774,315 | 13,187,750 | 8,271,793 | 3,710,475 | 1,205,482 | 1,416,118 | 635,227 |
| 2066 | 0.4507% | 3,193,394 | $ 14,257,459 | $ - | 14,257,459 | 13,650,319 | 8,561,931 | 3,840,623 | 1,247,765 | 1,409,413 | 632,220 |
| 2067 | 0.4507% | 3,193,394 | $ 14,758,017 | $ - | 14,758,017 | 14,129,562 | 8,862,528 | 3,975,461 | 1,291,573 | 1,402,784 | 629,246 |
| 2068 | 0.4507% | 3,193,394 | $ 15,276,628 | $ - | 15,276,628 | 14,626,088 | 9,173,966 | 4,115,163 | 1,336,960 | 1,396,230 | 626,306 |
| 2069 | 0.4507% | 3,193,394 | $ 15,813,955 | $ - | 15,813,955 | 15,140,534 | 9,496,643 | 4,259,906 | 1,383,985 | 1,389,749 | 623,399 |
| 2070 | 0.4507% | 3,193,394 | $ 16,370,685 | $ - | 16,370,685 | 15,673,556 | 9,830,972 | 4,409,876 | 1,432,708 | 1,383,342 | 620,525 |
| 2071 | 0.9457% | 6,700,394 | $ 27,148,278 | $ - | 27,148,278 | 25,992,196 | 16,303,164 | 7,313,105 | 2,375,927 | 2,205,828 | 989,467 |
| 2072 | 1.4750% | 10,451,384 | $ 39,756,107 | $ - | 39,756,107 | 38,063,133 | 23,874,455 | 10,709,356 | 3,479,322 | 3,105,988 | 1,393,252 |
| 2073 | 1.4691% | 10,409,218 | $ 51,337,301 | $ - | 51,337,301 | 49,151,154 | 30,829,228 | 13,829,056 | 4,492,870 | 3,856,521 | 1,729,918 |
| 2074 | 0.0496% | 351,490 | $ 2,256,348 | $ - | 2,256,348 | 2,160,264 | 1,354,989 | 607,807 | 197,468 | 162,980 | 73,108 |
| 2075 | 0.0000% | - | $ - | $ - | - | - | - | - | - | - | - |
| | **100.0000%** | **$ 708,546,759** | **$ 2,287,447,481** | **$ 248,360,471** | **$ 2,039,087,009** | **$ 1,952,254,528** | **$ 1,224,518,551** | **$ 549,281,871** | **$ 178,454,106** | **$ 255,972,494** | **$ 114,821,495** |

| | QUALIFIED | NON-QUAL | TOTAL |
|---|---|---|---|
| NPV @12/31/20 | $ 255,972,494 | $ 114,821,495 | $ 370,793,989 |
| LESS BALANCE @ 12/31/20 | 577,838,404 | 214,100,960 | $ 791,939,364 |
| PV OF FUNDING REQUIREMENTS | $ (321,865,909) | $ (99,279,465) | $ (421,145,375) |
| MONTHLY FUNDING REQUIREMENT | - | - | - |
| ANNUAL FUNDING REQUIREMENT | - | - | - |
| MONTHLY ACCRUAL | - | - | - |
| ANNUAL ACCRUAL | - | - | - |

# SECTION 10

# DECOMMISSIONING COST ANALYSIS: TURKEY POINT NUCLEAR PLANT UNITS 3 AND 4

Prepared by EnergySolutions, LLC

ENERGYSOLUTIONS

**Document No. 164086-DCE-02**

# 2020 Decommissioning Cost Estimate of the Turkey Point Nuclear Plant, Units 3 and 4

**Project No. 164086-02** **Rev. 1**

**Prepared for:**
Florida Power & Light Company


**Prepared by:**
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121 W. Trade Street, Suite 2700
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Authored By: Kevin M. Kirkley, Sr. Estimator — Date: 11/19/2020

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- [X] New Report
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Electronic documents, once printed, are uncontrolled and may become outdated.
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# Acronyms and Abbreviations

| | |
|---|---|
| AIF | Atomic Industrial Forum |
| ALARA | As Low As Reasonably Achievable |
| BWR | Boiling Water Reactor |
| CFR | Code of Federal Regulations |
| CWS | Circulating Water System |
| DAW | Dry Active Waste |
| DCE | Decommissioning Cost Estimate |
| DGC | Decommissioning General Contractor |
| DOE | U.S. Department of Energy |
| DSC | Dry Storage Canister |
| EPRI | Electric Power Research Institute |
| ES | Energy*Solutions* |
| FEMA | Federal Emergency Management Agency |
| FPL | Florida Power & Light Company |
| FSS | Final Status Survey |
| GSA | U.S. General Services Administration |
| GTCC | Greater Than Class C |
| HP | Health Physics |
| HSM | Horizontal Storage Module |
| INPO | Institute of Nuclear Power Operations |
| ISFSI | Independent Spent Fuel Storage Installation |
| LLRW | Low-Level Radioactive Waste |
| LOP | Life-of-Plant |
| MARSSIM | Multi-Agency Radiation Survey and Site Investigation Manual |
| MWt | Megawatt thermal |
| Turkey Point | Turkey Point Nuclear Plant |
| NRC | Nuclear Regulatory Commission |
| ORISE | Oak Ridge Institute for Science and Education |
| PCB | Polychlorinated Biphenyl |
| PSDAR | Post-Shutdown Decommissioning Activities Report |
| PWR | Pressurized Water Reactor |
| WBS | Work Breakdown Structure |
| WCS | Waste Control Specialists LLC |
| UCF | Unit Cost Factor |

# 1.0 EXECUTIVE SUMMARY

This report presents the 2020 Decommissioning Cost Estimate (DCE) Study of the Turkey Point Nuclear Plant, Units 3 and 4, hereinafter referred to as the 2020 Cost Study. The Turkey Point Nuclear Plant (Turkey Point) is owned and operated by Florida Power & Light Company (FPL).

This DCE has been performed to furnish an estimate, for financial planning purposes, of the costs for decommissioning Turkey Point Units 3 and 4 to the extent required to terminate the plant's operating license pursuant to 10 CFR 50.75(c); post-shutdown management of spent fuel until acceptance by the U.S. Department of Energy (DOE) pursuant to 10 CFR 50.54(bb); and clean demolition of structures and restoration of the site.

The study methodology follows the basic approach originally presented in the Atomic Industrial Forum/National Environmental Studies Project Report AIF/NESP-036, "Guidelines for Producing Commercial Nuclear Power Plant Decommissioning Cost Estimates," (Ref. No. 1). The report was prepared in accordance with Nuclear Regulatory Commission (NRC) Regulatory Guide 1.202, "Standard Format and Content of Decommissioning Cost Estimates for Nuclear Power Reactors," (Ref. No. 2). The estimate is based on compliance with current regulatory requirements and proven decommissioning technologies.

NRC requirements, set forth in Title 10 of the Code of Federal Regulations (CFR), differentiate between the post-shutdown costs associated with storage of spent fuel on site and those associated with the decommissioning of the facility. 10 CFR 50.75(c) requires funding by the licensee of the facility for the decommissioning program, but specifically excludes the cost of removal and disposal of spent fuel and the removal of clean structures. 10 CFR 50.75(c) also excludes the cost of site restoration activities that do not involve the removal of residual radioactivity necessary to terminate the NRC license, which restore the site to either "Brownfield" or "Greenfield" conditions depending on the desired end state. 10 CFR 50.54 (bb) requires funding by the licensee "for the management of all irradiated fuel at the reactor upon expiration of the reactor operating license until title to the irradiated fuel and possession of the fuel is transferred to the Secretary of Energy for its ultimate disposal in a repository."

Accordingly, the costs and schedules for all activities are segregated for regulatory purposes as follows: costs for "License Termination" (10 CFR 50.75(c)); costs for "Spent Fuel Management" (10 CFR 50.54(bb)); and costs for "Site Restoration".

This study analyzes two DCE scenarios, defined by FPL, as follows:

**Scenario 1 – DECON both following Unit 4 Shutdown**

- Unit 3 Shutdown July 19, 2052
- Unit 4 Shutdown April 10, 2053
- DECON Methodology after Unit 4 is permanently shutdown in 2053
- Transfer spent fuel from pool to DOE prior to shutdown beginning in 2031
- Fuel pools empty by 2056
- All Dry Fuel transferred from ISFSI to DOE by 2073
- Decommissioning will be performed by FPL and a Decommissioning General Contractor (DGC)

- Class A LLRW will be disposed of at the ES Clive UT burial site
- Class B and C LLRW will be shipped and buried at the WCS Andrews County, TX burial site

**Scenario 2 - SAFSTOR**

- Unit 3 Shutdown July 19, 2052
- Unit 4 Shutdown April 10, 2053
- SAFSTOR Methodology
- Transfer spent fuel from pool to DOE prior to shutdown beginning in 2031
- Fuel pools empty by 2056
- All Dry Fuel transferred from ISFSI to DOE by 2073
- Decommissioning will be performed by FPL and a Decommissioning General Contractor (DGC)
- SAFSTOR period ends in 2105
- Decommissioning activities to complete by 2112 (excludes ISFSI decommissioning – ISFSI decommissioning and demolition to complete by 2113)
- Class 'A' LLRW will be disposed of at the ES Clive UT burial site
- Class 'B' and 'C' LLRW will be shipped and buried at the WCS Andrews, TX burial site

The cost estimate results are provided for each scenario in 2020 dollars and summarized in Table 1-1 below. This table provides License Termination costs (corresponding to 10 CFR 50.75(c) requirements), Spent Fuel Management costs (corresponding to 10 CFR 50.54(bb) requirements), and Site Restoration costs including activities such as clean building demolition and site grading etc.

**Table 1-1**

**FPL Turkey Point Units 3 and 4**
**Decommissioning Cost Summary**
(thousands of 2020 dollars)

| Scenario | License Termination | Spent Fuel | Site Restoration | Total |
|---|---|---|---|---|
| 1 | 1,018,355 | 282,949 | 59,888 | 1,361,192 |
| 2 | 1,202,419 | 338,557 | 60,108 | 1,601,084 |

Table 1-2 below provides the cost estimate results for Scenario 1 separated into Unit 3, Unit 4 and Total.

**Table 1-2**

| **FPL Turkey Point Units 3 and 4<br>Scenario 1 Cost Summary by Unit**<br>(thousands of 2020 dollars) | | | |
|---|---|---|---|
| | Unit 3 | Unit 4 | Total |
| License Termination | 484,062 | 534,293 | 1,018,355 |
| Spent Fuel | 144,704 | 138,245 | 282,949 |
| Site Restoration | 23,879 | 36,009 | 59,888 |
| Total | 652,645 | 708,547 | 1,361,192 |

Table 1-3 below provides the cost estimate results for Scenario 2 separated into Unit 3, Unit 4 and Total.

**Table 1-3**

| **FPL Turkey Point Units 3 and 4<br>Scenario 2 Cost Summary by Unit**<br>(thousands of 2020 dollars) | | | |
|---|---|---|---|
| | Unit 3 | Unit 4 | Total |
| License Termination | 573,137 | 629,282 | 1,202,419 |
| Spent Fuel | 172,524 | 166,033 | 338,557 |
| Site Restoration | 24,029 | 36,079 | 60,108 |
| Total | 769,690 | 831,394 | 1,601,084 |

The estimate is based on site-specific plant systems and buildings inventories. These inventories, Energy*Solutions*' (ES) proprietary Unit Cost Factors (UCFs), historical data and execution strategy were used to generate required man-hours, waste volumes and classification, and estimated costs. Detailed project estimates are included in Appendix C.

The schedule reflects Energy*Solutions*' historical execution strategy to sequence activity-dependent or distributed decommissioning elements such as planning and preparations, major component removal, building decontamination, building demolition, etc. A schedule for each scenario is summarized in Tables 1-4 and 1-5 below. Detailed project schedules are included in Appendix B.

Table 1-4 below provides a schedule summary for Scenario 1 based on a DECON scenario with Unit 3 Shutdown in 2052 and Unit 4 Shutdown in 2053.

**Table 1-4**

| FPL DCE-02 Turkey Point Units 3 & 4 Scenario 1 Schedule Summary | |
|---|---|
| **Year** | **Item** |
| 2031 | DOE starts accepting fuel from spent fuel pool |
| 2052 | Unit 3 Shutdown |
| 2053 | Unit 4 Shutdown |
| 2056 | Unit 3 Fuel Pool Empty |
| 2056 | Unit 4 Fuel Pool Empty |
| 2057 | Start Demolition |
| 2063 | Decommissioning and Site Restoration Complete |
| 2073 | ISFSI Empty |
| 2074 | ISFSI Decommissioning and Site Restoration Complete |

Table 1-5 below provides a schedule summary for Scenario 2 based on a SAFSTOR scenario with Unit 3 Shutdown in 2052 and Unit 4 Shutdown in 2053.

**Table 1-5**

| FPL DCE-02 Turkey Point Units 3 & 4 Scenario 2 Schedule Summary | |
|---|---|
| **Year** | **Item** |
| 2031 | DOE starts accepting fuel |
| 2052 | Unit 3 Shutdown |
| 2053 | Unit 4 Shutdown |
| 2056 | Unit 3 Fuel Pool Empty |
| 2056 | Unit 4 Fuel Pool Empty |
| 2056 | SAFSTOR Period Begins |
| 2073 | ISFSI Empty |
| 2105 | SAFSTOR Period Ends |
| 2106 | Start Demolition |
| 2112 | Decommissioning and Site Restoration Complete |
| 2113 | ISFSI Decommissioning and Site Restoration Complete |

# 2.0 INTRODUCTION

## 2.1 Study Objective

This report presents the 2020 Decommissioning Cost Estimate (DCE) Study of the Turkey Point Nuclear Plant, Units 3 and 4, hereinafter referred to as the 2020 Cost Study. The Turkey Point Nuclear Plant (Turkey Point) is owned and operated by FPL.

This update has been performed to furnish an estimate, for financial planning purposes, of the costs for decommissioning Turkey Point Units 3 and 4 to the extent required to terminate the plant's operating license pursuant to 10 CFR 50.75(c); post-shutdown management of spent fuel until acceptance by the U.S. Department of Energy (DOE) pursuant to 10 CFR 50.54(bb); and clean demolition of structures and restoration of the site.

The study methodology follows the basic approach originally presented in the Atomic Industrial Forum/National Environmental Studies Project Report AIF/NESP-036, "Guidelines for Producing Commercial Nuclear Power Plant Decommissioning Cost Estimates," (Ref. No. 1). The report was prepared in accordance with Nuclear Regulatory Commission (NRC) Regulatory Guide 1.202, "Standard Format and Content of Decommissioning Cost Estimates for Nuclear Power Reactors," (Ref. No. 2). The estimate is based on compliance with current regulatory requirements and proven decommissioning technologies.

## 2.2 Regulatory Framework

Provisions of current laws and regulations affecting decommissioning, waste management and spent fuel management are as follows:

1. NRC regulations require a license for on-site storage of spent fuel. Wet storage in a spent fuel pool is authorized by a facility's 10 CFR Part 50 license (Ref. No. 3). On-site dry storage of spent fuel at an Independent Spent Fuel Storage Installation (ISFSI) is licensed by either: (a) the general license set forth in 10 CFR 72.210, which requires that a Part 50 license be in place; or (b) a site-specific ISFSI license issued pursuant to 10 CFR Part 72.

2. 10 CFR 50.75(c) requires funding by the licensee of the facility for the decommissioning program, but specifically excludes the cost of removal and disposal of spent fuel and the removal of clean structures.

3. 10 CFR 50.54 (bb) requires the licensee, within two years following permanent cessation of operation of the reactor or five years before expiration of the operating license, whichever occurs first, to submit written notification to the NRC for its review and preliminary approval of the program by which the licensee intends to manage and provide funding "for the management of all irradiated fuel at the reactor upon expiration of the reactor operating license until title to the irradiated fuel and possession of the fuel is transferred to the Secretary of Energy for its ultimate disposal in a repository." However, the NRC does not currently consider post-shutdown spent fuel management costs to be decommissioning costs.

4. 10 CFR 72.30(b) requires that a licensee under Part 72 must submit a decommissioning funding plan that contains information that provides assurance that funds will be available to decommission the ISFSI.

5. 10 CFR Part 961, Appendix E (Ref. No. 4), requires spent fuel to be cooled in the spent fuel pool for at least five years before it can be accepted by DOE.

Decommissioning Alternatives

The three basic methods for decommissioning are DECON, SAFSTOR, and ENTOMB, which are summarized as follows:

1. DECON: The equipment, structures, and portions of the facility and site that contain radioactive contaminants are promptly removed or decontaminated to a level that permits termination of the license after cessation of operations.
2. SAFSTOR: The facility is placed in a safe, stable condition and maintained in that state (safe storage). The facility is decontaminated and dismantled at the end of the storage period to levels that permit license termination. NRC regulations require decommissioning to be completed within 60 years of cessation of operation. Durations less than the regulatory-allowed maximum may be referred to as Modified SAFSTOR.
3. ENTOMB: Radioactive structures, systems, and components are encased in a structurally long-lived substance, such as concrete. The entombed structure is appropriately maintained and monitored until radioactivity decays to a level that permits termination of the license. Since entombment will exceed the requirement for decommissioning to be completed within 60 years of cessation of operation, NRC handles entombment requests on a case-by-case basis.

The selection of a preferred decommissioning alternative is influenced by a number of factors pertinent at the time of final plant shutdown. These factors include the cost of each decommissioning alternative, minimization of occupational radiation exposure, availability of a low-level waste disposal facility, availability of a high-level waste (spent fuel) repository, regulatory requirements, and public concerns.

Post-Shutdown Spent Fuel Management Alternatives

Selection of a decommissioning strategy and the associated schedule for completion is in part contingent upon an assumed start date for DOE acceptance of spent fuel and an assumed end date for completion of the transfer of all spent fuel assemblies projected to be generated during a power reactor's operating life. The basic options for long-term post-shutdown spent fuel management currently available to power plant operators are (1) wet storage consisting of continued maintenance and operation of the spent fuel pool, and (2) dry storage consisting of transfer of spent fuel from the fuel pool to on-site dry storage modules after a cooling period. Maintaining the spent fuel pool for an extended duration following cessation of operations prevents termination of the Part 50 license and typically has a higher annual maintenance and operating cost than the dry storage alternative. Transfer of spent fuel to an ISFSI requires additional capital expenditures for purchase and construction of the ISFSI and dismantlement and disposal of the ISFSI following completion of spent fuel transfer to DOE. In both cases the decommissioning and spent fuel management costs are significantly affected by the assumed start and end dates for DOE acceptance of spent fuel.

In January 2013, DOE released its "Strategy for Management and Disposal of Used Nuclear Fuel and High-Level Radioactive Waste" (Ref. No. 5). The DOE Strategy contemplates building the capability to begin executing DOE's commitment to address waste disposal within the next ten years. Under this strategy, by 2021, operation would begin of a "pilot storage facility" with an "initial focus on accepting spent fuel from

shutdown reactor sites." By 2025, a "larger interim storage facility" would be available and by 2048 a geologic repository would commence operations.

For purposes of this estimate, FPL has assumed the DOE pickup of commercial fuel to begin in 2030. The DOE starts accepting spent fuel from the Turkey Point facility in 2031 and the acceptance rate is consistent with the 2004 "Acceptance Priority Ranking & Annual Capacity Report" (Ref. No. 6), which is the most current information regarding the acceptance of spent fuel.

Note that nothing in this update, or in the assumptions and information provided by FPL, should be construed as any sort of admission or concession regarding the legal obligations of DOE. For example, and without limitation, the assumptions for DOE performance after 2021 utilized in this update do not include consolidation or acceleration via exchanges of acceptance allocations with other utilities, and DOE is also assumed to accept loaded and canistered fuel, although the government's stated positions with respect to such acceptance, including assertions in legal proceedings, have been inconsistent.

# 3.0 STUDY METHODOLOGY

## 3.1 General Description

Energy*Solutions* maintains a proprietary decommissioning cost model based upon the fundamental technical approach established in AIF/NESP-036, "Guidelines for Producing Commercial Nuclear Power Plant Decommissioning Cost Estimates," dated May 1986 (Ref. No. 1). The cost model has been continuously updated in accordance with regulatory requirements, Energy*Solutions'* actual project experience, and the latest industry technologies. The cost model includes elements for estimating distributed (direct costs) and undistributed costs. Distributed costs are activity specific and include planning and preparation costs as well as the decontamination, packaging, disposal, and removal of major components and systems. For example, the segmentation, packaging, and disposal of the reactor internals is a distributed cost. Undistributed costs, sometimes referred to as collateral costs, are typically time dependent costs such as utility and decommissioning general contractor staff, property taxes, insurance, regulatory fees and permits, energy costs, and security staff.

The methodology for preparing cost estimates for a selected decommissioning alternative requires development of a site-specific detailed work-activity sequence based upon the plant inventory. The activity sequence is used to define the labor, material, equipment, energy resources, and duration required for each activity. In the case of major components, individual work-activity sequence analyses are performed based on the physical and radiological characteristics of the component and the packaging, transportation, and disposal options available.

In addition to actual costs and UCF models the study also relies on information obtained for earlier decommissioning estimates from across the industry and from cost information derived for submitted proposals and bid results.

## 3.2 Schedule Analysis

Energy*Solutions* has established a Work Breakdown Structure (WBS) that typically defines decommissioning costs and the schedule into six primary periods to define the scope of work. Those periods are:

- Period 1 – Shutdown and Transition
- Period 2 – SAFSTOR
- Period 3 – Decommissioning and License Termination
- Period 4 – Site Restoration
- Period 5 – Dry Fuel / GTCC Storage and Transfer
- Period 6 – ISFSI Decommissioning

The work is broken down further into sub-periods as defined in Section 4.2 below.

Once the work activity durations are established, a time-phased schedule and cash-flow analysis are performed using Energy*Solutions'* integrated HardDollar estimating and scheduling tools to generate annual spending.

The schedule accounts for constraints such as spent fuel cooling periods and regulatory reviews. The schedule is typically delineated into periods that differentiate manpower requirements and undistributed costs.

### 3.3 Decommissioning Staff

Energy*Solutions*' philosophy towards decommissioning is to assume that the project will be performed in an efficiently planned and executed manner using project personnel experienced in decommissioning. These DCE scenarios assume that the decommissioning will be performed by a highly experienced and qualified DGC, with oversight and management of the decommissioning operations performed by the utility staff. It is also assumed that the utility staff will be supplemented by professional consulting engineering, particularly in the planning and preparation phase.

Staffing levels for each project period are based on the Atomic Industrial Forum (AIF) guidelines, Energy*Solutions'* project experience and industry practice. The sizes of the staffs are varied in each period in accordance with the requirements of the work activities. Staffing has been organized into the following departments or functional groups:

- Administration
- Engineering
- Health Physics/Radiation Protection
- Management
- Maintenance and Operations
- Quality Assurance
- Security Administration
- Security Guard Force
- Waste Operations
- DGC Staff

### 3.4 Waste Disposal

Waste management costs comprise a significant portion of the decommissioning cost estimate. Additionally, limited future access to disposal sites licensed for receipt of Class B and C wastes introduces a significant level of uncertainty with respect to the appropriateness of using existing rate structures to estimate disposal costs of these wastes. Energy*Solutions*' approach to estimating waste disposal costs is discussed in the following paragraphs.

<u>Waste Classification</u>

Regulations governing disposal of radioactive waste are stringent in order to ensure control of the waste and preclude adverse impact on public health and safety. At present, low-level radioactive waste (LLRW) disposal is controlled by NRC Regulation 10 CFR 61, which went into effect in December 1983. This regulation stipulates the criteria for the establishment and operation of shallow-land LLRW burial facilities. Embodied within this regulation are criteria and classifications for packaging LLRW such that it is acceptable for burial at licensed LLRW disposal sites.

For each waste classification, 10 CFR 61 stipulates specific criteria for physical and chemical properties that the LLRW must meet in order to be accepted at a licensed disposal site. The LLRW disposal criteria of 10 CFR 61 require that LLRW generators determine the proportional amount of a number of specific radioactive

isotopes present in each container of disposable LLRW. This requirement for isotopic analysis of each waste stream of disposable LLRW is met by employing a combination of analytical techniques such as computerized analyses based upon scaling factors, sample laboratory analyses, and direct assay methods. Having performed an isotopic analysis of each container of disposable LLRW, the waste must then be classified according to one of the classifications (Class A, B, C or Greater Than Class C (GTCC)) as defined in 10 CFR 61.

Energy*Solutions*' classification of LLRW resulting from decommissioning activities is based on AIF/NESP-036 (Ref. No. 1), NUREG/CR-0130 (Ref. No.7), NUREG/CR-0672 (Ref. No. 8), and recent industry experience. The estimated curie content of the reactor vessel and internals at shutdown is derived from NUREG/CR-0130 for Pressurized Water Reactors (PWRs) and NUREG/CR-0672 for Boiling Water Reactors (BWRs) and adjusted for the different mass of components and period of decay.

Packaging

Selection of the type and quantity of containers required for Class B and C wastes is based on the most restrictive of either curie content, dose rate, container weight limit, or container volume limit. GTCC wastes from segmentation of the reactor vessel internals is packaged in fuel canisters. The selection of container type for Class A waste is based on the transportation mode (rail, truck, barge, etc.) and waste form. The quantity of Class A waste containers is determined by the most restrictive of either container weight limit or container volume limit. Large components, such as pressurizers, and reactor recirculation pumps, are shipped as their own container with shielding as required.

Custom container costs are obtained from manufacturers. Shielded transport cask and liner costs are obtained from Energy*Solutions* or other cask owners and operators.

Transportation

Transportation routes to processing and disposal facilities are determined based on available transportation modes (truck, rail, barge or combinations). Transportation costs for the selected routes and modes are obtained from vendor quotes or published tariffs whenever possible.

Class A Disposal Options and Rates

In accordance with the existing Life-of-Plant (LOP) Disposal Agreement (Ref. No. 9), all Class A waste that meets the Clive facility waste acceptance criteria may be disposed of at Clive. All reported waste disposal costs include packaging, transportation, and any applicable surcharges.

Class B and C Disposal Options and Rates

Currently, within the United States, there are only three operational commercial disposal facilities licensed to accept Class B and C LLRW: the Barnwell facility, operated by Energy*Solutions* in Barnwell, South Carolina, the U.S. Ecology facility in Richland, Washington, and the licensed facility in Andrews County, Texas operated by Waste Control Specialists (WCS). Barnwell only accepts waste from states within the Atlantic Compact, U.S. Ecology only accepts waste from states within the Northwest and Rocky Mountain Compacts. However, the WCS facility will accept waste from the Texas Compact (comprised of Texas and Vermont) and non-

Compact generators. The Texas Compact Commission on March 23, 2012, approved amendments to rules allowing the import of non-compact generator LLRW for disposal at the Andrews County facility.

In accordance with the existing Life-of-Plant (LOP) Disposal Agreement, all Class B and C waste that meets the WCS facility waste acceptance criteria is to be disposed of at WCS, Andrews County, TX facility. All reported waste disposal costs include packaging, transportation, and any applicable surcharges.

Greater Than Class C (GTCC)

Wastes identified as 10 CFR 61 Class A, B, and C may be disposed of at a near-surface disposal facility. Certain components are highly activated and may exceed the radionuclide concentration limitations for 10 CFR 61 Class C waste. In accordance with 10 CFR 61, these components cannot be disposed of in a near-surface LLRW disposal facility and must be transferred to a geologic repository or a similar site approved by the NRC.

Highly activated sections of the reactor vessel internals will result in GTCC waste. Presently, a facility does not exist for the disposal of wastes exceeding 10 CFR 61 Class C limitations. Energy*Solutions* assumes that the DOE will accept this waste along with spent fuel. Although courts have held that DOE is obligated to accept and dispose of GTCC, issues regarding potential costs remain potentially unsettled. Therefore, Energy*Solutions* conservatively estimates a GTCC waste disposal cost. Energy*Solutions* assumes that the GTCC waste will be stored in dry storage containers, and be shipped to a storage or disposal facility by DOE along with the spent fuel.

Additionally, Energy*Solutions* assumes shipping costs for GTCC waste to be equivalent to the commercial cost of shipping a Type B licensed, shielded cask such as the CNS 8-120B cask, which is owned and operated by Energy*Solutions*.

LLRW Volume Reduction

Based on current Class A LLRW disposal rates, Energy*Solutions* does not assume on-site volume reduction techniques such as waste compaction or an aggressive decontamination, survey and release effort. These activities are not currently considered to be cost effective over disposal.

Non-Radioactive Non-Hazardous Waste Disposal

Energy*Solutions* assumes that recyclable, non-radioactive scrap metal resulting from the decommissioning program will be transported to a scrap metal dealer. Concrete debris is assumed to be processed by size reduction, with removal of structural reinforcing steel, and used on site as engineered fill for voids. Asphalt from parking lots and roadways is assumed to be stockpiled on site and removed, at no cost to the project, by a recycler. All other demolition debris is removed from the site and disposed of at a local construction debris landfill.

Hazardous and Industrial Waste Disposal

Uncontaminated lead shielding remaining after shutdown was assumed to be removed from its installed locations and shipped off site by entities having a need for the material. The entities receive the lead at no charge in return for providing the removal and shipping services. Non-radioactive contaminated surfaces coated with lead-based paint will be removed as non-hazardous building demolition debris. All other

chemicals and hazardous materials present at shutdown will be removed and properly disposed of during decommissioning.

### 3.5 Final Status Survey

The cost of performing a final status survey (FSS) is based on NUREG-1575, “Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM)” (Ref. No. 10). Estimates of MARSSIM Class I, II and III survey designations are based on information furnished by FPL, radiological assumptions regarding contamination resulting from historic plant operations and from small and large component removal activities. The FSS activity cost calculation includes the in-place remote survey of underground metal and concrete pipe, soil, and groundwater sampling and analysis. Estimated costs for NRC and Oak Ridge Institute for Science and Education (ORISE) verification are also included, and the NRC review period is incorporated into the project schedule.

### 3.6 Contingency

Contingencies are applied to cost estimates primarily to allow for unknown or unplanned occurrences during the actual program, e.g., increased radioactive contamination over that expected, equipment breakdowns, weather delays, and labor strikes. This is consistent with the definition provided in the DOE Cost Estimating Guide, DOE G 430.1-1, 3-28-97 (DOE G) (Ref. No. 11). Contingency "covers costs that may result from incomplete design, unforeseen and unpredictable conditions, or uncertainties within the defined project scope. The amount of contingency will depend on the status of design, procurement, and construction; and the complexity and uncertainties of the component parts of the project. Contingency is not to be used to avoid making an accurate assessment of expected costs." Energy*Solutions* determines site-specific contingency factors to be applied to each estimate based on industry practices and actual project experience.

The DOE has established a recommended range of contingencies as a function of completeness of program design, DOE G. The ranges are:

| Type of Estimate | Contingency Range as a % of Total Estimate |
|---|---|
| Planning Phase Estimate | 20-30 |
| Budget Estimate | 15-25 |
| Title I (Preliminary Design Estimate) | 10-20 |
| Title II (Definitive Design Estimate) | 5-15 |

The approach in this estimate to assigning appropriate contingency rates is based upon adaptations of published values for the specific decommissioning activities as well as project experience and current industry practices. One source for such published information is AIF/NESP-036 “Guidelines for Producing Nuclear Plant Decommissioning Cost Estimates” (Ref. No. 1). The AIF guideline identifies contingencies for activities specific to a nuclear power plant decommissioning, such as reactor internals removal. The contingencies presented in the AIF guideline are based on the assumption that the estimated costs are not well known; therefore, the recommended contingencies are greater than they would be if the estimated costs were well known. With the exception of the system decontamination, reactor vessel and reactor internals removal, and disposal, the contingencies presented in the AIF guideline are consistent with the values for a Budget/Title I estimate. The system decontamination, reactor vessel and reactor internals removal, and disposal contingencies recommended in the AIF guideline are significantly higher than the ranges identified by the DOE, even for a planning phase document. This is due to the unique nature of these

activities and the relatively small amount of historical data available at the time the AIF document was written.

The application of contingency rates in this estimate are consistent with information presented in AIF guideline and DOE G. The decommissioning costs generated in the estimate are considered well known and, as such, the contingencies presented in AIF guideline were reduced for each category of costs. There have also been a number of large-scale decommissioning projects since AIF was published, including by Energy*Solutions,* providing substantial historical information that has been used in preparing this estimate, allowing for additional reduction in contingency costs.

The following table provides a summary of contingency values included in the Decommissioning Cost Estimate:

- 10% contingency on SAFSTOR staff and undistributed costs
- 15% contingency on non-rad build demolition and site restoration activities
- 15% contingency on dry fuel storage & ISFSI operations activities
- 15% contingency on dry fuel transfer to DOE
- 15% contingency on staff and undistributed costs
- 15% contingency on GTCC transportation and disposal
- 20% contingency on reactor vessel segmentation
- 20% contingency on large component and system removal
- 20% contingency on rad building interior and exterior demolition
- 20% contingency on final status surveys
- 20% contingency on wet fuel transfer to the DOE
- 20% contingency on remediation and disposal of contaminated soils
- 25% contingency on asbestos abatement

A reactor decommissioning program will be conducted under an NRC-approved Quality Assurance Program which meets the requirements of 10 CFR 50, Appendix B. However, the development of the quality assurance program, the performance of work under that program, and the effort required to ensure compliance with the program, is already included in the detailed cost estimate. Therefore, Energy*Solutions* does not include quality assurance as an element of the contingency allowance. The same is true where radioactive contamination or activated materials are dealt with. The cost factors and associated calculations fully reflect the cost impact of that material, and a separate contingency is not required specifically due to working with contamination.

### 3.7 Cost Reporting

Total project costs are aggregated from the distributed activities (Direct Costs) and undistributed costs into the following categories:

- Labor
- Materials and Equipment
- Waste Transportation and Disposal
- Other Direct Costs

Other costs include property taxes, insurance, license fees, permits, and energy. Waste disposal costs are the summation of packaging, transportation, base disposal rate, and any applicable surcharges. Health

physics (HP) supplies and small tool costs are calculated as a component of each distributed activity cost and included in the category of Material and Equipment, with the exception that HP supplies for the utility HP staff are calculated and reported as an undistributed line item. A contingency is then applied to each activity.

# 4.0 SITE-SPECIFIC TECHNICAL APPROACH

## 4.1 Facility Description

Turkey Point Nuclear Plant is a nuclear-powered electrical generating facility consisting of two PWRs. The plant is located near Homestead, Florida, 25 miles south of Miami, Florida. The plant is situated on an 11,000-acre tract of land which is dominated by protected mangrove swamps. The cooling canals encompass an additional 6,800 acres.

Both Unit 3 and Unit 4 are three-loop Westinghouse PWRs with a current thermal output of 2,644 MWt and a design electrical rating of 844 MWe and 840 MWe, respectively. The current license expiration dates for Units 3 and 4 are in 2052 and 2053, respectively.

Turkey Point has an existing ISFSI supporting Units 3 and 4. The ISFSI is operated under the 10 CFR Part 72 general license using the manufacturer's Certificate of Compliance.

A list of the Turkey Point systems and structures included in the material inventory for this study is provided in Appendix A.

## 4.2 Decommissioning Periods

Energy*Solutions* has established a Work Breakdown Structure (WBS) that typically defines decommissioning cost estimates with six primary periods to define the scope of work. Those periods are:

- Period 1 – Shutdown and Transition
- Period 2 – SAFSTOR
- Period 3 – Decommissioning and License Termination
- Period 4 – Site Restoration
- Period 5 – Dry Fuel / GTCC Storage and Transfer
- Period 6 – ISFSI Decommissioning

The work is broken down further into sub-periods.

The project periods defined for this site-specific study and a summary of activities performed during each period are listed below.

**SCENARIO 1 – DECON both following Unit 4 Shutdown:**

**Period 1 – Shutdown and Transition:**

Period 1a – Planning Prior to Shutdown (by Plant Operations)

Period 1b – Unit 3 Post-Shutdown Planning and Engineering:

- Administrative Activities in Preparation for Decommissioning
- Prepare PSDAR and License Documents
- Engineering Activities in Preparation for Decommissioning

Period 1c – Unit 3 Post-Shutdown Deactivation and Modifications:

- Defuel Reactor Unit 3 (by Plant Operations)
- Fuel Sampling and Inspections (by Plant Operations)
- Spent Fuel Pool System Modifications

Period 1d – Unit 3 Wet Fuel Transfer to DOE prior to DECON:

- Provide Transfer Casks (supplied by DOE)
- Procure Spent Fuel Loading and Transfer Equipment
- Procedures and Dry Runs
- Remove Fuel Assemblies from Pool and Load DOE Casks
- Dry, Close and Inspect DOE-supplied Casks
- Load Out Casks to DOE Transport
- Spent Fuel Transportation and Disposal (by DOE)

Period 1e – Unit 3 Wet Fuel Transfer to ISFSI prior to Shutdown:

- Purchase Transfer Casks
- Procedures and Dry Runs
- Remove Fuel Assemblies from Pool and Load Casks
- Dry, Close and Inspect Casks
- Load Out Casks to Transport

Period 1f – Unit 4 Post-Shutdown Planning and Engineering:

- Administrative Activities in Preparation for Decommissioning
- Preparation of PSDAR and Licensing Documents
- Engineering Activities in Preparation for Decommissioning

Period 1g – Unit 4 Post-Shutdown Preparations and Deactivation:

- Defuel Reactor Unit 4 (by Plant Operations)
- Fuel Sampling and Inspections (by Plant Operations)
- Spent Fuel Pool System Modifications

Period 1h – Unit 4 Wet Fuel Transfer to DOE prior to DECON:

- Provide Transfer Casks (supplied by DOE)
- Procure Spent Fuel Loading and Transfer Equipment
- Procedures and Dry Runs
- Remove Fuel Assemblies from Pool and Load DOE Casks
- Dry, Close and Inspect DOE-supplied Casks
- Load Out Casks to DOE Transport
- Spent Fuel Transportation and Disposal (by DOE)

Period 1i – Unit 4 Wet Fuel Transfer to ISFSI prior to DECON:

- Provide Transfer Casks
- Procedures and Dry Runs
- Remove Fuel Assemblies from Pool and Load Casks

- Dry, Close and Inspect Casks
- Load Out Casks to Transport

Period 1j – Undistributed Costs for Shutdown and Transition:

- Utility Staff
- Security Guard Force
- Property Taxes
- Insurance
- Corporate Support
- Utility Staff HP Supplies
- NRC Inspection Fees
- Licensing Fees
- Materials and Services
- Energy
- County and FEMA Fees
- ISFSI Operating Costs
- Spent Fuel Maintenance

**Period 2 – SAFSTOR (not included in Scenario 1)**:

**Period 3 – Decommissioning and License Termination**:

Period 3a – Decommissioning Planning:

- Decommissioning Planning and Design
- Prepare Integrated Work Sequence and Schedule
- Site Characterization
- Prepare Decommissioning Activity Specifications
- Prepare Detailed Work Procedures
- Prepare License Termination Plan
- Design Containment and Miscellaneous System Modifications
- Purchase Dry Storage Modules for GTCC Waste

Period 3b – Decommissioning Transition and Preparations:

- Mobilize Decommissioning General Contractor
- Perform Asbestos Abatement of Pipe Insulation
- Implement Cold and Dark and Install Temporary Power
- Construct Misc. Building Modifications, In-Plant Laydown Areas
- Modify Containment Access
- Transportation Infrastructure Modifications
- Procure Waste Handling and Processing Tents

Period 3c – Reactor Vessel Removal:

- Design and Procure Special Equipment
- Test Special Cutting and Handling Equipment and Train Operators
- Finalize Internals and Vessel Segmentation Details

- Segment, Package and Ship Reactor Internals
- Segment, Package and Ship RPV
- Package and Ship Reactor Pressure Vessels

Period 3d – Large Component Removal:

- Heavy Lift / Transfer Equipment
- Remove and Dispose of Steam Generators
- Remove and Dispose of Pressurizer
- Remove and Dispose of Reactor Coolant Pipe
- Remove and Dispose of Reactor Coolant Pumps
- Package, Ship and Dispose

Period 3e – Plant Decontamination and Interior Rad Demolition:

- Remove and Dispose of Spent Fuel Storage Racks
- Segment, Package and Dispose of Spent Fuel Pool Island Equipment
- Decon/Surgical Removal Containment Buildings
- Decon/Surgical Removal Fuel Buildings
- Decon/Surgical Removal Auxiliary Building
- Decon/Surgical Removal Radwaste Building
- Package, Dispose and Ship

Period 3f – Rad Building Demolition:

- Demolish Fuel Buildings
- Demolish Auxiliary Building
- Demolish Radwaste Building
- Demolish Containment Buildings
- Demolish LLW Storage Building
- Contaminated Soil
- Debris Disposal

Period 3g – License Termination Activities:

- Final Status Survey for Structures
- Final Status Survey for Land Areas (included with Structures)

Period 3h – Undistributed Costs for Decommissioning and License Termination:

- Utility Staff
- Security Guard Force
- General Contractor Staff
- Property Taxes
- Insurance
- Corporate Support
- Utility Staff HP Supplies
- NRC Inspection Fees
- Licensing Fees
- Florida LLRW Inspection Fee

- Licenses and Permits
- Materials and Services
- Energy
- DGC HP Supplies

**Period 4 – Site Restoration**:

Period 4a – Clean Building and Site Demolition:

- Demolish Turbine Pedestal and Turbine Deck
- Demolish Sealwell
- Demolish Intake and Circulating Water System (CWS)
- Demolish Tank Foundations
- Demolish Miscellaneous Site Structures
- Demolish Security Improvements
- Demolish Maintenance Facility
- Demolish Control Building
- Clean Concrete Processing
- Demolish Site Paving
- Clean Debris Disposal / Recycle

Period 4b – Site Restoration:

- Procure Site Restoration Equipment
- Finish Grading and Re-Vegetate Site

Period 4c – Undistributed Costs for Site Restoration:

- Utility Staff
- Security Guard Force
- General Contractor Staff
- Property Taxes
- Insurance
- Corporate Support
- Energy
- Materials and Services
- Licenses and Permits

**Period 5 – Dry Fuel / GTCC Storage and Transfer**:

Period 5a – Dry Fuel Transfer to DOE during and after DECON:

- Procure Loading and Transfer Equipment (included in Period 1)
- Procedures and Dry Runs (included in Period 1)
- Remove Fuel Casks from ISFSI and Load DOE Transport
- Spent Fuel Transportation and Disposal (by DOE)

Period 5b – GTCC Waste Disposition:

- Remove GTCC Casks from ISFSI and Load Out
- GTCC Transportation and Disposal

Period 5c – Undistributed Costs for Dry Fuel / GTCC Storage and Transfer:

- Utility Staff
- Security Guard Force
- Property Taxes
- Insurance
- NRC Inspection Fees
- Licensing Fees
- Licenses and Permits
- Materials and Services
- ISFSI Operating Costs

**Period 6 –ISFSI Decommissioning**:

Period 6a – ISFSI D&D Planning and Preparations:

- Preparation and NRC Review of License Termination Plan

Period 6b – ISFSI and Support Structure Clean Demolition:

- Clean Demolition of ISFSI
- Demolition of ISFSI Support Structures

Period 6c – ISFSI Final Status Surveys:

- Verification Surveys
- Preparation of Final Report on Decommissioning and NRC Review

Period 6d – Undistributed Costs for ISFSI Decommissioning:

- Utility Staff
- Security Guard Force
- General Contractor Staff
- Property Taxes
- Insurance
- Materials and Services
- Energy

- Licenses and Permits

**SCENARIO 2 – SAFSTOR**

**Period 1 – Shutdown and Transition:**

Period 1a – Planning Prior to Shutdown (by Plant Operations):

Period 1b – Unit 3 Post-Shutdown Planning and Engineering:

- Administrative Activities in Preparation for Decommissioning
- Prepare PSDAR and License Documents
- Engineering Activities in Preparation for Decommissioning

Period 1c – Unit 3 Post-Shutdown Deactivation and Modifications:

- Defuel Reactor Unit 3 (by Plant Operations)
- Fuel Sampling and Inspections (by Plant Operations)
- Spent Fuel Pool System Modifications
- Implement Cold and Dark
- Perform Pre-SAFSTOR Baseline Radiation Survey

Period 1d – Unit 3 Wet Fuel Transfer to DOE prior to SAFSTOR:

- Provide Transfer Casks (supplied by DOE)
- Procure Spent Fuel Loading and Transfer Equipment
- Procedures and Dry Runs
- Remove Fuel Assemblies from Pool and Load DOE Casks
- Dry, Close and Inspect DOE-supplied Casks
- Load Out Casks to DOE Transport
- Spent Fuel Transportation and Disposal (by DOE)

Period 1e – Unit 3 Wet Fuel Transfer to ISFSI prior to SAFSTOR:

- Purchase Transfer Casks
- Procedures and Dry Runs
- Remove Fuel Assemblies from Pool and Load Casks
- Dry, Close and Inspect Casks
- Load Out Casks to Transport

Period 1f – Unit 4 Post-Shutdown Planning and Engineering:

- Administrative Activities in Preparation for Decommissioning
- Preparation of PSDAR and Licensing Documents
- Engineering Activities in Preparation for Decommissioning

Period 1g – Unit 4 Post-Shutdown Preparations and Deactivation:

- Defuel Reactor Unit 4 (by Plant Operations)
- Fuel Sampling and Inspections (by Plant Operations)
- Spent Fuel Pool System Modifications
- Implement Cold and Dark

- Perform Pre-SAFSTOR Baseline Radiation Survey

Period 1h – Unit 4 Wet Fuel Transfer to DOE prior to DECON:

- Provide Transfer Casks (supplied by DOE)
- Procure Spent Fuel Loading and Transfer Equipment
- Procedures and Dry Runs
- Remove Fuel Assemblies from Pool and Load DOE Casks
- Dry, Close and Inspect DOE-supplied Casks
- Load Out Casks to DOE Transport
- Spent Fuel Transportation and Disposal (by DOE)

Period 1i – Unit 4 Wet Fuel Transfer to ISFSI prior to SAFSTOR:

- Provide Transfer Casks
- Procedures and Dry Runs
- Remove Fuel Assemblies from Pool and Load Casks
- Dry, Close and Inspect Casks
- Load Out Casks to Transport

Period 1j – Undistributed Costs for Shutdown and Transition:

- Utility Staff
- Security Guard Force
- Property Taxes
- Insurance
- Corporate Support
- Utility Staff HP Supplies
- NRC Inspection Fees
- Licensing Fees
- Materials and Services
- Energy
- County and FEMA Fees
- Licenses and Permits
- ISFSI Operating Costs
- Spent Fuel Maintenance

**Period 2 – SAFSTOR**:

Period 2a – Dormancy during Dry Fuel Storage:

- Utility Staff
- Security Guard Force
- Property Taxes
- Insurance
- Corporate Support
- Utility Staff HP Supplies
- NRC Inspection Fees
- Licensing Fees

- Licenses and Permits
- Materials and Services
- Energy
- Roof Replacement

Period 2b – Dormancy Only:

- Utility Staff
- Security Guard Force
- Property Taxes
- Insurance
- Corporate Support
- Utility Staff HP Supplies
- NRC Inspection Fees
- Licensing Fees
- Licenses and Permits
- Materials and Services
- Energy
- Roof Replacement

**Period 3 – Decommissioning and License Termination**:

Period 3a – Decommissioning Planning:

- Decommissioning Planning and Design
- Site Characterization
- Prepare Integrated Work Sequence and Schedule
- Prepare Decommissioning Activity Specifications
- Prepare License Termination Plan
- Prepare Detailed Work Procedures
- Design Containment and Miscellaneous System Modifications
- Purchase Dry Storage Modules for GTCC Waste

Period 3b – Decommissioning Transition and Preparations:

- Mobilize Decommissioning General Contractor
- Perform Asbestos Abatement of Pipe Insulation
- Implement Temporary Power Upgrades
- Construct Misc. Building Modifications, In-Plant Laydown Areas
- Modify Containment Access
- Transportation Infrastructure Modifications
- Procure Waste Handling and Processing Tents

Period 3c – Reactor Vessel Removal:

- Design and Procure Special Equipment
- Test Special Cutting and Handling Equipment and Train Operators
- Finalize Internals and Vessel Segmentation Details
- Segment, Package and Ship Reactor Internals

- Segment, Package and Ship RPV
- Package, Ship and Dispose

Period 3d – Large Component Removal:

- Heavy Lift / Transfer Equipment
- Remove and Dispose of Steam Generators
- Remove and Dispose of Pressurizer
- Remove and Dispose of Reactor Coolant Pipe
- Remove and Dispose of Reactor Coolant Pumps
- Package, Ship and Dispose

Period 3e – Plant Decontamination and Interior Rad Demolition:

- Remove and Dispose of Spent Fuel Storage Racks
- Segment, Package and Dispose of Spent Fuel Pool Island Equipment
- Decon/Surgical Removal Containment Buildings
- Decon/Surgical Removal Fuel Buildings
- Decon/Surgical Removal Auxiliary Building
- Decon/Surgical Removal Radwaste Building
- Package, Ship and Dispose

Period 3f – Rad Building Demolition:

- Demolish Fuel Buildings
- Demolish Auxiliary Building
- Demolish Radwaste Building
- Demolish Containment Buildings
- Demolish LLW Storage Building
- Contaminated Soil
- Debris Disposal

Period 3g – License Termination Activities:

- Final Status Survey for Structures
- Final Status Survey for Land Areas (included with Structures)

Period 3h – Undistributed Costs for Decommissioning and License Termination:

- Utility Staff
- Security Guard Force
- General Contractor Staff
- Property Taxes
- Insurance
- Corporate Support
- Utility Staff HP Supplies
- NRC Inspection Fees
- Licensing Fees
- Florida LLRW Inspection Fee
- Licenses and Permits

- Materials and Services
- Energy
- DGC HP Supplies

**Period 4 – Site Restoration**:

Period 4a – Clean Building and Site Demolition:

- Demolish Turbine Pedestal and Turbine Deck
- Demolish Sealwell
- Demolish Intake and CWS
- Demolish Tank Foundations
- Demolish Miscellaneous Site Structures
- Demolish Security Improvements
- Demolish Maintenance Facility
- Demolish Control Building
- Clean Concrete Processing
- Demolish Site Paving
- Clean Debris Disposal / Recycle

Period 4b – Site Restoration:

- Procure Site Restoration Equipment
- Finish Grading and Re-Vegetate Site

Period 4c – Undistributed Costs for Site Restoration:

- Utility Staff
- Security Guard Force
- General Contractor Staff
- Property Taxes
- Insurance
- Corporate Support
- Energy
- Materials and Services
- Licenses and Permits

**Period 5 – Dry Fuel / GTCC Storage and Transfer**:

Period 5a – Dry Fuel Transfer to DOE during and after DECON:

- Procure Loading and Transfer Equipment (included in Period 1)
- Procedures and Dry Runs (included in Period 1)
- Remove Fuel Casks from ISFSI and Load DOE Transport
- Spent Fuel Transportation and Disposal (by DOE)

Period 5b – GTCC Waste Disposition:

- Remove GTCC Casks from ISFSI and Load Out
- GTCC Transportation and Disposal

Period 5c – Undistributed Costs for Dry Fuel / GTCC Storage and Transfer:

- Utility Staff
- Security Guard Force
- ISFSI Operating Costs

**Period 6 –ISFSI Decommissioning**:

Period 6a – ISFSI D&D Planning and Preparations:

- Preparation and NRC Review of License Termination Plan

Period 6b – ISFSI and Support Structure Clean Demolition:

- Clean Demolition of ISFSI
- Demolition of ISFSI Support Structures

Period 6c – ISFSI Final Status Surveys:

- Verification Surveys
- Preparation of Final Report on Decommissioning and NRC Review

Period 6d – Undistributed Costs for ISFSI Decommissioning:

- Utility Staff
- Security Guard Force
- General Contractor Staff
- Property Taxes
- Insurance
- Materials and Services
- Energy
- Licenses and Permits

### 4.3 Decommissioning Staff

Energy*Solutions* developed staffing based on the assumption that decommissioning will be performed by an experienced and qualified Decommissioning General Contractor, with oversight, management and security of the decommissioning operations performed by the utility staff. It is also assumed that the utility staff will be supplemented by professional consulting engineering, particularly in the planning and preparation period.

The sizes of the staffs are varied in each period in accordance with the requirements of the work activities. Details on the staff levels, by functional group, during each period are provided in detail in Appendix D.

### 4.4 Spent Fuel Management Staff

The largest spent fuel staff and security is in place while the fuel pool is operational during the minimum cooling period and the fuel assemblies are being transferred to either a DOE facility or dry storage. Once all spent fuel has been removed from the spent fuel pool, the staff and security levels are reduced. Details on the staff levels, by functional group, during each period are provided in Appendix D.

### 4.5 Spent Fuel Shipments

The spent fuel shipment schedules for this estimate are based on information from FPL regarding existing fuel inventory, planned transfers to dry storage and a projected date of 2031 for DOE's acceptance of spent fuel.

## 5.0 BASES OF ESTIMATE AND KEY ASSUMPTIONS

The bases of, and key assumptions for, this site-specific decommissioning estimate are presented below:

1. All cost data used in this study are in 2020 dollars.

2. Total and subtotal amounts are rounded.

3. The decommissioning will be performed under the current regulations. These regulations require a Post-Shutdown Decommissioning Activities Report (PSDAR) to be submitted prior to, or within, two years after permanent shutdown. Other revisions will be required for other licensing basis documents (e.g., Security, Emergency Planning, Fire Protection, Nuclear Safety, Quality Assurance Program, Fuel Debris issues, Spent Fuel Storage options).

4. The decommissioning will be performed using currently available technologies.

5. Fuel transfer operations are based on the DOE beginning to accept spent fuel starting in 2031.

6. All transformers on site following shutdown are assumed to be PCB-free; therefore, this study does not include costs for disposition of PCB contaminated transformers.

7. Cost for transportation of clean scrap metal to a recycler is included in the estimate; however, no credit is taken for the value of the scrap metal. Clean concrete debris is assumed to be processed by size reduction, with removal of structural reinforcing steel, and used on site as engineered fill for voids.

8. DGC staff salaries, including overhead and profit, were determined by using Energy*Solutions'* project experience and standard assumptions for these rates.

9. Certain professional personnel used for the planning and preparation activities, and DGC personnel, that are not based in the local economy are assumed to be paid per diem based on area per diem rates from U.S. General Services Administration (GSA).

10. This study follows the occupational exposure principles of As Low As Reasonably Achievable (ALARA) through the use of productivity loss factors that incorporate such items as the use of respiratory protection and personnel protective clothing. These factors increase the work duration and cost.

11. The costs of all required safety analyses and safety measures for the protection of the general public, the environment, and decommissioning workers are included in the cost estimates. This reflects the requirements of:

| | |
|---|---|
| 10 CFR 20 | Standards for Protection Against Radiation |
| 10 CFR 50 | Domestic Licensing of Production and Utilization Facilities |
| 10 CFR 61 | Licensing Requirements for Land Disposal of Radioactive Waste |
| 10 CFR 71 | Packaging of Radioactive Material for Transport |

| | |
|---|---|
| 10 CFR 72 | Licensing Requirements for the Independent Storage of Spent Nuclear Fuel and High-Level Radioactive Waste |
| 29 CFR 1910 | Occupational Safety and Health Standards |
| 49 CFR 170-189 | Department of Transportation Regulations Governing the Transport of Hazardous Materials |
| Reg. Guide 1.159 | Assuring the Availability of Funds for Decommissioning Nuclear Reactors |

12. Energy*Solutions* developed project schedules based on Unit 3 and Unit 4 shutdown dates of 2052 and 2053, respectively, and fuel shipping schedules provided by FPL.

13. Spent fuel in the fuel pools at the time of shutdown will be transferred directly to the DOE-provided transfer/shipping casks from 2031 through 2056. The 2020 Cost Analysis includes costs for transfer to the DOE beginning in 2053 for Unit 3 and 2054 for Unit 4. Costs prior to these dates are assumed to be paid from the plant operations budget. Remaining spent fuel in 2056 will be transferred from the spent fuel pool to the on-site ISFSI. The estimate includes purchase of transfer/shipping casks of the remaining spent fuel to be moved to the ISFSI.

14. Spent fuel canisters in the ISFSI at the time of shutdown will remain in dry storage until transfer to the DOE. The estimate includes transferring fuel from the existing ISFSI to the DOE-provided transfer/shipping casks during Period 5.

15. Costs for ISFSI security, operations and demolition for Units 3 and 4 are included in the estimate.

16. The estimate includes procurement of on-site fuel transfer equipment. It is assumed that equipment purchased for transfer equipment utilized during shipment from the spent fuel pool to the DOE will be utilized for the transfer of spent fuel to the ISFSI and is included in Period 1. It I assumed that this equipment will also be utilized for transfer/loading casks from the ISFSI to the DOE.

17. Based on FPL experience, the purchase of dry storage DSCs and HSMs required following shutdown are assumed to be 25% lower than for normal campaign costs due to volume discounts associated with the larger quantity of DSCs and HSMs required to transfer all fuel assemblies from the SFP to the Pad.

18. As per FPL's settlement agreement, the DOE is expected to make payments to FPL to cover spent fuel management costs incurred by FPL prior to 2059 for Turkey Point.

19. The DOE is responsible to provide all transfer/shipping casks, containers, transportation and disposition of spent fuel shipped from the fuel pool and the ISFSI to a DOE designated off-site facility.

20. The estimate is based on site-specific plant systems and building inventories previously included in the 2015 Cost Study, and includes any updates provided by FPL.

21. All structures/systems shared between Unit 3 and Unit 4 are included in Unit 4 cost estimate.

22. License Termination costs include the complete demolition of the following buildings to a nominal depth of three feet below grade: Reactor Building, Auxiliary Building, LLW Storage Building, Radwaste Building, and Fuel Handling Building.

23. The estimate is based on final site restoration, in which all remaining structures, with the exception of the switchyard and any structures associated with Turkey Point Units 3 and 4 will be removed. Intake and Discharge canals also will remain in place.

24. Foundations and building exterior walls are removed to a nominal depth of three feet below grade, surveyed and backfilled with appropriate fill material.

25. Clean concrete will be processed and utilized as backfill where needed to re-establish grade. The disturbed area of the site is to be graded and seeded.

26. Uncontaminated lead shielding remaining after shutdown was assumed to be removed from its installed locations and shipped off site by entities having a need for the material. The entities receive the lead at no charge in return for providing the removal and shipping services.

27. Any chemicals and hazardous materials present at shutdown are assumed to be removed and disposed of by the plant staff prior to decommissioning, as a normal part of plant operations.

28. All Class A waste is assumed to be disposed of at Energy*Solutions*' facility in Clive, Utah, in accordance with the existing LOP Disposal Agreement (Ref. No. 9) between Energy*Solutions* and FPL dated January 1, 2007. A LOP agreement letter stating the 2020 price increase was also utilized to develop the waste disposal costs.

29. Class A waste includes Dry Active Waste (DAW) arising from the disposal of contaminated protective clothing and health physics supplies.

30. Class B and C waste disposal costs are based on disposal rates provided by FPL for the WCS Andrews, TX facility. All resins and filter waste is assumed to be Class B.

31. GTCC waste generated from the segmentation of the reactor internals will be stored in on-site canisters placed in the ISFSI until final disposition at a DOE facility. It is assumed that 8 GTCC canisters will be required for the Turkey Point units (4 canisters for Unit 3 and 4 canisters for Unit 4).

32. Vessel and internals curie estimates were derived from the values for the Reference PWR vessel and internals in NUREG/CR-0130. These values were adjusted for mass and decay period.

33. It is assumed that all Class A LLRW currently being accumulated on site will be removed to a low-level waste processing and/or disposal facility prior to the end of the operating life of the plant. The disposition of such materials is assumed not to be a decommissioning cost.

34. The spent fuel shipping schedules and transfer to dry storage costs for each scenario were developed by FPL and furnished to Energy*Solutions*.

35. Turkey Point currently has an existing ISFSI on site. Construction costs for any expansion of the ISFSI that may be required has not been included, but demolition has been included in the estimate and has been split between both units.

36. Energy*Solutions* has assumed that the 10 CFR Part 50 license for Units 3 and 4 will be terminated after DOE has taken possession of the spent fuel.

37. Emergency Preparedness fees were supplied by FPL. Per direction of FPL emergency preparedness fees are assumed to cease once all spent fuel is removed from the spent fuel pool.

38. NEIL and ANI insurance premiums are included based on the rate schedule provided by FPL. Insurance premiums have been reduced when major milestones have been completed.

39. Units 3 and 4 property taxes are included based on the rate schedule provided by FPL.

40. Energy costs have been estimated based on previous experience of similar projects utilizing energy rates provided by FPL.

41. Energy*Solutions* has included NRC inspection fees during each decommissioning period based on the type and level of activities being performed.

42. Energy*Solutions* has assumed that licensing fees will be reduced after shutdown.

43. Utility staff and security positions, and average direct-burdened salary data were supplied by FPL.

44. Severance costs for Reductions-in-Force immediately following Unit 3 and Unit 4 permanently ceasing operations are excluded from the estimate.

45. Craft labor rates used in the estimate are based on 2019 RS Means rates escalated to 2020 costs.

46. The most recent NRC requirements for Security, Emergency Response, Fukushima, Cyber Security and any other regulatory changes have been included.

47. Undistributed staffing costs, taxes, and fees in Periods 3 and 4 is split 93% for License Termination and 7% Site Restoration with exception licensing and NRC fees (100% License Termination).

48. Institute for Nuclear Power Operations (INPO) and Electric Power Research Institute (EPRI) dues are not included in this estimate.

49. County fees are assumed to be constant throughout the life of the decommissioning project.

## 6.0 STUDY RESULTS

The study results for each of the DCE scenarios are presented in this section.

The cost estimate results are provided in Table 6-1 below. This table provides License Termination costs (corresponding to 10 CFR 50.75(c) requirements); Spent Fuel Management costs (corresponding to 10 CFR 50.54(bb) requirements) and Site Restoration costs, including activities such as clean building demolition and site grading etc.

**Table 6-1**

**FPL Turkey Point Units 3 and 4**
**Decommissioning Cost Summary**
(thousands of 2020 dollars)

| Scenario | License Termination | Spent Fuel | Site Restoration | Total |
|---|---|---|---|---|
| 1 | 1,018,355 | 282,949 | 59,888 | 1,361,192 |
| 2 | 1,202,419 | 338,557 | 60,108 | 1,601,084 |

Summary schedule tables are shown for each scenario below. Detailed schedules for each scenario are provided in Appendix B.

Summary cost tables are shown for each scenario below. Detailed estimates for each scenario are provided in Appendix C.

Detailed staffing tables for each scenario are provided in Appendix D.

Summary waste quantities are shown for each scenario below. Waste estimates for each scenario are provided in Appendix E.

Detailed annual spending tables for each scenario are provided in Appendix F.

The following sections provide study results by scenario.

### 6.1 Scenario 1 – DECON both after Unit 4 Shutdown

Cost Summary

Table 6-2 below provides the cost estimate results for Scenario 1 organized by period and separated into Unit 3, Unit 4 and Total.

**Table 6-2**

**FPL Turkey Point Units 3 and 4**
**Scenario 1 - Cost Summary by Period & Unit**
(thousands of 2020 dollars)

| Period | Item Description | Unit 3 | Unit 4 | Total Cost |
|---|---|---|---|---|
| Period 1 | SHUTDOWN & TRANSITION | 157,154 | 134,981 | 292,135 |
| Period 2 | SAFSTOR | - | - | - |
| Period 3 | DECOMMISSIONING & LICENSE TERMINATION | 397,306 | 464,936 | 862,242 |
| Period 4 | SITE RESTORATION | 23,879 | 36,009 | 59,888 |
| Period 5 | DRY FUEL / GTCC STORAGE & TRANSFER | 66,792 | 66,720 | 133,512 |
| Period 6 | ISFSI DECOMMISSIONING | 7,514 | 5,901 | 13,415 |
| GRAND TOTAL | | 652,645 | 708,547 | 1,361,192 |

Table 6-3 below provides the cost estimate results for Scenario 1 organized by period and separated by cost type.

**Table 6-3**

**FPL Turkey Point Units 3 and 4**
**Scenario 1 - Cost Summary by Period & Cost Type**
(thousands of 2020 dollars)

| Period | Item Description | Labor Cost | Materials & Equipment | Waste Transport & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost |
|---|---|---|---|---|---|---|---|
| Period 1 | SHUTDOWN & TRANSITION | 171,834 | 46,863 | - | 34,307 | 39,131 | 292,135 |
| Period 2 | SAFSTOR | - | - | - | - | - | - |
| Period 3 | DECOMMISSIONING & LICENSE TERMINATION | 324,927 | 124,874 | 245,937 | 36,602 | 129,902 | 862,242 |
| Period 4 | SITE RESTORATION | 34,435 | 12,900 | 216 | 4,526 | 7,811 | 59,888 |
| Period 5 | DRY FUEL / GTCC STORAGE & TRANSFER | 65,133 | 2,780 | 23,492 | 24,588 | 17,519 | 133,512 |
| Period 6 | ISFSI DECOMMISSIONING | 9,358 | 1,932 | - | 376 | 1,750 | 13,415 |
| GRAND TOTAL | | 605,687 | 189,349 | 269,645 | 100,398 | 196,113 | 1,361,192 |

A detailed estimate is provided in Appendix C.

Summary Schedule

Table 6-4 below provides a schedule summary for Scenario 1 based on a DECON scenario with Unit 3 Shutdown in 2052 and Unit 4 Shutdown in 2053.

**Table 6-4**

| FPL DCE-02 Turkey Point Units 3 & 4<br>Scenario 1 Schedule Summary | |
|---|---|
| **Year** | **Item** |
| 2031 | DOE starts accepting fuel from spent fuel pool |
| 2052 | Unit 3 Shutdown |
| 2053 | Unit 4 Shutdown |
| 2056 | Unit 3 Fuel Pool Empty |
| 2056 | Unit 4 Fuel Pool Empty |
| 2057 | Start Demolition |
| 2063 | Decommissioning and Site Restoration Complete |
| 2073 | ISFSI Empty |
| 2074 | ISFSI Decommissioning and Site Restoration Complete |

A detailed schedule is provided in Appendix B.

Project Staffing

Table 6-5 below provides project staffing for Scenario 1 organized by period and staff group.

**Table 6-5**

| **Period 1 - Shutdown & Transition** | 2050 | 2051 | 2052 | 2053 | 2054 | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Administration | - | - | 6 | 12 | 12 | 7 | 4 | | | | |
| Engineering | | | 20 | 40 | 40 | 20 | 8 | | | | |
| Health Physics/Rad Protection | | | 20 | 30 | 30 | 24 | 20 | | | | |
| Management | | | 3 | 5 | 5 | 5 | 3 | | | | |
| Maintenance & Operations | | | 40 | 70 | 60 | 40 | 20 | | | | |
| Quality Assurance | | | 2 | 3 | 3 | 2 | 1 | | | | |
| **Utility Staff** | **-** | **-** | **91** | **160** | **150** | **98** | **56** | **-** | **-** | **-** | **-** |
| | | | | | | | | | | | |
| **General Contractor Staff** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |

| Period 3 & 4 - License Term & Site Restoration | 2054 | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 | 2061 | 2062 | 2063 | 2064 | 2065 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Administration | | 4 | 4 | 10 | 12 | 12 | 12 | 12 | 7 | 2 | | |
| Engineering | | 4 | 6 | 16 | 20 | 20 | 20 | 20 | 7 | 2 | | |
| Health Physics/Rad Protection | | | 4 | 8 | 24 | 24 | 24 | 24 | 16 | 4 | | |
| Management | | 1 | 1 | 4 | 5 | 5 | 4 | 4 | 4 | 2 | | |
| Maintenance & Operations | | | | 10 | 24 | 24 | 20 | 20 | 8 | 2 | | |
| Quality Assurance | | 1 | 1 | 2 | 3 | 3 | 2 | 2 | 2 | 1 | | |
| **Utility Staff** | **-** | **10** | **16** | **50** | **88** | **88** | **82** | **82** | **44** | **13** | **-** | **-** |
| | | | | | | | | | | | | |
| Project Management | | 2 | 4 | 6 | 10 | 10 | 10 | 10 | 8 | 4 | | |
| Engineering | | 4 | 6 | 6 | 12 | 12 | 10 | 10 | 7 | 2 | | |
| Health Physics/Rad Protection | | | 4 | 8 | 16 | 16 | 16 | 16 | 12 | 6 | | |
| Administration | | 2 | 3 | 6 | 12 | 12 | 12 | 12 | 8 | 4 | | |
| Maintenance & Operations | | | | | - | - | - | - | - | - | | |
| Quality Assurance | | 1 | 1 | 2 | 4 | 4 | 4 | 4 | 3 | 2 | | |
| Waste Management | | | 1 | 2 | 12 | 12 | 12 | 12 | 12 | 4 | | |
| **General Contractor Staff** | **-** | **9** | **19** | **30** | **66** | **66** | **64** | **64** | **50** | **22** | **-** | **-** |

| Period 5 - Dry Fuel / GTCC Storage & Transfer | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 | 2061 / 2070 | 2071 | 2072 | 2073 |
|---|---|---|---|---|---|---|---|---|---|---|
| Administration | | | | | | | | | | |
| Engineering | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Health Physics/Rad Protection | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Management | | | | | | | | | | |
| Maintenance & Operations | | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Quality Assurance | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| **Utility Staff** | **-** | **1** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** |
| | | | | | | | | | | |
| **General Contractor Staff** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |

| Period 6 - ISFSI Decommissioning | 2070 | 2071 | 2072 | 2073 | 2074 | 2075 |
|---|---|---|---|---|---|---|
| Administration | | | | | | |
| Engineering | | | | | 1 | |
| Health Physics/Rad Protection | | | | | 1 | |
| Management | | | | | 1 | |
| Maintenance & Operations | | | | | | |
| Quality Assurance | | | | | 1 | |
| **Utility Staff** | **-** | **-** | **-** | **-** | **4** | **-** |
| | | | | | | |
| Project Management | | | | 1 | 1 | |
| Engineering | | | | 1 | 1 | |
| Health Physics/Rad Protection | | | | | 1 | |
| Administration | | | | | 1 | |
| Maintenance & Operations | | | | | | |
| Quality Assurance | | | | 1 | 1 | |
| Waste Management | | | | 1 | 1 | |
| **General Contractor Staff** | **-** | **-** | **-** | **4** | **6** | **-** |

Detailed staffing tables for each scenario are provided in Appendix D.

Waste Disposal Volumes

Waste disposal is a significant element of the decommissioning project. The estimated waste disposal quantities for Scenario 1 are shown in cubic feet of waste as follows:

| | |
|---|---|
| Class A | 2,430,666 |
| Class B/C | 4,150 |
| GTCC | 4,122 |

Waste disposal volumes and costs, itemized by packaging, transportation, surcharges and disposal costs by waste class and facility, are provided in Appendix E.

## 6.2 Scenario 2 – SAFSTOR

Cost Summary

Table 6-6 below provides the cost estimate results for Scenario 2 organized by period and separated into Unit 3, Unit 4 and Total.

**Table 6-6**

**FPL Turkey Point Units 3 and 4**
**Scenario 2 - Cost Summary by Period & Unit**
(thousands of 2020 dollars)

| Period | Item Description | Unit 3 | Unit 4 | Total Cost |
|---|---|---|---|---|
| Period 1 | SHUTDOWN & TRANSITION | 162,015 | 139,221 | 301,236 |
| Period 2 | SAFSTOR | 137,347 | 142,539 | 279,886 |
| Period 3 | DECOMMISSIONING & LICENSE TERMINATION | 384,184 | 452,636 | 836,820 |
| Period 4 | SITE RESTORATION | 24,029 | 36,079 | 60,108 |
| Period 5 | DRY FUEL / GTCC STORAGE & TRANSFER | 54,315 | 54,731 | 109,046 |
| Period 6 | ISFSI DECOMMISSIONING | 7,800 | 6,187 | 13,987 |
| GRAND TOTAL | | 769,690 | 831,394 | 1,601,084 |

Table 6-7 below provides the cost estimate results for Scenario 2 organized by period and separated by cost type.

**Table 6-7**

**FPL Turkey Point Units 3 and 4**
**Scenario 2 - Cost Summary by Period & Cost Type**
(thousands of 2020 dollars)

| Period | Item Description | Labor Cost | Materials & Equipment | Waste Transport & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost |
|---|---|---|---|---|---|---|---|
| Period 1 | SHUTDOWN & TRANSITION | 178,735 | 48,818 | - | 33,366 | 40,318 | 301,236 |
| Period 2 | SAFSTOR | 113,853 | 29,582 | - | 108,736 | 27,716 | 279,886 |
| Period 3 | DECOMMISSIONING & LICENSE TERMINATION | 321,342 | 122,553 | 231,600 | 35,363 | 125,961 | 836,820 |
| Period 4 | SITE RESTORATION | 34,700 | 12,889 | 228 | 4,452 | 7,840 | 60,108 |
| Period 5 | DRY FUEL / GTCC STORAGE & TRANSFER | 65,133 | 1,800 | 23,492 | 4,294 | 14,328 | 109,046 |
| Period 6 | ISFSI DECOMMISSIONING | 9,358 | 1,932 | - | 873 | 1,824 | 13,987 |
| GRAND TOTAL | | 723,120 | 217,573 | 255,320 | 187,083 | 217,987 | 1,601,084 |

A detailed estimate is provided in Appendix C.

Summary Schedule

Table 6-8 below provides a schedule summary for Scenario 2 based on a SAFSTOR scenario with Unit 3 Shutdown in 2052 and Unit 4 Shutdown in 2053.

**Table 6-8**

| FPL DCE-02 Turkey Point Units 3 & 4<br>Scenario 2 Schedule Summary | |
|---|---|
| **Year** | **Item** |
| 2031 | DOE starts accepting fuel |
| 2052 | Unit 3 Shutdown |
| 2053 | Unit 4 Shutdown |
| 2056 | Unit 3 Fuel Pool Empty |
| 2056 | Unit 4 Fuel Pool Empty |
| 2056 | SAFSTOR Period Begins |
| 2073 | ISFSI Empty |
| 2105 | SAFSTOR Period Ends |
| 2106 | Start Demolition |
| 2112 | Decommissioning and Site Restoration Complete |
| 2113 | ISFSI Decommissioning and Site Restoration Complete |

A detailed schedule is provided in Appendix B.

Project Staffing

Table 6-9 below provides project staffing for Scenario 2 organized by period and staff group.

**Table 6-9**

| **Period 1 - Shutdown & Transition** | 2050 | 2051 | 2052 | 2053 | 2054 | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Administration | - | - | 6 | 12 | 12 | 7 | 4 | | | | |
| Engineering | | | 20 | 40 | 40 | 20 | 8 | | | | |
| Health Physics/Rad Protection | | | 20 | 30 | 30 | 24 | 20 | | | | |
| Management | | | 3 | 5 | 5 | 5 | 3 | | | | |
| Maintenance & Operations | | | 40 | 70 | 60 | 40 | 20 | | | | |
| Quality Assurance | | | 2 | 3 | 3 | 2 | 1 | | | | |
| **Utility Staff** | **-** | **-** | **91** | **160** | **150** | **98** | **56** | **-** | **-** | **-** | **-** |
| | | | | | | | | | | | |
| **General Contractor Staff** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |

| Period 2 - SAFSTOR | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 / 2099 | 2100 | 2101 | 2102 | 2103 | 2104 | 2105 | 2106 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Administration | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| Engineering | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| Health Physics/Rad Protection | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| Management | | | | | | | | | | | | | |
| Maintenance & Operations | | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| Quality Assurance | | | | | | | | | | | | | |
| **Utility Staff** | **-** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **-** |
| | | | | | | | | | | | | | |
| **General Contractor Staff** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |

| Period 3 & 4 - License Term & Site Restoration | 2103 | 2104 | 2105 | 2106 | 2107 | 2108 | 2109 | 2110 | 2111 | 2112 | 2113 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Administration | | 4 | 4 | 10 | 12 | 12 | 12 | 12 | 7 | 2 | |
| Engineering | | 4 | 6 | 16 | 20 | 20 | 20 | 20 | 7 | 2 | |
| Health Physics/Rad Protection | | | 4 | 8 | 24 | 24 | 24 | 24 | 16 | 4 | |
| Management | | 1 | 1 | 4 | 5 | 5 | 4 | 4 | 4 | 2 | |
| Maintenance & Operations | | | | 10 | 24 | 24 | 20 | 20 | 8 | 2 | |
| Quality Assurance | | 1 | 1 | 2 | 3 | 3 | 2 | 2 | 2 | 1 | |
| **Utility Staff** | **-** | **10** | **16** | **50** | **88** | **88** | **82** | **82** | **44** | **13** | **-** |
| | | | | | | | | | | | |
| Project Management | | 2 | 4 | 6 | 10 | 10 | 10 | 10 | 8 | 4 | |
| Engineering | | 4 | 6 | 6 | 12 | 12 | 10 | 10 | 7 | 2 | |
| Health Physics/Rad Protection | | | 4 | 8 | 16 | 16 | 16 | 16 | 12 | 6 | |
| Administration | | 2 | 3 | 6 | 12 | 12 | 12 | 12 | 8 | 4 | |
| Maintenance & Operations | | | | | - | - | - | - | - | - | |
| Quality Assurance | | 1 | 1 | 2 | 4 | 4 | 4 | 4 | 3 | 2 | |
| Waste Management | | | 1 | 2 | 12 | 12 | 12 | 12 | 12 | 4 | |
| **General Contractor Staff** | **-** | **9** | **19** | **30** | **66** | **66** | **64** | **64** | **50** | **22** | **-** |

| Period 5 - Dry Fuel / GTCC Storage & Transfer | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 / 2069 | 2070 | 2071 | 2072 | 2073 | 2074 | 2075 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Administration | | | | | | | | | | | | |
| Engineering | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| Health Physics/Rad Protection | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| Management | | | | | | | | | | | | |
| Maintenance & Operations | | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | |
| Quality Assurance | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| **Utility Staff** | **-** | **1** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **-** | **-** |
| | | | | | | | | | | | | |
| **General Contractor Staff** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |

| Period 6 - ISFSI Decommissioning | 2107 | 2108 | 2109 | 2110 | 2111 | 2112 | 2113 | 2114 | 2115 |
|---|---|---|---|---|---|---|---|---|---|
| Administration | | | | | | | | | |
| Engineering | | | | | | | 1 | | |
| Health Physics/Rad Protection | | | | | | | 1 | | |
| Management | | | | | | | 1 | | |
| Maintenance & Operations | | | | | | | | | |
| Quality Assurance | | | | | | | 1 | | |
| **Utility Staff** | **-** | **-** | **-** | **-** | **-** | **-** | **4** | **-** | **-** |
| | | | | | | | | | |
| Project Management | | | | | | 1 | 1 | | |
| Engineering | | | | | | 1 | 1 | | |
| Health Physics/Rad Protection | | | | | | | 1 | | |
| Administration | | | | | | | 1 | | |
| Maintenance & Operations | | | | | | | | | |
| Quality Assurance | | | | | | 1 | 1 | | |
| Waste Management | | | | | | 1 | 1 | | |
| **General Contractor Staff** | **-** | **-** | **-** | **-** | **-** | **4** | **6** | **-** | **-** |

Detailed staffing tables for each scenario are provided in Appendix D.

Waste Disposal Volumes

Waste disposal is a significant element of the decommissioning project. The estimated waste disposal quantities for Scenario 2 are shown in cubic feet of waste as follows:

| | |
|---|---|
| Class A | 2,390,095 |
| Class B/C | 2,686 |
| GTCC | 4,122 |

Waste disposal volumes and costs, itemized by packaging, transportation, surcharges and disposal costs by waste class and facility, are provided in Appendix E.

## 7.0 REFERENCES

1. Atomic Industrial Forum, Inc., "Guidelines for Producing Commercial Nuclear Power Plant Decommissioning Cost Estimates," AIF/NESP-036, May 1986.

2. U.S. Nuclear Regulatory Commission, "Standard Format and Content of Decommissioning Cost Estimates for Nuclear Power Reactors," Regulatory Guide 1.202, February 2005.

3. U.S. Nuclear Regulatory Commission, "Domestic Licensing of Production and Utilization Facilities," 10 CFR Part 50, 2008.

4. Federal Register, Vol. 4, "Standard Contract for Disposal of Spent Nuclear Fuel and/or High-Level Radioactive Waste," NRC 10 CFR Part 961 (DOE), January 1, 1999.

5. U.S. Department of Energy, "Strategy for the Management and Disposal of Used Nuclear Fuel and High-Level Radioactive Waste," January 2013.

6. U.S. Department of Energy, "Acceptance Priority Ranking & Annual Capacity Report," DOE/RW-0567, July 2004.

7. U.S. Nuclear Regulatory Commission, "Technology, Safety and Costs of Decommissioning a Reference Pressurized Water Reactor Power Station," NUREG/CR-0130, June 1980. This original NUREG has been updated by NUREG/CR-5884 "Revised Analyses of Decommissioning for the Reference Pressurized Water Reactor Power Station."

8. U.S. Nuclear Regulatory Commission, "Technology, Safety and Costs of Decommissioning a Reference Boiling Water Reactor Power Station," NUREG/CR-0672, June 1980. This original NUREG has been updated by NUREG/CR-6174 "Revised Analyses of Decommissioning for the Reference Boiling Water Reactor Power Station."

9. Life-of-Plant Disposal Agreement, between Energy*Solutions*, LLC and FPL, dated March 26, 2020.

10. U.S. Nuclear Regulatory Commission, "Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM)," NUREG-1575, Rev. 1, August 2000.

11. U.S. Department of Energy, "Cost Estimating Guide," DOE G 430.1-1, March 1997.

**APPENDIX A**
**FPL - Turkey Point - UNITS 3 & 4**
**Plant Structures and Systems**

| Turkey Point - Primary Plant Structures | |
|---|---|
| **Unit 3** | **Unit 4** |
| Reactor | Reactor |
| Turbine & Turbine Pedestal | Auxiliary Building |
| Fuel Handling Building | Control Building |
| Sealwell | Intake Structure |
| Misc Structures | Radwaste Building |
| | LLW Storage Building |
| | Maintenance Facility |
| | Sealwell |
| | Turbine & Turbine Pedestal |
| | Fuel Handling Building |
| | Misc. Structures |

| Turkey Point - Primary Plant Systems | |
|---|---|
| **Unit 3** | **Unit 4** |
| Amertap | Amertap |
| Auxiliary Feedwater | Auxiliary Feedwater |
| Auxiliary Steam | Auxiliary Steam |
| Breathing Air | Breathing Air |
| Chemical & Volume Control | Chemical & Volume Control |
| Circulating Water | Circulating Water |
| Component Cooling Water | Component Cooling Water |
| Condensate | Condensate |
| Condensate Polishing | Condensate Polishing |
| Condensate Recovery | Condensate Recovery |
| Condensate Storage | Condensate Storage |
| Condenser | Condenser |
| Containment Post Accident | Containment Post Accident |
| Containment Spray | Containment Spray |
| EDG Engine & Oil | EDG Engine & Oil |
| Extraction Steam | Extraction Steam |
| Feedwater | Feedwater |
| Fire Protection | Fire Protection |
| Generator | Generator |
| HVAC | HVAC |
| Instrument Air | Instrument Air |
| Intake Cooling Water | Intake Cooling Water |
| Main Steam | Main Steam |
| Primary & Secondary Wet Layup | Nitrogen & Hydrogen |
| Primary Water Makeup | Primary & Secondary Wet Layup |
| Reactor Coolant | Primary Water Makeup |
| Refueling Equipment | Reactor Coolant |
| Residual Heat Removal | Refueling Equipment |
| Safety Injection | Residual Heat Removal |
| Sampling | Safety Injection |
| Screen Wash | Sampling |
| Service Water | Screen Wash |
| Spent Fuel Pool Cooling | Service Water |
| Turbine Lube Oil | Spent Fuel Pool Cooling |
| Turbine Plant Chemical Addition | Turbine Lube Oil |
| Turbine Plant Cooling Water | Turbine Plant Chemical Addition |
| Turbine Steam | Turbine Plant Cooling Water |
| Waste Disposal | Turbine Steam |
| | Waste Disposal |
| | Water Treatment |

**Appendix B-1 - Schedule**

**Florida Power and Light**
**Turkey Point Units 3 & 4**
**Scenario 1 - Prompt DECON following Unit 4 Shutdown**

| Description | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 | 2051 | 2052 | 2053 | 2054 | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 | 2061 | 2062 | 2063 | 2064 | 2065 | 2066 | 2067 | 2068 | 2069 | 2070 | 2071 | 2072 | 2073 | 2074 | 2075 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MILESTONES** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unit 3 Shutdown (2052) | | | | | | | | | | | | | | | | | | | | | | | ◆ | | | | | | | | | | | | | | | | | | | | | | | | |
| DOE Starts Accepting Fuel (2031) | | ◆ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unit 3 Zirc Fire Period Ends (2053) | | | | | | | | | | | | | | | | | | | | | | | | ◆ | | | | | | | | | | | | | | | | | | | | | | |
| Unit 3 Fuel Pool Empty (2056) | | | | | | | | | | | | | | | | | | | | | | | | | | | ◆ | | | | | | | | | | | | | | | | | | | |
| Unit 4 Shutdown (2053) | | | | | | | | | | | | | | | | | | | | | | | | ◆ | | | | | | | | | | | | | | | | | | | | | | |
| Unit 4 Zirc Fire Period Ends (2054) | | | | | | | | | | | | | | | | | | | | | | | | | ◆ | | | | | | | | | | | | | | | | | | | | | | |
| Unit 4 Fuel Pool Empty (2056) | | | | | | | | | | | | | | | | | | | | | | | | | | | ◆ | | | | | | | | | | | | | | | | | | | |
| Decommissioning & Site Restoration Complete (2063) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ◆ | | | | | | | | | | | | |
| ISFSI Empty (2073) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ◆ | | | |
| ISFSI Decommissioning & Site Restoration Complete (2073) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ◆ | | |
| **PERIOD 1 - SHUTDOWN & TRANSITION** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1a. Planning Prior to Shutdown (by Plant Operations) | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | | | | | | | | | | | | | | | | | | | | | | | | |
| 1b. Unit 3 Post Shutdown Planning & Engineering | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | ▬ | | | | | | | | | | | | | | | | | | | | | |
| 1c. Unit 3 Post Shutdown Deactivation & Modifications | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | ▬ | ▬ | | | | | | | | | | | | | | | | | | | | |
| 1d. Unit 3 Wet Fuel Transfer to DOE prior to DECON | | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | | | | | | | | | | | | | | | | | | |
| 1e. Unit 3 Wet Fuel Transfer to ISFSI prior to DECON | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | | | | | | | | | | | | | | | | | | |
| 1f. Unit 4 Post Shutdown Planning & Engineering | | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | | | | | | | | | | | | | | | | | | | | | |
| 1g. Unit 4 Post Shutdown Deactivation & Modifications | | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | ▬ | | | | | | | | | | | | | | | | | | | | |
| 1h. Unit 4 Wet Fuel Transfer to DOE prior to DECON | | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | | | | | | | | | | | | | | | | | | |
| 1i. Unit 4 Wet Fuel Transfer to ISFSI prior to DECON | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | | | | | | | | | | | | | | | | | | |
| 1j. Undistributed Costs for Shutdown & Transition | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | | | | | | | | | | | | | | | | | | |
| **PERIOD 2 - SAFSTOR** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **PERIOD 3 - DECOMMISSIONING & LICENSE TERMINATION** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3a. Decommissioning Planning | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | | | | | | | | | | | | | | | | | | |
| 3b. Decommissioning Transition & Preparations | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | ▬ | | | | | | | | | | | | | | | | | |
| 3c. Reactor Vessel Removal | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | ▬ | | | | | | | | | | | | | | | | |
| 3d. Large Component Removal | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | ▬ | | | | | | | | | | | | | | | | |
| 3e. Plant Decontamination & Interior Rad Demolition | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | ▬ | | | | | | | | | | | | | | | | |
| 3f. Rad Building Demolition | | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | ▬ | | | | | | | | | | | | | | | |
| 3g. License Termination Activities | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | ▬ | | | | | | | | | | | | | |
| 3h. Undistributed Costs for Decommissioning & License Termination | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ |
| **PERIOD 4 - SITE RESTORATION** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4a. Clean Building & Site Demolition | | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | ▬ | | | | | | | | | | | | | | | |
| 4b. Site Restoration | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | ▬ | | | | | | | | | | | |
| 4c. Undistributed Costs for Site Restoration | | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ |
| **PERIOD 5 - DRY FUEL / GTCC STORAGE & TRANSFER** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5a. Dry Fuel Transfer to DOE | | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | |
| 5b. GTCC Waste Disposition | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | |
| 5c. Undistributed Costs for Dry Fuel / GTCC Storage & Transfer | | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ |
| **PERIOD 6 - ISFSI DECOMMISSIONING** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6a. ISFSI D&D Planning & Preparations | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | |
| 6b. ISFSI and Support Structure Clean Demolition | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ |
| 6c. ISFSI Final Status Surveys | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ |
| 6d. Undistributed Costs for ISFSI Decommissioning | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ |

Assumed by plant Operations

Included in estimate

Undistributed costs Included in estimate

**Florida Power and Light**
**Turkey Point UnitS 3 & 4**
**Scenario 2 - SAFSTOR**

| Description | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 2045 | 2046 | 2047 | 2048 | 2049 | 2050 | 2051 | 2052 | 2053 | 2054 | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 | 2061 | 2062 | 2063 | 2064 | 2065 | 2066 | 2067 | 2068 | 2069 | 2070 | 2071 | 2072 | 2073 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MILESTONES** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unit 3 Shutdown (2052) | | | | | | | | | | | | | | | | | | | | | | | ◆ | | | | | | | | | | | | | | | | | | | | | | |
| DOE Starts Accepting Fuel (2031) | | ◆ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unit 3 Zirc Fire Period Ends (2053) | | | | | | | | | | | | | | | | | | | | | | | | ◆ | | | | | | | | | | | | | | | | | | | | | | |
| Unit 3 Fuel Pool Empty (2039) | | | | | | | | | | | | | | | | | | | | | | | | | | | ◆ | | | | | | | | | | | | | | | | | | |
| Unit 4 Shutdown (2053) | | | | | | | | | | | | | | | | | | | | | | | | ◆ | | | | | | | | | | | | | | | | | | | | | | |
| Unit 4 Zirc Fire Period Ends (2054) | | | | | | | | | | | | | | | | | | | | | | | | | ◆ | | | | | | | | | | | | | | | | | | | | | |
| Unit 4 Fuel Pool Empty (2056) | | | | | | | | | | | | | | | | | | | | | | | | | | | ◆ | | | | | | | | | | | | | | | | | | |
| ISFSI Empty (2073) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ◆ |
| SAFSTOR Period Ends (2105) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Decommissioning & Site Restoration Complete (2112) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ISFSI Decommissioning & Site Restoration Complete (2113) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **PERIOD 1 - SHUTDOWN & TRANSITION** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1a. Planning Prior to Shutdown (by Plant Operations) | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | | | | | | | | | | | | | | | | | | | | | | |
| 1b. Unit 3 Post Shutdown Planning & Engineering | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | | | | | | | | | | | | | | | | | | | | | |
| 1c. Unit 3 Post Shutdown Deactivation & Modifications | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | ▬ | | | | | | | | | | | | | | | | | | | | |
| 1d. Unit 3 Wet Fuel Transfer to DOE prior to SAFSTOR | | | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | | | | | | | | | | | | | | | | |
| 1e. Unit 3 Wet Fuel Transfer to ISFSI prior to SAFSTOR | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | | | | | | | | | | | | | | | | |
| 1f. Unit 4 Post Shutdown Planning & Engineering | | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | | | | | | | | | | | | | | | | | | | |
| 1g. Unit 4 Post Shutdown Deactivation & Modifications | | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | ▬ | | | | | | | | | | | | | | | | | | |
| 1h. Unit 4 Wet Fuel Transfer to DOE prior to SAFSTOR | | | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | | | | | | | | | | | | | | | | |
| 1i. Unit 4 Wet Fuel Transfer to ISFSI prior to SAFSTOR | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | | | | | | | | | | | | | | | | |
| 1j. Undistributed Costs for Shutdown & Transition | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | ▬ | ▬ | ▬ | | | | | | | | | | | | | | | | |
| **PERIOD 2 - SAFSTOR** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2a. Dormancy during Dry Fuel Storage | | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ |
| 2b. Dormancy Only | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **PERIOD 3 - DECOMMISSIONING & LICENSE TERMINATION** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3a. Decommissioning Planning | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3b. Decommissioning Transition & Preparations | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3c. Reactor Vessel Removal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3d. Large Component Removal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3e. Plant Decontamination & Interior Rad Demolition | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3f. Rad Building Demolition | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3g. License Termination Activities | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3h. Undistributed Costs for Decommissioning & License Termination | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **PERIOD 4 - SITE RESTORATION** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4a. Clean Building & Site Demolition | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4b. Site Restoration | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4c. Undistributed Costs for Site Restoration | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **PERIOD 5 - DRY FUEL / GTCC STORAGE & TRANSFER** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5a. Dry Fuel Transfer to DOE | | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | |
| 5b. GTCC Waste Disposition | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5c. Undistributed Costs for Dry Fuel / GTCC Storage & Transfer | | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | |
| **PERIOD 6 - ISFSI DECOMMISSIONING** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6a. ISFSI D&D Planning & Preparations | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6b. ISFSI and Support Structure Clean Demolition | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6c. ISFSI Final Status Surveys | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6d. Undistributed Costs for ISFSI Decommissioning | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

▬ Assumed by plant Operations
▬ Included in estimate
▬ Undistributed costs Included in estimate

**Florida Power and Light**
**Turkey Point UnitS 3 & 4**
**Scenario 2 - SAFSTOR**

| Description | 2074 | 2075 | 2076 | 2077 | 2078 | 2079 | 2080 | 2081 | 2082 | 2083 | 2084 | 2085 | 2086 | 2087 | 2088 | 2089 | 2090 | 2091 | 2092 | 2093 | 2094 | 2095 | 2096 | 2097 | 2098 | 2099 | 2100 | 2101 | 2102 | 2103 | 2104 | 2105 | 2106 | 2107 | 2108 | 2109 | 2110 | 2111 | 2112 | 2113 | 2114 | 2115 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MILESTONES** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unit 3 Shutdown (2052) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DOE Starts Accepting Fuel (2031) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unit 3 Zirc Fire Period Ends (2053) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unit 3 Fuel Pool Empty (2039) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unit 4 Shutdown (2053) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unit 4 Zirc Fire Period Ends (2054) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unit 4 Fuel Pool Empty (2056) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ISFSI Empty (2073) | ◆ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SAFSTOR Period Ends (2105) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ◆ | | | | | | | | | | |
| Decommissioning & Site Restoration Complete (2112) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ◆ | | | |
| ISFSI Decommissioning & Site Restoration Complete (2113) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ◆ | | |
| **PERIOD 1 - SHUTDOWN & TRANSITION** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1a. Planning Prior to Shutdown (by Plant Operations) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1b. Unit 3 Post Shutdown Planning & Engineering | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1c. Unit 3 Post Shutdown Deactivation & Modifications | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1d. Unit 3 Wet Fuel Transfer to DOE prior to SAFSTOR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1e. Unit 3 Wet Fuel Transfer to ISFSI prior to SAFSTOR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1f. Unit 4 Post Shutdown Planning & Engineering | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1g. Unit 4 Post Shutdown Deactivation & Modifications | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1h. Unit 4 Wet Fuel Transfer to DOE prior to SAFSTOR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1i. Unit 4 Wet Fuel Transfer to ISFSI prior to SAFSTOR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1j. Undistributed Costs for Shutdown & Transition | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **PERIOD 2 - SAFSTOR** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2a. Dormancy during Dry Fuel Storage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2b. Dormancy Only | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | | | | | | | | | | |
| **PERIOD 3 - DECOMMISSIONING & LICENSE TERMINATION** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3a. Decommissioning Planning | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | | | | | | | | | | | |
| 3b. Decommissioning Transition & Preparations | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | | | | | | | | | | |
| 3c. Reactor Vessel Removal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | | | | | | | | | |
| 3d. Large Component Removal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | | | | | | | | |
| 3e. Plant Decontamination & Interior Rad Demolition | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | | | | | | | | |
| 3f. Rad Building Demolition | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | | | | | | |
| 3g. License Termination Activities | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | | | | | |
| 3h. Undistributed Costs for Decommissioning & License Termination | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ |
| **PERIOD 4 - SITE RESTORATION** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4a. Clean Building & Site Demolition | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | ▬ | ▬ | | | | | |
| 4b. Site Restoration | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | | | |
| 4c. Undistributed Costs for Site Restoration | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ | ▬ |
| **PERIOD 5 - DRY FUEL / GTCC STORAGE & TRANSFER** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5a. Dry Fuel Transfer to DOE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5b. GTCC Waste Disposition | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | ▬ | | | | |
| 5c. Undistributed Costs for Dry Fuel / GTCC Storage & Transfer | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **PERIOD 6 - ISFSI DECOMMISSIONING** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6a. ISFSI D&D Planning & Preparations | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | | |
| 6b. ISFSI and Support Structure Clean Demolition | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | |
| 6c. ISFSI Final Status Surveys | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ |
| 6d. Undistributed Costs for ISFSI Decommissioning | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ▬ | ▬ | ▬ | ▬ |

Assumed by plant Operations

Included in estimate

Undistributed costs Included in estimate

Appendix C-1

# Florida Power and Light
## Turkey Point Unit 3
## Scenario 1 - Prompt DECON following Unit 4 Shutdown

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **1a Total** | **Planning Prior to Shutdown (by Plant Operations)** | | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| | 1b.1 | Admin Activities in Preparation for Decommissioning - Unit 3 | 2,653 | 82 | - | - | 410 | 3,146 | 3,146 | - | - |
| | 1b.2 | Prepare PSDAR and License Documents - Unit 3 | 444 | 14 | - | - | 69 | 527 | 527 | - | - |
| | 1b.3 | Engineering Activities in Preparation for Decommissioning - Unit 3 | 1,064 | 52 | - | 26 | 171 | 1,314 | 1,314 | - | - |
| **1b Total** | **Unit 3 Post Shutdown Planning & Engineering** | | **4,161** | **148** | **-** | **26** | **650** | **4,986** | **4,986** | **-** | **-** |
| | 1c.1 | Defuel Reactor Unit 3 (by Plant Operations) | - | - | - | - | - | - | - | - | - |
| | 1c.2 | Fuel Sampling & Inspections (by Plant Operations) | - | - | - | - | - | - | - | - | - |
| | 1c.3 | Spent Fuel Pool System Modifications - Unit 3 | 11,345 | 1,212 | - | - | 1,884 | 14,441 | - | 14,441 | - |
| **1c Total** | **Unit 3 Post Shutdown Deactivation & Modifications** | | **11,345** | **1,212** | **-** | **-** | **1,884** | **14,441** | **-** | **14,441** | **-** |
| | 1d.1 | Provide Transfer Casks (supplied by DOE) | - | - | - | - | - | - | - | - | - |
| | 1d.2 | Procure Spent Fuel Loading & Transfer Equipment | - | 2,184 | - | - | 328 | 2,512 | - | 2,512 | - |
| | 1d.3 | Procedures & Dry Runs | 500 | - | - | 250 | 113 | 863 | - | 863 | - |
| | 1d.4 | Remove (448) Fuel Assemblies from Pool & Load DOE Casks | 2,240 | 560 | - | - | 560 | 3,360 | - | 3,360 | - |
| | 1d.5 | Dry, Close & Inspect (14) DOE supplied Casks | 1,120 | 280 | - | - | 280 | 1,680 | - | 1,680 | - |
| | 1d.6 | Load Out (14) Casks to DOE Transport | 1,120 | 280 | - | - | 280 | 1,680 | - | 1,680 | - |
| | 1d.7 | Spent Fuel Transportation & Disposal (by DOE) | - | - | - | - | - | - | - | - | - |
| **1d Total** | **Unit 3 Wet Fuel Transfer to DOE prior to DECON** | | **4,980** | **3,304** | **-** | **250** | **1,560** | **10,094** | **-** | **10,094** | **-** |
| | 1e.1 | Purchase Transfer Casks | - | 13,241 | - | - | 1,986 | 15,227 | - | 15,227 | - |
| | 1e.2 | Procure Spent Fuel Loading & Transfer Equipment | - | - | - | - | - | - | - | - | - |
| | 1e.3 | Procedures & Dry Runs | 500 | - | - | 250 | 113 | 863 | - | 863 | - |
| | 1e.4 | Remove (464) Fuel Assemblies from Pool & Load DOE Casks | 2,400 | 600 | - | - | 600 | 3,600 | - | 3,600 | - |
| | 1e.5 | Dry, Close & Inspect (15) DOE supplied Casks | 1,200 | 300 | - | - | 300 | 1,800 | - | 1,800 | - |
| | 1e.6 | Load Out (15) Casks to DOE Transport | 1,200 | 300 | - | - | 300 | 1,800 | - | 1,800 | - |
| | 1e.7 | Spent Fuel Transportation & Disposal (by DOE) | - | - | - | - | - | - | - | - | - |
| **1e Total** | **Unit 3 Wet Fuel Transfer to ISFSI prior to Shutdown** | | **5,300** | **14,441** | **-** | **250** | **3,299** | **23,290** | **-** | **23,290** | **-** |
| **1f Total** | **Unit 4 Post Shutdown Planning & Engineering** | | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| **1g Total** | **Unit 4 Shutdown Preparations & Deactivation** | | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| **1h Total** | **Unit 4 Wet Fuel Transfer to DOE prior to DECON** | | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| **1i Total** | **Unit 4 Wet Fuel Transfer to ISFSI prior to DECON** | | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |

Appendix C-1

## Florida Power and Light
## Turkey Point Unit 3
## Scenario 1 - Prompt DECON following Unit 4 Shutdown

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1j.1 | Utility Staff | 44,454 | - | - | - | 6,668 | 51,122 | 40,897 | 10,224 | - |
| | 1j.2 | Security Guard Force | 21,113 | - | - | - | 3,167 | 24,280 | 7,284 | 16,996 | - |
| | 1j.3 | General Contractor Staff | - | - | - | - | - | - | - | - | - |
| | 1j.4 | Property Taxes | - | - | - | 67 | 10 | 77 | 62 | 15 | - |
| | 1j.5 | Insurance | - | - | - | 10,251 | 1,538 | 11,788 | 9,431 | 2,358 | - |
| | 1j.6 | Corporate Support | 2,932 | - | - | - | 440 | 3,372 | 1,012 | 2,360 | - |
| | 1j.7 | Utility Staff HP Supplies | - | 903 | - | - | 135 | 1,038 | 312 | 727 | - |
| | 1j.8 | NRC Inspection Fee | - | - | - | 2,780 | 417 | 3,197 | 3,197 | - | - |
| | 1j.9 | Licensing Fees | - | - | - | 860 | 129 | 989 | 989 | - | - |
| | 1j.10 | Materials and Services | - | 1,639 | - | - | 246 | 1,885 | 566 | 1,320 | - |
| | 1j.11 | Energy | - | - | - | 1,428 | 214 | 1,643 | 1,314 | 329 | - |
| | 1j.12 | EPRI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 1j.13 | NEI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 1j.14 | County & FEMA Fees | - | - | - | 2,828 | 424 | 3,252 | 2,601 | 650 | - |
| | 1j.15 | Licenses & Permits | - | - | - | 85 | 13 | 97 | 78 | 19 | - |
| | 1j.16 | INPO Membership Fees | - | - | - | - | - | - | - | - | - |
| | 1j.17 | ISFSI Operating Costs | 20 | 61 | - | - | 12 | 93 | - | 93 | - |
| | 1j.18 | Spent Fuel Maintenance | 985 | 328 | - | - | 197 | 1,510 | - | 1,510 | - |
| **1j Total** | **Undistributed Costs for Shutdown & Transition** | | **69,504** | **2,931** | **-** | **18,299** | **13,610** | **104,344** | **67,742** | **36,602** | **-** |
| | | | | | | | | | | | |
| **Period 1 Total** | **SHUTDOWN & TRANSITION** | | **95,290** | **22,037** | **-** | **18,825** | **21,003** | **157,154** | **72,728** | **84,426** | **-** |
| | | | | | | | | | | | |
| **Period 2 Total** | **SAFSTOR** | | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| | | | | | | | | | | | |
| | 3a.1 | Decommissioning Planning and Design - Unit 3 | 1,523 | 46 | - | - | 235 | 1,804 | 1,804 | - | - |
| | 3a.2 | Prepare Integrated Work Sequence and Schedule - Unit 3 | 164 | 5 | - | - | 25 | 195 | 195 | - | - |
| | 3a.3 | Site Characterization - Unit 3 | 1,953 | 53 | - | 105 | 317 | 2,429 | 2,429 | - | - |
| | 3a.4 | Prepare Decommissioning Activity Specifications - Unit 3 | 5,096 | 158 | - | - | 788 | 6,042 | 6,042 | - | - |
| | 3a.5 | Prepare Detailed Work Procedures - Unit 3 | 4,479 | 139 | - | - | 693 | 5,310 | 5,310 | - | - |
| | 3a.6 | Prepare License Termination Plan - Unit 3 | 984 | - | - | 667 | 248 | 1,899 | 1,899 | - | - |
| | 3a.7 | Design Containment and Misc System Modifications - Unit 3 | 195 | - | - | - | 29 | 224 | 224 | - | - |
| | 3a.8 | Purchase Dry Storage Modules for Unit 3 GTCC Waste | - | - | 4,708 | - | 706 | 5,414 | 5,414 | - | - |
| **3a Total** | **Decommissioning Planning** | | **14,395** | **400** | **4,708** | **772** | **3,041** | **23,317** | **23,317** | **-** | **-** |
| | | | | | | | | | | | |
| | 3b.1 | Mobilize Decommissioning General Contractor | - | - | - | 1,693 | 254 | 1,947 | 1,947 | - | - |
| | 3b.2 | Perform Asbestos Abatement of Pipe Insulation - Unit 3 | 3,465 | 182 | - | - | 912 | 4,559 | 4,559 | - | - |
| | 3b.3 | Implement Cold and Dark & Install Temporary Power - Unit 3 | 4,669 | 1,568 | - | - | 936 | 7,172 | 7,172 | - | - |

Appendix C-1

# Florida Power and Light
## Turkey Point Unit 3
## Scenario 1 - Prompt DECON following Unit 4 Shutdown

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3b.4 | Construct Misc Building Modifications, In-Plant Laydown Areas | 2,996 | 508 | - | - | 526 | 4,030 | 4,030 | - | - |
| | 3b.5 | Modify Containment Access - Unit 3 | 2,223 | 377 | - | - | 390 | 2,990 | 2,990 | - | - |
| | 3b.6 | Transportation Infrastructure Modifications | 93 | 447 | - | 2,089 | 394 | 3,023 | 3,023 | - | - |
| | 3b.7 | Procure Waste Handling & Processing Tents | - | - | - | 1,739 | 261 | 2,000 | 2,000 | - | - |
| **3b Total** | **Decommissioning Transition and Preparations** | | **13,445** | **3,082** | **-** | **5,521** | **3,672** | **25,721** | **25,721** | **-** | **-** |
| | 3c.1 | Design and Procure Special Equipment | - | 29,000 | - | - | 5,800 | 34,800 | 34,800 | - | - |
| | 3c.2 | Test Special Cutting and Handling Equipment and Train Operators | 2,263 | - | - | 72 | 467 | 2,802 | 2,802 | - | - |
| | 3c.3 | Finalize Internals and Vessel Segmentation Details - Unit 3 | 538 | - | - | - | 108 | 646 | 646 | - | - |
| | 3c.4 | Segment, Package and Ship Reactor Internals - Unit 3 | 5,879 | 2,100 | - | - | 1,596 | 9,575 | 9,575 | - | - |
| | 3c.5 | Segment, Package and Ship RPV - Unit 3 | 1,394 | 1,030 | - | - | 485 | 2,909 | 2,909 | - | - |
| | 3c.6 | Package and Ship Reactor Pressure Vessel - Unit 3 | - | - | 16,724 | - | 3,345 | 20,069 | 20,069 | - | - |
| **3c Total** | **Reactor Vessel Removal** | | **10,074** | **32,130** | **16,724** | **72** | **11,800** | **70,800** | **70,800** | **-** | **-** |
| | 3d.1 | Heavy Lift / Transfer Equipment | | 3,245 | - | - | 649 | 3,893 | 3,893 | - | - |
| | 3d.2 | Remove and Dispose of Steam Generators - Unit 3 | 1,417 | 163 | - | - | 316 | 1,895 | 1,895 | - | - |
| | 3d.3 | Remove and Dispose of Pressurizer - Unit 3 | 195 | 22 | - | - | 43 | 259 | 259 | - | - |
| | 3d.4 | Remove and Dispose of Reactor Coolant Pipe - Unit 3 | 522 | 36 | - | - | 112 | 670 | 670 | - | - |
| | 3d.5 | Remove and Dispose of Reactor Coolant Pumps - Unit 3 | 537 | 59 | - | - | 119 | 716 | 716 | - | - |
| | 3d.7 | Package, Ship, & Dispose | - | - | 11,062 | - | 2,212 | 13,274 | 13,274 | - | - |
| **3d Total** | **Large Component Removal** | | **2,671** | **3,524** | **11,062** | **-** | **3,451** | **20,708** | **20,708** | **-** | **-** |
| | 3e.1 | Remove and Dispose of Spent Fuel Storage Racks | 68 | 20 | - | - | 18 | 106 | 106 | - | - |
| | 3e.2 | Segment, Package and Dispose of Spent Fuel Pool Island Equipment | 214 | 20 | - | - | 47 | 281 | 281 | - | - |
| | 3e.3 | Decon/Surgical Removal Containment Building - Unit 3 | 1,095 | 130 | - | - | 245 | 1,470 | 1,470 | - | - |
| | 3e.4 | Decon/Surgical Removal Fuel Building | 553 | 21 | - | - | 115 | 688 | 688 | - | - |
| | 3e.5 | Decon/Surgical Remvoal Auxiliary Building (with Unit 4) | - | - | - | - | - | - | - | - | - |
| | 3e.6 | Package, Dispose, & Ship | - | - | 3,569 | - | 714 | 4,283 | 4,283 | - | - |
| **3e Total** | **Plant Decontamination & Interior Rad Demolition** | | **1,930** | **191** | **3,569** | **-** | **1,138** | **6,828** | **6,828** | **-** | **-** |
| | 3f.1 | Demolish Fuel Building | 257 | 538 | - | - | 159 | 953 | 953 | - | - |
| | 3f.2 | Demolish Auxiliary Building (with Unit 4) | - | - | - | - | - | - | - | - | - |
| | 3f.3 | Demolish Unit 3 Containment Building | 2,019 | 6,120 | - | - | 1,628 | 9,767 | 9,767 | - | - |
| | 3f.4 | Contaminated Soil | 397 | 596 | 17,930 | - | 3,785 | 22,709 | 22,709 | - | - |
| | 3f.5 | Debris Disposal | - | - | 46,283 | - | 9,257 | 55,539 | 55,539 | - | - |
| **3f Total** | **Rad Building Demolition** | | **2,673** | **7,254** | **64,213** | **-** | **14,828** | **88,968** | **88,968** | **-** | **-** |
| | 3g.1 | Final Status Survey for Structures | 5,897 | 67 | - | 227 | 1,238 | 7,428 | 7,428 | - | - |

Appendix C-1

## Florida Power and Light
## Turkey Point Unit 3
## Scenario 1 - Prompt DECON following Unit 4 Shutdown

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3g.2 | Final Status Survey for Land Areas (included with structures) | - | - | - | - | - | - | - | - | - |
| **3g Total** | **License Termination Activities** | | **5,897** | **67** | **-** | **227** | **1,238** | **7,428** | **7,428** | **-** | **-** |
| | 3h.1 | Utility Staff | 29,716 | - | - | - | 4,457 | 34,174 | 34,174 | - | - |
| | 3h.2 | Security Guard Force | 1,951 | - | - | - | 293 | 2,244 | 2,244 | - | - |
| | 3h.3 | General Contractor Staff | 67,660 | - | - | - | 10,149 | 77,809 | 77,809 | - | - |
| | 3h.4 | Property Taxes | - | - | - | 75 | 11 | 86 | 86 | - | - |
| | 3h.5 | Insurance | - | - | - | 5,428 | 814 | 6,242 | 6,242 | - | - |
| | 3h.6 | Corporate Support | 11,033 | - | - | - | 1,655 | 12,688 | 12,688 | - | - |
| | 3h.7 | Utility Staff HP Supplies | - | 4,732 | - | - | 710 | 5,441 | 5,441 | - | - |
| | 3h.8 | NRC Inspection Fee | - | - | - | 667 | 100 | 767 | 767 | - | - |
| | 3h.9 | Licensing Fees | - | - | - | 1,032 | 155 | 1,187 | 1,187 | - | - |
| | 3h.10 | County & FEMA Fees | - | - | - | - | - | - | - | - | - |
| | 3h.11 | Licenses & Permits | - | - | - | 95 | 14 | 109 | 109 | - | - |
| | 3h.12 | Materials and Services | - | 1,648 | - | - | 247 | 1,895 | 1,895 | - | - |
| | 3h.13 | Energy | - | - | - | 2,541 | 381 | 2,923 | 2,923 | - | - |
| | 3h.14 | DGC HP Supplies | - | 5,132 | - | - | 770 | 5,902 | 5,902 | - | - |
| | 3h.15 | Florida LLRW Inspection Fee | - | - | - | 1,798 | 270 | 2,068 | 2,068 | - | - |
| | 3h.16 | EPRI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 3h.17 | NEI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 3h.18 | INPO Membership Fees | - | - | - | - | - | - | - | - | - |
| **3h Total** | **Undistributed Costs for Decommissioning & License Termination** | | **110,361** | **11,511** | **-** | **11,636** | **20,026** | **153,535** | **153,535** | **-** | **-** |
| | | | | | | | | | | | |
| **Period 3 Total** | **DECOMMISSIONING & LICENSE TERMINATION** | | **161,446** | **58,160** | **100,276** | **18,227** | **59,195** | **397,306** | **397,306** | **-** | **-** |
| | 4a.1 | Demo Turbine Pedastal and Turbine Deck | 3,647 | 1,506 | - | - | 773 | 5,927 | - | - | 5,927 |
| | 4a.2 | Demo Sealwell | 113 | 251 | - | - | 55 | 418 | - | - | 418 |
| | 4a.3 | Demo Tank Foundations | 11 | 251 | - | - | 39 | 302 | - | - | 302 |
| | 4a.4 | Demo Misc Site Structures | 206 | 502 | - | - | 106 | 814 | - | - | 814 |
| | 4a.5 | Security Improvements | 667 | 1,255 | - | - | 288 | 2,210 | - | - | 2,210 |
| | 4a.6 | Clean Concrete Processing | - | - | - | 1,306 | 196 | 1,502 | - | - | 1,502 |
| | 4a.7 | Demo Site Paving | 220 | 330 | - | - | 83 | 633 | - | - | 633 |
| | 4a.8 | Clean Debris Disposal/Recycle | - | - | 101 | - | 15 | 117 | - | - | 117 |
| **4a Total** | **Clean Building & Site Demolition** | | **4,864** | **4,096** | **101** | **1,306** | **1,555** | **11,922** | **-** | **-** | **11,922** |
| | 4b.1 | Procure Site Restoration Equipment | - | 735 | - | - | 110 | 846 | - | - | 846 |
| | 4b.2 | Finish Grading and Re-Vegetate Site | 715 | | - | - | 107 | 822 | - | - | 822 |
| **4b Total** | **Site Restoration** | | **715** | **735** | **-** | **-** | **218** | **1,668** | **-** | **-** | **1,668** |

Appendix C-1

## Florida Power and Light
## Turkey Point Unit 3
## Scenario 1 - Prompt DECON following Unit 4 Shutdown

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4c.1 | Utility Staff | 2,237 | - | - | - | 336 | 2,572 | - | - | 2,572 |
| | 4c.2 | Security Guard Force | 147 | - | - | - | 22 | 169 | - | - | 169 |
| | 4c.3 | General Contractor Staff | 5,093 | - | - | - | 764 | 5,857 | - | - | 5,857 |
| | 4c.4 | Property Taxes | - | - | - | 6 | 1 | 6 | - | - | 6 |
| | 4c.5 | Insurance | - | - | - | 409 | 61 | 470 | - | - | 470 |
| | 4c.6 | Corporate Support | 830 | - | - | - | 125 | 955 | - | - | 955 |
| | 4c.7 | Energy | - | - | - | 135 | 20 | 156 | - | - | 156 |
| | 4c.8 | Materials and Services | - | 84 | - | - | 13 | 96 | - | - | 96 |
| | 4c.9 | County & FEMA Fees | - | - | - | - | - | - | - | - | - |
| | 4c.10 | Licenses & Permits | - | - | - | 7 | 1 | 8 | - | - | 8 |
| **4c Total** | **Undistributed Costs for Site Restoration** | | **8,307** | **84** | **-** | **557** | **1,342** | **10,289** | **-** | **-** | **10,289** |
| | | | | | | | | | | | |
| **Period 4 Total** | **SITE RESTORATION** | | **13,886** | **4,915** | **101** | **1,862** | **3,115** | **23,879** | **-** | **-** | **23,879** |
| | | | | | | | | | | | |
| | 5a.1 | Procure Loading & Transfer Equipment (included in Period 1) | - | - | - | - | - | - | - | - | - |
| | 5a.2 | Procedures & Dry Runs (included in Period 1) | - | - | - | - | - | - | - | - | - |
| | 5a.3 | Remove (43) Fuel Casks from ISFSI & Load DOE Transport | 3,440 | 860 | - | - | 645 | 4,945 | - | 4,945 | - |
| | 5a.4 | Spent Fuel Transportation & Disposal (by DOE) | - | - | - | - | - | - | - | - | - |
| **5a Total** | **Dry Fuel Transfer to DOE during and after DECON** | | **3,440** | **860** | **-** | **-** | **645** | **4,945** | **-** | **4,945** | **-** |
| | | | | | | | | | | | |
| | 5b.1 | Remove GTCC Casks from ISFSI & Loadout | 320 | - | - | 80 | 120 | 520 | 520 | - | - |
| | 5b.2 | GTCC Transportation & Disposal | - | - | 11,746.22 | - | 1,762 | 13,508 | 13,508 | - | - |
| **5b Total** | **GTCC Waste Disposition** | | **320** | **-** | **11,746** | **80** | **1,882** | **14,028** | **14,028** | **-** | **-** |
| | | | | | | | | | | | |
| | 5c.1 | Utility Staff | 5,897 | - | - | - | 885 | 6,781 | - | 6,781 | - |
| | 5c.2 | Security Guard Force | 22,749 | - | - | - | 3,412 | 26,162 | - | 26,162 | - |
| | 5c.3 | General Contractor Staff | - | - | - | - | - | - | - | - | - |
| | 5c.4 | Property Taxes | - | - | - | 148 | 22 | 170 | - | 170 | - |
| | 5c.5 | Insurance | - | - | - | 6,918 | 1,038 | 7,956 | - | 7,956 | - |
| | 5c.6 | Corporate Support | - | - | - | - | - | - | - | - | - |
| | 5c.7 | Utility Staff HP Supplies | - | - | - | - | - | - | - | - | - |
| | 5c.8 | NRC Inspection Fee | - | - | - | 1,112 | 167 | 1,279 | - | 1,279 | - |
| | 5c.9 | Licensing Fees | - | - | - | 1,720 | 258 | 1,978 | - | 1,978 | - |
| | 5c.10 | County & FEMA Fees | - | - | - | - | - | - | - | - | - |
| | 5c.11 | Licenses & Permits | - | - | - | 169 | 25 | 195 | - | 195 | - |
| | 5c.12 | Energy | - | - | - | - | - | - | - | - | - |
| | 5c.13 | Materials and Services | - | 490 | - | - | 74 | 564 | - | 564 | - |

Appendix C-1

## Florida Power and Light
## Turkey Point Unit 3
## Scenario 1 - Prompt DECON following Unit 4 Shutdown

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5c.14 | ISFSI Operating Costs | - | - | - | 2,378 | 357 | 2,734 | - | 2,734 | - |
| **5c Total** | **Undistributed Costs for Dry Fuel / GTCC Storage & Transfer** | | **28,646** | **490** | **-** | **12,445** | **6,237** | **47,819** | **-** | **47,819** | **-** |
| | | | | | | | | | | | |
| **Period 5 Total** | **DRY FUEL / GTCC STORAGE & TRANSFER** | | **32,406** | **1,350** | **11,746** | **12,525** | **8,764** | **66,792** | **14,028** | **52,764** | **-** |
| | | | | | | | | | | | |
| | 6a.1 | Preparation and NRC Review of License Termination Plan | 71 | - | - | 96 | 25 | 192 | - | 192 | - |
| **6a Total** | **ISFSI D&D Planning & Preparations** | | **71** | **-** | **-** | **96** | **25** | **192** | **-** | **192** | **-** |
| | | | | | | | | | | | |
| | 6b.1 | Clean Demolition of ISFSI | 2,073 | 958 | - | - | 455 | 3,486 | - | 3,486 | - |
| | 6b.2 | Demolition of ISFSI Support Structures | 377 | 141 | - | - | 78 | 596 | - | 596 | - |
| **6b Total** | **ISFSI and Support Structure Clean Demolition** | | **2,451** | **1,099** | **-** | **-** | **532** | **4,082** | **-** | **4,082** | **-** |
| | | | | | | | | | | | |
| | 6c.1 | Verification Surveys | 128 | 33 | - | - | 24 | 185 | - | 185 | - |
| | 6c.2 | Preparation of Final Report on Decommissioning and NRC Review | 71 | - | - | - | 11 | 81 | - | 81 | - |
| **6c Total** | **ISFSI Final Status Surveys** | | **199** | **33** | **-** | **-** | **35** | **266** | **-** | **266** | **-** |
| | | | | | | | | | | | |
| | 6d.1 | Utility Staff | 304 | - | - | - | 46 | 350 | - | 350 | - |
| | 6d.2 | Security Guard Force | 153 | - | - | - | 23 | 176 | - | 176 | - |
| | 6d.3 | General Contractor Staff | 1,999 | - | - | - | 300 | 2,299 | - | 2,299 | - |
| | 6d.4 | Property Taxes | - | - | - | 13 | 2 | 15 | - | 15 | - |
| | 6d.5 | Insurance | - | - | - | 25 | 4 | 29 | - | 29 | - |
| | 6d.6 | Corporate Support | - | - | - | - | - | - | - | - | - |
| | 6d.7 | Utility Staff HP Supplies | - | - | - | - | - | - | - | - | - |
| | 6d.8 | Materials and Services | - | 23 | - | - | 3 | 26 | - | 26 | - |
| | 6d.9 | Energy | - | - | - | 35 | 5 | 41 | - | 41 | - |
| | 6d.10 | NRC Inspection Fee | - | - | - | - | - | - | - | - | - |
| | 6d.11 | Licensing Fees | - | - | - | - | - | - | - | - | - |
| | 6d.12 | County & FEMA Fees | - | - | - | - | - | - | - | - | - |
| | 6d.13 | Licenses & Permits | - | - | - | 34 | 5 | 39 | - | 39 | - |
| **6d Total** | **Undistributed Costs for ISFSI Decommissioning** | | **2,456** | **23** | **-** | **108** | **388** | **2,974** | **-** | **2,974** | **-** |
| | | | | | | | | | | | |
| **Period 6 Total** | **ISFSI DECOMMISSIONING** | | **5,176** | **1,154** | **-** | **204** | **980** | **7,514** | **-** | **7,514** | **-** |
| | | | | | | | | | | | |
| **GRAND TOTAL** | | | **308,203** | **87,617** | **112,124** | **51,644** | **93,057** | **652,645** | **484,062** | **144,704** | **23,879** |

Appendix C-1

# Florida Power and Light
## Turkey Point Unit 4
## Scenario 1 - Prompt DECON both following Unit 4 Shutdown

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **1a Total** | | **Planning Prior to Shutdown (by Plant Operations)** | - | - | - | - | - | - | - | - | - |
| **1b Total** | | **Unit 3 Post Shutdown Planning & Engineering** | - | - | - | - | - | - | - | - | - |
| **1c Total** | | **Unit 3 Post Shutdown Deactivation & Modifications** | - | - | - | - | - | - | - | - | - |
| **1d Total** | | **Unit 3 Wet Fuel Transfer to DOE prior to SAFSTOR** | - | - | - | - | - | - | - | - | - |
| **1e Total** | | **Unit 3 Wet Fuel Transfer to ISFSI prior to SAFSTOR** | - | - | - | - | - | - | - | - | - |
| | 1f.1 | Admin Activities in Preparation for Decommissioning - Unit 4 | 1,137 | 2 | - | - | 171 | 1,310 | 1,310 | - | - |
| | 1f.2 | Preparation of PSDAR and Licensing Documents - Unit 4 | 191 | 6 | - | - | 30 | 226 | 226 | - | - |
| | 1f.3 | Engineering Activities in Preparation for Decommissioning - Unit 4 | 455 | 42 | - | - | 75 | 571 | 571 | - | - |
| **1f Total** | | **Unit 4 Post Shutdown Planning & Engineering** | **1,783** | **50** | **-** | **-** | **275** | **2,108** | **2,108** | **-** | **-** |
| | 1g.1 | Defuel Reactor Unit 4 (by Plant Operations) | - | - | - | - | - | - | - | - | - |
| | 1g.2 | Fuel Sampling & Inspections (by Plant Operations) | - | - | - | - | - | - | - | - | - |
| | 1g.3 | Spent Fuel Pool System Modifications - Unit 4 | 7,143 | 1,212 | - | - | 1,253 | 9,608 | - | 9,608 | - |
| **1g Total** | | **Unit 4 Shutdown Preparations & Deactivation** | **7,143** | **1,212** | **-** | **-** | **1,253** | **9,608** | **-** | **9,608** | **-** |
| | 1h.1 | Provide Transfer Casks (supplied by DOE) | - | - | - | - | - | - | - | - | - |
| | 1h.2 | Procure Spent Fuel Loading & Transfer Equipment | - | 1,463 | - | - | 219 | 1,683 | - | 1,683 | - |
| | 1h.3 | Procedures & Dry Runs | 335 | - | - | 168 | 75 | 578 | - | 578 | - |
| | 1h.4 | Remove (352) Fuel Assemblies from Pool & Load DOE Casks | 1,760 | 440 | - | - | 440 | 2,640 | - | 2,640 | - |
| | 1h.5 | Dry, Close & Inspect (11) DOE supplied Casks | 880 | 220 | - | - | 220 | 1,320 | - | 1,320 | - |
| | 1h.6 | Load Out (11) Casks to DOE Transport | 880 | 220 | - | - | 220 | 1,320 | - | 1,320 | - |
| | 1h.7 | Spent Fuel Transportation & Disposal (by DOE) | - | - | - | - | - | - | - | - | - |
| **1h Total** | | **Unit 4 Wet Fuel Transfer to DOE prior to DECON** | **3,855** | **2,343** | **-** | **168** | **1,175** | **7,541** | **-** | **7,541** | **-** |
| | 1i.1 | Provide Transfer Casks (19) | - | 16,772 | - | - | 2,516 | 19,288 | - | 19,288 | - |
| | 1i.2 | Procure Spent Fuel Loading & Transfer Equipment | - | - | - | - | - | - | - | - | - |
| | 1i.3 | Procedures & Dry Runs | 335 | - | - | 168 | 75 | 578 | - | 578 | - |
| | 1i.4 | Remove (592) Fuel Assemblies from Pool & Load Casks | 3,040 | 760 | - | - | 760 | 4,560 | - | 4,560 | - |
| | 1i.5 | Dry, Close & Inspect (19) | 1,520 | 380 | - | - | 380 | 2,280 | - | 2,280 | - |
| | 1i.6 | Load Out (19) Casks to Transport | 1,520 | 380 | - | - | 380 | 2,280 | - | 2,280 | - |
| | 1i.7 | Spent Fuel Transportation & Disposal (by DOE) | - | - | - | - | - | - | - | - | - |
| **1i Total** | | **Unit 4 Wet Fuel Transfer to ISFSI prior to DECON** | **6,415** | **18,292** | **-** | **168** | **4,111** | **28,986** | **-** | **28,986** | **-** |
| | 1j.1 | Utility Staff | 31,915 | - | - | - | 4,787 | 36,703 | 29,362 | 7,341 | - |
| | 1j.2 | Security Guard Force | 20,871 | - | - | - | 3,131 | 24,002 | 7,201 | 16,801 | - |

Appendix C-1

## Florida Power and Light
## Turkey Point Unit 4
## Scenario 1 - Prompt DECON both following Unit 4 Shutdown

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1j.3 | General Contractor Staff | - | - | - | - | - | - | - | - | - |
| | 1j.4 | Property Taxes | - | - | - | 54 | 8 | 62 | 49 | 12 | - |
| | 1j.5 | Insurance | - | - | - | 8,201 | 1,230 | 9,431 | 7,545 | 1,886 | - |
| | 1j.6 | Corporate Support | 3,236 | - | - | - | 485 | 3,721 | 1,116 | 2,605 | - |
| | 1j.7 | Utility Staff HP Supplies | - | 948 | - | - | 142 | 1,090 | 327 | 763 | - |
| | 1j.8 | NRC Inspection Fee | - | - | - | 2,224 | 334 | 2,558 | 2,558 | - | - |
| | 1j.9 | Licensing Fees | - | - | - | 688 | 103 | 791 | 791 | - | - |
| | 1j.10 | Materials and Services | - | 1,770 | - | - | 265 | 2,035 | 610 | 1,424 | - |
| | 1j.11 | Energy | - | - | - | 1,650 | 248 | 1,898 | 1,518 | 380 | - |
| | 1j.12 | EPRI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 1j.13 | NEI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 1j.14 | County & FEMA Fees | - | - | - | 2,262 | 339 | 2,601 | 2,081 | 520 | - |
| | 1j.15 | Licenses & Permits | - | - | - | 68 | 10 | 78 | 62 | 16 | - |
| | 1j.16 | INPO Membership Fees | - | - | - | - | - | - | - | - | - |
| | 1j.17 | ISFSI Operating Costs | 22 | 66 | - | - | 13 | 102 | - | 102 | - |
| | 1j.18 | Spent Fuel Maintenance | 1,305 | 145 | - | - | 217 | 1,667 | - | 1,667 | - |
| **1j Total** | **Undistributed Costs for Shutdown & Transition** | | **57,349** | **2,929** | **-** | **15,147** | **11,314** | **86,738** | **53,221** | **33,517** | **-** |
| | | | | | | | | | | | |
| **Period 1 Total** | **SHUTDOWN & TRANSITION** | | **76,545** | **24,826** | **-** | **15,482** | **18,128** | **134,981** | **55,329** | **79,652** | **-** |
| | | | | | | | | | | | |
| **Period 2 Total** | **SAFSTOR** | | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| | | | | | | | | | | | |
| | 3a.1 | Decommissioning Planning and Design - Unit 4 | 1,523 | 46 | - | - | 235 | 1,804 | 1,804 | - | - |
| | 3a.2 | Site Characterization - Unit 4 | 1,953 | 53 | - | 105 | 317 | 2,429 | 2,429 | - | - |
| | 3a.3 | Prepare Integrated Work Sequence and Schedule - Unit 4 | 164 | 5 | - | - | 25 | 195 | 195 | - | - |
| | 3a.4 | Prepare Decommissioning Activity Specifications - Unit 4 | 2,181 | 67 | - | - | 337 | 2,586 | 2,586 | - | - |
| | 3a.5 | Prepare License Termination Plan - Unit 4 | 984 | - | - | 667 | 248 | 1,899 | 1,899 | - | - |
| | 3a.6 | Prepare Detailed Work Procedures for Decommissioning - Unit 4 | 1,917 | 59 | - | - | 296 | 2,273 | 2,273 | - | - |
| | 3a.7 | Design Containment and Misc System Modifications - Unit 4 | 83 | - | - | - | 12 | 96 | 96 | - | - |
| | 3a.8 | Purchase Dry Storage Modules for Unit 4 GTCC Waste | - | - | 4,708 | - | 706 | 5,414 | 5,414 | - | - |
| **3a Total** | **Decommissioning Planning** | | **8,807** | **231** | **4,708** | **772** | **2,178** | **16,695** | **16,695** | **-** | **-** |
| | | | | | | | | | | | |
| | 3b.1 | Mobilize Decommissioning General Contractor | - | - | - | 1,693 | 254 | 1,947 | 1,947 | - | - |
| | 3b.2 | Perform Asbestos Abatement of Pipe Insulation - Unit 4 | 3,465 | 182 | - | - | 912 | 4,559 | 4,559 | - | - |
| | 3b.3 | Implement Cold and Dark & Install Temporary Power - Unit 4 | 4,669 | 1,568 | - | - | 936 | 7,172 | 7,172 | - | - |
| | 3b.4 | Construct Misc Building Modifications, In-Plant Laydown Areas | 2,996 | 508 | - | - | 526 | 4,030 | 4,030 | - | - |
| | 3b.5 | Modify Containment Access - Unit 4 | 2,223 | 377 | - | - | 390 | 2,990 | 2,990 | - | - |
| | 3b.6 | Transportation Infrastructure Modifications | 62 | 298 | - | 1,393 | 263 | 2,015 | 2,015 | - | - |
| | 3b.7 | Procure Waste Handling & Processing Tents | - | - | - | 1,476 | 221 | 1,697 | 1,697 | - | - |
| **3b Total** | **Decommissioning Transition and Preparations** | | **13,414** | **2,933** | **-** | **4,562** | **3,501** | **24,411** | **24,411** | **-** | **-** |

Appendix C-1

## Florida Power and Light
## Turkey Point Unit 4
## Scenario 1 - Prompt DECON both following Unit 4 Shutdown

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3c.1 | Design and Procure Special Equipment | - | 27,050 | - | - | 5,410 | 32,460 | 32,460 | - | - |
| | 3c.2 | Test Special Cutting and Handling Equipment and Train Operators | 1,924 | - | - | 72 | 399 | 2,394 | 2,394 | - | - |
| | 3c.3 | Finalize Internals and Vessel Segmentation Details - Unit 4 | 458 | - | - | - | 92 | 549 | 549 | - | - |
| | 3c.4 | Segment, Package and Ship Reactor Internals - Unit 4 | 5,879 | 2,100 | - | - | 1,596 | 9,575 | 9,575 | - | - |
| | 3c.5 | Segment, Package and Ship RPV - Unit 4 | 1,394 | 1,030 | - | - | 485 | 2,909 | 2,909 | - | - |
| | 3c.6 | Package and Ship Reactor Pressure Vessel - Unit 4 | | | 16,724 | - | 3,345 | 20,069 | 20,069 | - | - |
| **3c Total** | **Reactor Vessel Removal** | | **9,654** | **30,180** | **16,724** | **72** | **11,326** | **67,956** | **67,956** | **-** | **-** |
| | 3d.1 | Heavy Lift / Transfer Equipment | | 3,245 | - | - | 649 | 3,893 | 3,893 | - | - |
| | 3d.2 | Remove and Dispose of Steam Generators - Unit 4 | 1,417 | 163 | - | - | 316 | 1,895 | 1,895 | - | - |
| | 3d.3 | Remove and Dispose of Pressurizer - Unit 4 | 195 | 22 | - | - | 43 | 259 | 259 | - | - |
| | 3d.4 | Remove and Dispose of Reactor Coolant Pipe - Unit 4 | 522 | 36 | - | - | 112 | 670 | 670 | - | - |
| | 3d.5 | Remove and Dispose of Reactor Coolant Pumps - Unit 4 | 537 | 59 | - | - | 119 | 716 | 716 | - | - |
| | 3d.6 | Package, Ship, & Dispose | - | - | 11,062 | - | 2,212 | 13,274 | 13,274 | - | - |
| **3d Total** | **Large Component Removal** | | **2,671** | **3,524** | **11,062** | **-** | **3,451** | **20,708** | **20,708** | **-** | **-** |
| | 3e.1 | Remove and Dispose of Spent Fuel Storage Racks | 68 | 20 | - | - | 18 | 106 | 106 | - | - |
| | 3e.2 | Segment, Package and Dispose of Spent Fuel Pool Island Equipment | 214 | 20 | - | - | 47 | 281 | 281 | - | - |
| | 3e.3 | Decon/Surgical Removal Containment Building - Unit 4 | 1,095 | 130 | - | - | 245 | 1,470 | 1,470 | - | - |
| | 3e.4 | Decon/Surgical Removal Fuel Building | 553 | 21 | - | - | 115 | 688 | 688 | - | - |
| | 3e.5 | Decon/Surgical Remvoal Auxiliary Building Unit 4 | 6,132 | 574 | - | - | 1,341 | 8,048 | 8,048 | - | - |
| | 3e.6 | Decon/Surgical Radwaste Building | 334 | 84 | - | - | 84 | 502 | 502 | - | - |
| | 3e.7 | Package, Dispose, & Ship | - | - | 3,880 | - | 776 | 4,656 | 4,656 | - | - |
| **3e Total** | **Plant Decontamination & Interior Rad Demolition** | | **8,396** | **850** | **3,880** | **-** | **2,625** | **15,751** | **15,751** | **-** | **-** |
| | 3f.1 | Demolish Fuel Building | 257 | 538 | - | - | 159 | 953 | 953 | - | - |
| | 3f.2 | Demolish Auxiliary Building | 2,019 | 5,508 | - | - | 1,505 | 9,033 | 9,033 | - | - |
| | 3f.4 | Demolish Radwaste Building Demolish | 531 | 1,476 | - | - | 401 | 2,409 | 2,409 | - | - |
| | 3f.5 | Unit 4 Containment Building Demolish | 2,019 | 6,120 | - | - | 1,628 | 9,767 | 9,767 | - | - |
| | 3f.6 | LLW Storage Building Contaminated | 655 | 1,550 | - | - | 441 | 2,647 | 2,647 | - | - |
| | 3f.7 | Soil | 397 | 596 | 17,930 | - | 3,785 | 22,709 | 22,709 | - | - |
| | 3f.8 | Debris Disposal | - | - | 91,357 | - | 18,271 | 109,628 | 109,628 | - | - |
| **3f Total** | **Rad Building Demolition** | | **5,878** | **15,789** | **109,287** | **-** | **26,191** | **157,145** | **157,145** | **-** | **-** |
| | 3g.1 | Final Status Survey for Structures | 5,897 | 67 | - | 227 | 1,238 | 7,428 | 7,428 | - | - |
| | 3g.2 | Final Status Survey for Land Areas (included with structures) | - | - | - | - | - | - | - | - | - |
| **3g Total** | **License Termination Activities** | | **5,897** | **67** | **-** | **227** | **1,238** | **7,428** | **7,428** | **-** | **-** |
| | 3h.1 | Utility Staff | 29,716 | - | - | - | 4,457 | 34,174 | 34,174 | - | - |

Appendix C-1

## Florida Power and Light
## Turkey Point Unit 4
## Scenario 1 - Prompt DECON both following Unit 4 Shutdown

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3h.2 | Security Guard Force | 1,951 | - | - | - | 293 | 2,244 | 2,244 | - | - |
| | 3h.3 | General Contractor Staff | 67,660 | - | - | - | 10,149 | 77,809 | 77,809 | - | - |
| | 3h.4 | Property Taxes | - | - | - | 75 | 11 | 86 | 86 | - | - |
| | 3h.5 | Insurance | - | - | - | 5,428 | 814 | 6,242 | 6,242 | - | - |
| | 3h.6 | Corporate Support | 9,436 | - | - | - | 1,415 | 10,851 | 10,851 | - | - |
| | 3h.7 | Utility Staff HP Supplies | - | 5,925 | - | - | 889 | 6,814 | 6,814 | - | - |
| | 3h.8 | NRC Inspection Fee | - | - | - | 667 | 100 | 767 | 767 | - | - |
| | 3h.9 | Licensing Fees | - | - | - | 1,032 | 155 | 1,187 | 1,187 | - | - |
| | 3h.10 | County & FEMA Fees | - | - | - | - | - | - | - | - | - |
| | 3h.11 | Licenses & Permits | - | - | - | 95 | 14 | 109 | 109 | - | - |
| | 3h.12 | Materials and Services | - | 2,082 | - | - | 312 | 2,394 | 2,394 | - | - |
| | 3h.13 | Energy | - | - | - | 2,500 | 375 | 2,875 | 2,875 | - | - |
| | 3h.14 | DGC HP Supplies | - | 5,132 | - | - | 770 | 5,902 | 5,902 | - | - |
| | 3h.15 | Florida LLRW Inspection Fee | - | - | - | 2,945 | 442 | 3,387 | 3,387 | | |
| | 3h.16 | EPRI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 3h.17 | NEI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 3h.18 | INPO Membership Fees | - | - | - | - | - | - | - | - | - |
| **3h Total** | **Undistributed Costs for Decommissioning & License Termination** | | **108,764** | **13,139** | **-** | **12,742** | **20,197** | **154,842** | **154,842** | **-** | **-** |
| | | | | | | | | | | | |
| **Period 3 Total** | **DECOMMISSIONING & LICENSE TERMINATION** | | **163,480** | **66,714** | **145,661** | **18,374** | **70,707** | **464,936** | **464,936** | **-** | **-** |
| | 4a.1 | Demo Turbine Pedastal and Turbine Deck | 3,647 | 1,506 | - | - | 773 | 5,927 | - | - | 5,927 |
| | 4a.2 | Demo Intake & CWS | 2,854 | 1,830 | - | - | 703 | 5,386 | - | - | 5,386 |
| | 4a.3 | Demo Primary Water Tank Foundation | 11 | 126 | - | - | 20 | 157 | - | - | 157 |
| | 4a.4 | Demo Misc Site Structures | 3,065 | 1,506 | - | - | 686 | 5,257 | - | - | 5,257 |
| | 4a.5 | Demo Security Improvements | 667 | 459 | - | - | 169 | 1,295 | - | - | 1,295 |
| | 4a.6 | Demo Maintenance Facility | 937 | 753 | - | - | 254 | 1,944 | - | - | 1,944 |
| | 4a.7 | Demo Control Building | 145 | 251 | - | - | 59 | 456 | - | - | 456 |
| | 4a.8 | Demo Sealwell | 113 | 251 | - | - | 55 | 418 | - | - | 418 |
| | 4a.9 | Clean Concrete Processing | - | - | - | 2,054 | 308 | 2,362 | - | - | 2,362 |
| | 4a.10 | Demo Site Paving | 447 | 670 | - | - | 168 | 1,285 | - | - | 1,285 |
| | 4a.11 | Clean Debris Disposal/Recycle | - | - | 114 | - | 17 | 131 | - | - | 131 |
| **4a Total** | **Clean Building & Site Demolition** | | **11,886** | **7,352** | **114** | **2,054** | **3,211** | **24,618** | **-** | **-** | **24,618** |
| | | | | | | | | | | | |
| | 4b.1 | Procure Site Restoration Equipment | - | 490 | - | - | 74 | 564 | - | - | 564 |
| | 4b.2 | Finish Grading and Re-Vegetate Site | 477 | 26 | - | - | 75 | 578 | - | - | 578 |
| **4b Total** | **Site Restoration** | | **477** | **516** | **-** | **-** | **149** | **1,142** | **-** | **-** | **1,142** |
| | | | | | | | | | | | |
| | 4c.1 | Utility Staff | 2,237 | - | - | - | 336 | 2,572 | - | - | 2,572 |
| | 4c.2 | Security Guard Force | 147 | - | - | - | 22 | 169 | - | - | 169 |

Appendix C-1

## Florida Power and Light
## Turkey Point Unit 4
## Scenario 1 - Prompt DECON both following Unit 4 Shutdown

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4c.3 | General Contractor Staff | 5,093 | - | - | - | 764 | 5,857 | - | - | 5,857 |
| | 4c.4 | Property Taxes | - | - | - | 6 | 1 | 6 | - | - | 6 |
| | 4c.5 | Insurance | - | - | - | 409 | 61 | 470 | - | - | 470 |
| | 4c.6 | Corporate Support | 710 | - | - | - | 107 | 817 | - | - | 817 |
| | 4c.7 | Energy | - | - | - | 188 | 28 | 216 | - | - | 216 |
| | 4c.8 | Materials and Services | - | 116 | - | - | 17 | 134 | - | - | 134 |
| | 4c.9 | County & FEMA Fees | - | - | - | - | - | - | - | - | - |
| | 4c.10 | Licenses & Permits | - | - | - | 7 | 1 | 8 | - | - | 8 |
| **4c Total** | **Undistributed Costs for Site Restoration** | | **8,187** | **116** | **-** | **609** | **1,337** | **10,249** | **-** | **-** | **10,249** |
| | | | | | | | | | | | |
| **Period 4 Total** | **SITE RESTORATION** | | **20,550** | **7,985** | **114** | **2,664** | **4,697** | **36,009** | **-** | **-** | **36,009** |
| | | | | | | | | | | | |
| | 5a.1 | Procure Loading & Transfer Equipment (included in Period 1) | - | - | - | - | - | - | - | - | - |
| | 5a.2 | Procedures & Dry Runs (included in Period 1) | - | - | - | - | - | - | - | - | - |
| | 5a.3 | Remove (47) Fuel Casks from ISFSI & Load DOE Transport | 3,760 | 940 | - | - | 705 | 5,405 | - | 5,405 | - |
| | 5a.4 | Spent Fuel Transportation & Disposal (by DOE) | - | - | - | - | - | - | - | - | - |
| **5a Total** | **Dry Fuel Transfer to DOE during and after DECON** | | **3,760** | **940** | **-** | **-** | **705** | **5,405** | **-** | **5,405** | **-** |
| | | | | | | | | | | | |
| | 5b.1 | Remove GTCC Casks from ISFSI & Loadout | 320 | - | - | 80 | 120 | 520 | 520 | - | - |
| | 5b.2 | GTCC Transportation & Disposal | - | - | 11,746 | - | 1,762 | 13,508 | 13,508 | - | - |
| **5b Total** | **GTCC Waste Disposition** | | **320** | **-** | **11,746** | **80** | **1,882** | **14,028** | **14,028** | **-** | **-** |
| | | | | | | | | | | | |
| | 5c.1 | Utility Staff | 5,897 | - | - | - | 885 | 6,781 | - | 6,781 | - |
| | 5c.2 | Security Guard Force | 22,749 | - | - | - | 3,412 | 26,162 | - | 26,162 | - |
| | 5c.3 | General Contractor Staff | - | - | - | - | - | - | - | - | - |
| | 5c.4 | Property Taxes | - | - | - | 148 | 22 | 170 | - | 170 | - |
| | 5c.5 | Insurance | - | - | - | 6,918 | 1,038 | 7,956 | - | 7,956 | - |
| | 5c.6 | Corporate Support | - | - | - | - | - | - | - | - | - |
| | 5c.7 | Utility Staff HP Supplies | - | - | - | - | - | - | - | - | - |
| | 5c.8 | NRC Inspection Fee | - | - | - | 1,112 | 167 | 1,279 | - | 1,279 | - |
| | 5c.9 | Licensing Fees | - | - | - | 1,720 | 258 | 1,978 | - | 1,978 | - |
| | 5c.10 | County & FEMA Fees | - | - | - | - | - | - | - | - | - |
| | 5c.11 | Licenses & Permits | - | - | - | 169 | 25 | 195 | - | 195 | - |
| | 5c.12 | Energy | - | - | - | - | - | - | - | - | - |
| | 5c.13 | Materials and Services | - | 490 | - | - | 74 | 564 | - | 564 | - |
| | 5c.14 | ISFSI Operating Costs | - | - | - | 1,915 | 287 | 2,203 | - | 2,203 | - |
| **5c Total** | **Undistributed Costs for Dry Fuel / GTCC Storage & Transfer** | | **28,646** | **490** | **-** | **11,983** | **6,168** | **47,287** | **-** | **47,287** | **-** |
| | | | | | | | | | | | |
| **Period 5 Total** | **DRY FUEL / GTCC STORAGE & TRANSFER** | | **32,726** | **1,430** | **11,746** | **12,063** | **8,755** | **66,720** | **14,028** | **52,692** | **-** |

**Appendix C-1**

## Florida Power and Light
## Turkey Point Unit 4
## Scenario 1 - Prompt DECON both following Unit 4 Shutdown

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 6a.1 | Preparation and NRC Review of License Termination Plan | 45 | - | - | 64 | 16 | 125 | - | 125 | - |
| **6a Total** | **ISFSI D&D Planning & Preparations** | | **45** | **-** | **-** | **64** | **16** | **125** | **-** | **125** | **-** |
| | 6b.1 | Clean Demolition of ISFSI | 1,316 | 638 | - | - | 293 | 2,248 | - | 2,248 | - |
| | 6b.2 | Demolition of ISFSI Support Structures | 240 | 94 | - | - | 50 | 384 | - | 384 | - |
| **6b Total** | **ISFSI and Support Structure Clean Demolition** | | **1,556** | **732** | **-** | **-** | **343** | **2,632** | **-** | **2,632** | **-** |
| | 6c.1 | Verification Surveys | 81 | 22 | - | - | 15 | 119 | - | 119 | - |
| | 6c.2 | Preparation of Final Report on Decommissioning and NRC Review | 45 | - | - | - | 7 | 52 | - | 52 | - |
| **6c Total** | **ISFSI Final Status Surveys** | | **126** | **22** | **-** | **-** | **22** | **170** | **-** | **170** | **-** |
| | 6d.1 | Utility Staff | 304 | - | - | - | 46 | 350 | - | 350 | - |
| | 6d.2 | Security Guard Force | 153 | - | - | - | 23 | 176 | - | 176 | - |
| | 6d.3 | General Contractor Staff | 1,999 | - | - | - | 300 | 2,299 | - | 2,299 | - |
| | 6d.4 | Property Taxes | - | - | - | 13 | 2 | 15 | - | 15 | - |
| | 6d.5 | Insurance | - | - | - | 25 | 4 | 29 | - | 29 | - |
| | 6d.6 | Corporate Support | - | - | - | - | - | - | - | - | - |
| | 6d.7 | Utility Staff HP Supplies | - | - | - | - | - | - | - | - | - |
| | 6d.8 | Materials and Services | - | 23 | - | - | 3 | 26 | - | 26 | - |
| | 6d.9 | Energy | - | - | - | 35 | 5 | 41 | - | 41 | - |
| | 6d.10 | NRC Inspection Fee | - | - | - | - | - | - | - | - | - |
| | 6d.11 | Licensing Fees | - | - | - | - | - | - | - | - | - |
| | 6d.12 | County & FEMA Fees | - | - | - | - | - | - | - | - | - |
| | 6d.13 | Licenses & Permits | - | - | - | 34 | 5 | 39 | - | 39 | - |
| **6d Total** | **Undistributed Costs for ISFSI Decommissioning** | | **2,456** | **23** | **-** | **108** | **388** | **2,974** | **-** | **2,974** | **-** |
| | | | | | | | | | | | |
| **Period 6 Total** | **ISFSI DECOMMISSIONING** | | **4,183** | **777** | **-** | **172** | **770** | **5,901** | **-** | **5,901** | **-** |
| | | | | | | | | | | | |
| **GRAND TOTAL** | | | **297,484** | **101,732** | **157,521** | **48,754** | **103,056** | **708,547** | **534,293** | **138,245** | **36,009** |

Appendix C-2

# Florida Power and Light
# Turkey Point Unit 3
# Scenario 2 - SAFSTOR

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **1a Total** | **Planning Prior to Shutdown (by Plant Operations)** | | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| | 1b.1 | Admin Activities in Preparation for Decommissioning - Unit 3 | 2,102 | 82 | - | - | 328 | 2,511 | 2,511 | - | - |
| | 1b.2 | Prepare PSDAR and License Documents - Unit 3 | 444 | 14 | - | - | 69 | 527 | 527 | - | - |
| | 1b.3 | Engineering Activities in Preparation for Decommissioning - Unit 3 | 1,064 | 52 | - | 26 | 171 | 1,314 | 1,314 | - | - |
| **1b Total** | **Unit 3 Post Shutdown Planning & Engineering** | | **3,610** | **148** | **-** | **26** | **568** | **4,352** | **4,352** | **-** | **-** |
| | 1c.1 | Defuel Reactor Unit 3 (by Plant Operations) | - | - | - | - | - | - | - | - | - |
| | 1c.2 | Fuel Sampling & Inspections (by Plant Operations) | - | - | - | - | - | - | - | - | - |
| | 1c.3 | Spent Fuel Pool System Modifications - Unit 3 | 11,345 | 1,212 | - | - | 1,884 | 14,441 | - | 14,441 | - |
| | 1c.4 | Implement Cold & Dark - Unit 3 | 3,508 | 630 | - | - | 621 | 4,759 | 4,759 | - | - |
| | 1c.5 | Perform Pre-SAFSTOR Baseline Radiation Survey - Unit 3 | 445 | - | - | - | 67 | 512 | 230 | 281 | - |
| **1c Total** | **Unit 3 Post Shutdown Deactivation & Modifications** | | **15,298** | **1,842** | **-** | **-** | **2,571** | **19,711** | **4,989** | **14,722** | **-** |
| | 1d.1 | Provide Transfer Casks (supplied by DOE) | - | - | - | - | - | - | - | - | - |
| | 1d.2 | Procure Spent Fuel Loading & Transfer Equipment | - | 2,184 | - | - | 328 | 2,512 | - | 2,512 | - |
| | 1d.3 | Procedures & Dry Runs | 500 | - | - | 250 | 113 | 863 | - | 863 | - |
| | 1d.4 | Remove (448) Fuel Assemblies from Pool & Load DOE Casks | 2,240 | 560 | - | - | 560 | 3,360 | - | 3,360 | - |
| | 1d.5 | Dry, Close & Inspect (14) DOE supplied Casks | 1,120 | 280 | - | - | 280 | 1,680 | - | 1,680 | - |
| | 1d.6 | Load Out (14) Casks to DOE Transport | 1,120 | 280 | - | - | 280 | 1,680 | - | 1,680 | - |
| | 1d.7 | Spent Fuel Transportation & Disposal (by DOE) | - | - | - | - | - | - | - | - | - |
| **1d Total** | **Unit 3 Wet Fuel Transfer to DOE prior to SAFSTOR** | | **4,980** | **3,304** | **-** | **250** | **1,560** | **10,094** | **-** | **10,094** | **-** |
| | 1e.1 | Purchase Transfer Casks | - | 13,241 | - | - | 1,986 | 15,227 | - | 15,227 | - |
| | 1e.2 | Procure Spent Fuel Loading & Transfer Equipment | - | - | - | - | - | - | - | - | - |
| | 1e.3 | Procedures & Dry Runs | 500 | - | - | 250 | 113 | 863 | - | 863 | - |
| | 1e.4 | Remove (464) Fuel Assemblies from Pool & Load DOE Casks | 2,400 | 600 | - | - | 600 | 3,600 | - | 3,600 | - |
| | 1e.5 | Dry, Close & Inspect (15) DOE supplied Casks | 1,200 | 300 | - | - | 300 | 1,800 | - | 1,800 | - |
| | 1e.6 | Load Out (15) Casks to DOE Transport | 1,200 | 300 | - | - | 300 | 1,800 | - | 1,800 | - |
| **1e Total** | **Unit 3 Wet Fuel Transfer to ISFSI prior to Shutdown** | | **5,300** | **14,441** | **-** | **250** | **3,299** | **23,290** | **-** | **23,290** | **-** |
| **1f Total** | **Unit 4 Post Shutdown Planning & Engineering** | | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| **1g Total** | **Unit 4 Shutdown Preparations & Deactivation** | | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| **1h Total** | **Unit 4 Wet Fuel Transfer to DOE prior to DECON** | | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |

Appendix C-2

# Florida Power and Light
# Turkey Point Unit 3
# Scenario 2 - SAFSTOR

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **1i Total** | **Unit 4 Wet Fuel Transfer to ISFSI prior to SAFSTOR** | | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| | 1j.1 | Utility Staff | 44,454 | - | - | - | 6,668 | 51,122 | 40,897 | 10,224 | - |
| | 1j.2 | Security Guard Force | 21,113 | - | - | - | 3,167 | 24,280 | 7,284 | 16,996 | - |
| | 1j.3 | General Contractor Staff | - | - | - | - | - | - | - | - | - |
| | 1j.4 | Property Taxes | - | - | - | 67 | 10 | 77 | 62 | 15 | - |
| | 1j.5 | Insurance | - | - | - | 10,251 | 1,538 | 11,788 | 9,431 | 2,358 | - |
| | 1j.6 | Corporate Support | 2,933 | - | - | - | 440 | 3,373 | 1,012 | 2,361 | - |
| | 1j.7 | Utility Staff HP Supplies | - | 1,077 | - | - | 162 | 1,238 | 372 | 867 | - |
| | 1j.8 | NRC Inspection Fee | - | - | - | 2,780 | 417 | 3,197 | 3,197 | - | - |
| | 1j.9 | Licensing Fees | - | - | - | 860 | 129 | 989 | 989 | - | - |
| | 1j.10 | Materials and Services | - | 2,020 | - | - | 303 | 2,323 | 697 | 1,626 | - |
| | 1j.11 | Energy | - | - | - | 1,069 | 160 | 1,229 | 983 | 246 | - |
| | 1j.12 | EPRI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 1j.13 | NEI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 1j.14 | County Fees & FEMA Fees | - | - | - | 2,828 | 424 | 3,252 | 2,601 | 650 | - |
| | 1j.15 | Licenses & Permits | - | - | - | 85 | 13 | 97 | 78 | 19 | - |
| | 1j.16 | INPO Membership Fees | - | - | - | - | - | - | - | - | - |
| | 1j.17 | ISFSI Operating Costs | 20 | 60 | - | - | 12 | 92 | - | 92 | - |
| | 1j.18 | Spent Fuel Maintenance | 985 | 328 | - | - | 197 | 1,510 | - | 1,510 | - |
| **1j Total** | **Undistributed Costs for Shutdown & Transition** | | **69,504** | **3,485** | **-** | **17,939** | **13,639** | **104,568** | **67,603** | **36,965** | **-** |
| | | | | | | | | | | | |
| **Period 1 Total** | **SHUTDOWN & TRANSITION** | | **98,692** | **23,221** | **-** | **18,465** | **21,637** | **162,015** | **76,944** | **85,071** | **-** |
| | 2a.1 | Utility Staff | 7,323 | - | - | - | 732 | 8,055 | 3,625 | 4,430 | - |
| | 2a.2 | Security Guard Force | 3,441 | - | - | - | 344 | 3,785 | - | 3,785 | - |
| | 2a.3 | General Contractor Staff | - | - | - | - | - | - | - | - | - |
| | 2a.4 | Property Taxes | - | - | - | 228 | 23 | 251 | 113 | 138 | - |
| | 2a.5 | Insurance | - | - | - | 16,537 | 1,654 | 18,190 | 8,186 | 10,005 | - |
| | 2a.6 | Corporate Support | 17,506 | - | - | - | 1,751 | 19,257 | 8,666 | 10,591 | - |
| | 2a.7 | Utility Staff HP Supplies | - | 2,805 | - | - | 281 | 3,086 | 1,389 | 1,697 | - |
| | 2a.8 | NRC Inspection Fee | - | - | - | 1,890 | 189 | 2,079 | 936 | 1,144 | - |
| | 2a.9 | Licensing Fees | - | - | - | 2,924 | 439 | 3,363 | 1,513 | 1,849 | - |
| | 2a.10 | County Fees & FEMA Fees | - | - | - | - | - | - | - | - | - |
| | 2a.11 | Licenses & Permits | - | - | - | 288 | 29 | 317 | 143 | 174 | - |
| | 2a.12 | EPRI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 2a.13 | NEI Fees | - | - | - | - | - | - | - | - | - |
| | 2a.14 | INPO Membership Fees | - | - | - | - | - | - | - | - | - |

Appendix C-2

## Florida Power and Light
## Turkey Point Unit 3
## Scenario 2 - SAFSTOR

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2a.15 | Materials and Services | - | 6,413 | - | - | 641 | 7,054 | 3,174 | 3,880 | - |
| | 2a.16 | Energy | - | - | - | 2,765 | 277 | 3,042 | 1,369 | 1,673 | - |
| | 2a.17 | Roof Replacement | - | - | - | - | - | - | - | - | - |
| **2a Total** | **Dormancy during Dry Fuel Storage** | | **28,270** | **9,218** | **-** | **24,632** | **6,358** | **68,479** | **29,112** | **39,366** | **-** |
| | 2b.1 | Utility Staff | 13,019 | - | - | - | 1,302 | 14,320 | 14,320 | - | - |
| | 2b.2 | Security Guard Force | 6,363 | - | - | - | 636 | 6,999 | 6,999 | - | - |
| | 2b.3 | General Contractor Staff | - | - | - | - | - | - | - | - | - |
| | 2b.4 | Property Taxes | - | - | - | 429 | 43 | 472 | 472 | - | - |
| | 2b.5 | Insurance | - | - | - | 18,526 | 1,853 | 20,378 | 20,378 | - | - |
| | 2b.6 | Corporate Support | 8,728 | - | - | - | 873 | 9,601 | 9,601 | - | - |
| | 2b.7 | Utility Staff HP Supplies | - | 1,141 | - | - | 114 | 1,255 | 1,255 | - | - |
| | 2b.8 | NRC Inspection Fee | - | - | - | 3,558 | 356 | 3,914 | 3,914 | - | - |
| | 2b.9 | Licensing Fees | - | - | - | 5,504 | 550 | 6,054 | 6,054 | - | - |
| | 2b.10 | County Fees & FEMA Fees | - | - | - | - | - | - | - | - | - |
| | 2b.11 | Licenses & Permits | - | - | - | 543 | 54 | 597 | 597 | - | - |
| | 2b.12 | EPRI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 2b.13 | NEI Fees | - | - | - | - | - | - | - | - | - |
| | 2b.14 | INPO Membership Fees | - | - | - | - | - | - | - | - | - |
| | 2b.15 | Materials and Services | - | 3,632 | - | - | 363 | 3,995 | 3,995 | - | - |
| | 2b.16 | Energy | - | - | - | 1,165 | 117 | 1,282 | 1,282 | - | - |
| | 2b.17 | Roof Replacement | - | - | - | - | - | - | - | - | - |
| **2b Total** | **Dormancy Only** | | **28,109** | **4,773** | **-** | **29,725** | **6,261** | **68,869** | **68,869** | **-** | **-** |
| **Period 2 Total** | **SAFSTOR** | | **56,379** | **13,991** | **-** | **54,358** | **12,619** | **137,347** | **97,981** | **39,366** | **-** |
| | 3a.1 | Decommissioning Planning and Design - Unit 3 | 1,523 | 46 | - | - | 235 | 1,804 | 1,804 | - | - |
| | 3a.2 | Prepare Integrated Work Sequence and Schedule - Unit 3 | 164 | 5 | - | - | 25 | 195 | 195 | - | - |
| | 3a.3 | Site Characterization - Unit 3 | 1,953 | 53 | - | 105 | 317 | 2,429 | 2,429 | - | - |
| | 3a.4 | Prepare Decommissioning Activity Specifications - Unit 3 | 5,359 | 166 | - | - | 829 | 6,354 | 6,354 | - | - |
| | 3a.5 | Prepare Detailed Work Procedures - Unit 3 | 4,344 | 134 | - | - | 672 | 5,150 | 5,150 | - | - |
| | 3a.6 | Prepare License Termination Plan - Unit 3 | 1,004 | - | - | 667 | 251 | 1,921 | 1,921 | - | - |
| | 3a.7 | Design Containment and Misc System Modifications - Unit 3 | 195 | - | - | - | 29 | 224 | 224 | - | - |
| | 3a.8 | Purchase Dry Storage Modules for Unit 3 GTCC Waste | - | - | 4,708 | - | 706 | 5,414 | 5,414 | - | - |
| **3a Total** | **Decommissioning Planning** | | **14,542** | **404** | **4,708** | **772** | **3,064** | **23,490** | **23,490** | **-** | **-** |
| | 3b.1 | Mobilize Decommissioning General Contractor | - | - | - | 1,693 | 254 | 1,947 | 1,947 | - | - |
| | 3b.2 | Perform Asbestos Abatement of Pipe Insulation - Unit 3 | 3,465 | 182 | - | - | 912 | 4,559 | 4,559 | - | - |

Appendix C-2

## Florida Power and Light
## Turkey Point Unit 3
## Scenario 2 - SAFSTOR

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3b.3 | Implement Temporary Power Upgrades - Unit 3 | 1,033 | 937 | - | - | 296 | 2,266 | 2,266 | - | - |
| | 3b.4 | Construct Misc Building Modifications, In-Plant Laydown Areas | 2,996 | 508 | - | - | 526 | 4,030 | 4,030 | - | - |
| | 3b.5 | Modify Containment Access - Unit 3 | 2,223 | 377 | - | - | 390 | 2,990 | 2,990 | - | - |
| | 3b.6 | Transportation Infrastructure Modifications | 93 | 447 | - | 2,089 | 394 | 3,023 | 3,023 | - | - |
| | 3b.7 | Procure Waste Handling & Processing Tents | - | - | - | 1,739 | 261 | 2,000 | 2,000 | - | - |
| **3b Total** | **Decommissioning Transition and Preparations** | | **9,809** | **2,452** | **-** | **5,521** | **3,032** | **20,814** | **20,814** | **-** | **-** |
| | 3c.1 | Design and Procure Special Equipment | - | 29,000 | - | - | 5,800 | 34,800 | 34,800 | - | - |
| | 3c.2 | Test Special Cutting and Handling Equipment and Train Operators | 2,263 | - | - | 72 | 467 | 2,802 | 2,802 | - | - |
| | 3c.3 | Finalize Internals and Vessel Segmentation Details - Unit 3 | 538 | - | - | - | 108 | 646 | 646 | - | - |
| | 3c.4 | Segment, Package and Ship Reactor Internals - Unit 3 | 5,879 | 2,100 | - | - | 1,596 | 9,575 | 9,575 | - | - |
| | 3c.5 | Segment, Package and Ship RPV - Unit 3 | 1,394 | 1,030 | - | - | 485 | 2,909 | 2,909 | - | - |
| | 3c.6 | Package, Ship & Dispose | - | - | 10,753 | - | 2,151 | 12,904 | 12,904 | - | - |
| **3c Total** | **Reactor Vessel Removal** | | **10,074** | **32,130** | **10,753** | **72** | **10,606** | **63,635** | **63,635** | **-** | **-** |
| | 3d.1 | Heavy Lift / Transfer Equipment | | 3,245 | - | - | 649 | 3,893 | 3,893 | - | - |
| | 3d.2 | Remove and Dispose of Steam Generators - Unit 3 | 1,417 | 163 | - | - | 316 | 1,895 | 1,895 | - | - |
| | 3d.3 | Remove and Dispose of Pressurizer - Unit 3 | 195 | 22 | - | - | 43 | 259 | 259 | - | - |
| | 3d.4 | Remove and Dispose of Reactor Coolant Pipe - Unit 3 | 522 | 36 | - | - | 112 | 670 | 670 | - | - |
| | 3d.5 | Remove and Dispose of Reactor Coolant Pumps - Unit 3 | 537 | 59 | - | - | 119 | 716 | 716 | - | - |
| | 3d.6 | Package, Ship, & Dispose | - | - | 10,447 | - | 2,089 | 12,536 | 12,536 | - | - |
| **3d Total** | **Large Component Removal** | | **2,671** | **3,524** | **10,447** | **-** | **3,328** | **19,970** | **19,970** | **-** | **-** |
| | 3e.1 | Remove and Dispose of Spent Fuel Storage Racks | 68 | 20 | - | - | 18 | 106 | 106 | - | - |
| | 3e.2 | Segment, Package and Dispose of Spent Fuel Pool Island Equipment | 214 | 20 | - | - | 47 | 281 | 281 | - | - |
| | 3e.3 | Decon/Surgical Removal Containment Building - Unit 3 | 1,095 | 130 | - | - | 245 | 1,470 | 1,470 | - | - |
| | 3e.4 | Decon/Surgical Removal Fuel Building | 553 | 21 | - | - | 115 | 688 | 688 | - | - |
| | 3e.5 | Decon/Surgical Remvoal Auxiliary Building (with Unit 4) | - | - | - | - | - | - | - | - | - |
| | 3e.6 | Package, Ship, and Dispose | - | - | 4,770 | - | 954 | 5,724 | 5,724 | - | - |
| **3e Total** | **Plant Decontamination & Interior Rad Demolition** | | **1,930** | **191** | **4,770** | **-** | **1,378** | **8,270** | **8,270** | **-** | **-** |
| | 3f.1 | Demolish Fuel Building | 257 | 538 | - | - | 159 | 953 | 953 | - | - |
| | 3f.2 | Demolish Auxiliary Building (with Unit 4) | - | - | - | - | - | - | - | - | - |
| | 3f.3 | Demolish Unit 3 Containment Building | 2,019 | 6,120 | - | - | 1,628 | 9,767 | 9,767 | - | - |
| | 3f.4 | Contaminated Soil | 397 | 596 | 16,223 | - | 3,443 | 20,660 | 20,660 | - | - |
| | 3f.5 | Debris Disposal | - | - | 45,615 | - | 9,123 | 54,738 | 54,738 | - | - |
| **3f Total** | **Rad Building Demolition** | | **2,673** | **7,254** | **61,837** | **-** | **14,353** | **86,117** | **86,117** | **-** | **-** |

Appendix C-2

## Florida Power and Light
## Turkey Point Unit 3
## Scenario 2 - SAFSTOR

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3g.1 | Final Status Survey for Structures | 5,868 | 55 | - | 227 | 1,230 | 7,379 | 7,379 | - | - |
| | 3g.2 | Final Status Survey for Land Areas (included with structures) | - | - | - | - | - | - | - | - | - |
| **3g Total** | **License Termination Activities** | | **5,868** | **55** | **-** | **227** | **1,230** | **7,379** | **7,379** | **-** | **-** |
| | 3h.1 | Utility Staff | 29,716 | - | - | - | 4,457 | 34,174 | 34,174 | - | - |
| | 3h.2 | Security Guard Force | 1,951 | - | - | - | 293 | 2,244 | 2,244 | - | - |
| | 3h.3 | General Contractor Staff | 67,660 | - | - | - | 10,149 | 77,809 | 77,809 | - | - |
| | 3h.4 | Property Taxes | - | - | - | 87 | 13 | 100 | 100 | - | - |
| | 3h.5 | Insurance | - | - | - | 3,769 | 565 | 4,334 | 4,334 | - | - |
| | 3h.6 | Corporate Support | 12,917 | - | - | - | 1,938 | 14,855 | 14,855 | - | - |
| | 3h.7 | Utility Staff HP Supplies | - | 4,616 | - | - | 692 | 5,308 | 5,308 | - | - |
| | 3h.8 | NRC Inspection Fee | - | - | - | 778 | 117 | 895 | 895 | - | - |
| | 3h.9 | Licensing Fees | - | - | - | 1,204 | 181 | 1,385 | 1,385 | - | - |
| | 3h.10 | County Fees & FEMA Fees | - | - | - | - | - | - | - | - | - |
| | 3h.11 | Licenses & Permits | - | - | - | 110 | 17 | 127 | 127 | - | - |
| | 3h.12 | Florida LLRW Inspection Fee | - | - | - | 1,742 | 261 | 2,003 | 2,003 | - | - |
| | 3h.13 | Materials and Services | - | 1,385 | - | - | 208 | 1,592 | 1,592 | - | - |
| | 3h.14 | Energy | - | - | - | 3,287 | 493 | 3,780 | 3,780 | - | - |
| | 3h.15 | DGC HP Supplies | - | 5,132 | - | - | 770 | 5,902 | 5,902 | - | - |
| | 3h.16 | EPRI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 3h.17 | NEI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 3h.18 | INPO Membership Fees | - | - | - | - | - | - | - | - | - |
| **3h Total** | **Undistributed Costs for Decommissioning & License Termination** | | **112,245** | **11,132** | **-** | **10,978** | **20,153** | **154,509** | **154,509** | **-** | **-** |
| **Period 3 Total** | **DECOMMISSIONING & LICENSE TERMINATION** | | **159,812** | **57,143** | **92,515** | **17,570** | **57,144** | **384,184** | **384,184** | **-** | **-** |
| | 4a.1 | Demo Turbine Pedastal and Turbine Deck | 3,647 | 1,506 | - | - | 773 | 5,927 | - | - | 5,927 |
| | 4a.2 | Demo Sealwell | 113 | 251 | - | - | 55 | 418 | - | - | 418 |
| | 4a.3 | Demo Tank Foundations | 11 | 251 | - | - | 39 | 302 | - | - | 302 |
| | 4a.4 | Demo Misc Site Structures | 206 | 1,255 | - | - | 219 | 1,680 | - | - | 1,680 |
| | 4a.5 | Security Improvements | 667 | 502 | - | - | 175 | 1,344 | - | - | 1,344 |
| | 4a.6 | Clean Concrete Processing | - | - | - | 1,306 | 196 | 1,502 | - | - | 1,502 |
| | 4a.7 | Demo Site Paving | 220 | 330 | - | - | 83 | 633 | - | - | 633 |
| | 4a.8 | Clean Debris Disposal/Recycle | - | - | 100 | - | 15 | 115 | - | - | 115 |
| **4a Total** | **Clean Building & Site Demolition** | | **4,864** | **4,096** | **100** | **1,306** | **1,555** | **11,920** | **-** | **-** | **11,920** |
| | 4b.1 | Procure Site Restoration Equipment | - | 735 | - | - | 110 | 846 | - | - | 846 |
| | 4b.2 | Finish Grading and Re-Vegetate Site | 715 | | - | - | 107 | 822 | - | - | 822 |

Appendix C-2

# Florida Power and Light
# Turkey Point Unit 3
# Scenario 2 - SAFSTOR

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **4b Total** | **Site Restoration** | | **715** | **735** | **-** | **-** | **218** | **1,668** | **-** | **-** | **1,668** |
| | 4c.1 | Utility Staff | 2,237 | - | - | - | 336 | 2,572 | - | - | 2,572 |
| | 4c.2 | Security Guard Force | 147 | - | - | - | 22 | 169 | - | - | 169 |
| | 4c.3 | General Contractor Staff | 5,093 | - | - | - | 764 | 5,857 | - | - | 5,857 |
| | 4c.4 | Property Taxes | - | - | - | 7 | 1 | 8 | - | - | 8 |
| | 4c.5 | Insurance | - | - | - | 284 | 43 | 326 | - | - | 326 |
| | 4c.6 | Corporate Support | 972 | - | - | - | 146 | 1,118 | - | - | 1,118 |
| | 4c.7 | Energy | - | - | - | 247 | 37 | 285 | - | - | 285 |
| | 4c.8 | Materials and Services | - | 84 | - | - | 13 | 97 | - | - | 97 |
| | 4c.9 | County Fees & FEMA Fees | - | - | - | - | - | - | - | - | - |
| | 4c.10 | Licenses & Permits | - | - | - | 8 | 1 | 10 | - | - | 10 |
| **4c Total** | **Undistributed Costs for Site Restoration** | | **8,449** | **84** | **-** | **546** | **1,362** | **10,440** | **-** | **-** | **10,440** |
| **Period 4 Total** | **SITE RESTORATION** | | **14,027** | **4,915** | **100** | **1,852** | **3,134** | **24,029** | **-** | **-** | **24,029** |
| | 5a.1 | Procure Loading & Transfer Equipment (included in Period 1) | - | - | - | - | - | - | - | - | - |
| | 5a.2 | Procedures & Dry Runs (included in Period 1) | - | - | - | - | - | - | - | - | - |
| | 5a.3 | Remove (43) Fuel Casks from ISFSI & Load DOE Transport | 3,440 | 860 | - | - | 645 | 4,945 | - | 4,945 | - |
| | 5a.4 | Spent Fuel Transportation & Disposal (by DOE) | - | - | - | - | - | - | - | - | - |
| **5a Total** | **Dry Fuel Transfer to DOE during and after DECON** | | **3,440** | **860** | **-** | **-** | **645** | **4,945** | **-** | **4,945** | **-** |
| | 5b.1 | Remove GTCC Casks from ISFSI & Loadout | 320 | - | - | 80 | 120 | 520 | 520 | - | - |
| | 5b.2 | GTCC Transportation & Disposal | - | - | 11,746 | - | 1,762 | 13,508 | 13,508 | - | - |
| **5b Total** | **GTCC Waste Disposition** | | **320** | **-** | **11,746** | **80** | **1,882** | **14,028** | **14,028** | **-** | **-** |
| | 5c.1 | Utility Staff | 5,897 | - | - | - | 885 | 6,781 | - | 6,781 | - |
| | 5c.2 | Security Guard Force | 22,749 | - | - | - | 3,412 | 26,162 | - | 26,162 | - |
| | 5c.3 | General Contractor Staff | - | - | - | - | - | - | - | - | - |
| | 5c.4 | Property Taxes | - | - | - | - | - | - | - | - | - |
| | 5c.5 | Insurance | - | - | - | - | - | - | - | - | - |
| | 5c.6 | Corporate Support | - | - | - | - | - | - | - | - | - |
| | 5c.7 | Utility Staff HP Supplies | - | - | - | - | - | - | - | - | - |
| | 5c.8 | NRC Inspection Fee | - | - | - | - | - | - | - | - | - |
| | 5c.9 | Licensing Fees | - | - | - | - | - | - | - | - | - |
| | 5c.10 | County Fees & FEMA Fees | - | - | - | - | - | - | - | - | - |
| | 5c.11 | Licenses & Permits | - | - | - | - | - | - | - | - | - |
| | 5c.12 | Energy | - | - | - | - | - | - | - | - | - |

Appendix C-2

## Florida Power and Light
## Turkey Point Unit 3
## Scenario 2 - SAFSTOR

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5c.13 | Materials and Services | - | - | - | - | - | - | - | - | - |
| | 5c.14 | ISFSI Operating Costs | - | - | - | 2,086 | 313 | 2,399 | - | 2,399 | - |
| **5c Total** | **Undistributed Costs for Dry Fuel / GTCC Storage & Transfer** | | **28,646** | **-** | **-** | **2,086** | **4,610** | **35,342** | **-** | **35,342** | **-** |
| | | | | | | | | | | | |
| **Period 5 Total** | **DRY FUEL / GTCC STORAGE & TRANSFER** | | **32,406** | **860** | **11,746** | **2,166** | **7,137** | **54,315** | **14,028** | **40,287** | **-** |
| | | | | | | | | | | | |
| | 6a.1 | Preparation and NRC Review of License Termination Plan | 71 | - | - | 96 | 25 | 192 | - | 192 | - |
| **6a Total** | **ISFSI D&D Planning & Preparations** | | **71** | **-** | **-** | **96** | **25** | **192** | **-** | **192** | **-** |
| | | | | | | | | | | | |
| | 6b.1 | Clean Demolition of ISFSI | 2,073 | 958 | - | - | 455 | 3,486 | - | 3,486 | - |
| | 6b.2 | Demolition of ISFSI Support Structures | 377 | 141 | - | - | 78 | 596 | - | 596 | - |
| **6b Total** | **ISFSI and Support Structure Clean Demolition** | | **2,451** | **1,099** | **-** | **-** | **532** | **4,082** | **-** | **4,082** | **-** |
| | | | | | | | | | | | |
| | 6c.1 | Verification Surveys | 128 | 33 | - | - | 24 | 185 | - | 185 | - |
| | 6c.2 | Preparation of Final Report on Decommissioning and NRC Review | 71 | - | - | - | 11 | 81 | - | 81 | - |
| **6c Total** | **ISFSI Final Status Surveys** | | **199** | **33** | **-** | **-** | **35** | **266** | **-** | **266** | **-** |
| | | | | | | | | | | | |
| | 6d.1 | Utility Staff | 304 | - | - | - | 46 | 350 | - | 350 | - |
| | 6d.2 | Security Guard Force | 153 | - | - | - | 23 | 176 | - | 176 | - |
| | 6d.3 | General Contractor Staff | 1,999 | - | - | - | 300 | 2,299 | - | 2,299 | - |
| | 6d.4 | Property Taxes | - | - | - | 13 | 2 | 15 | - | 15 | - |
| | 6d.5 | Insurance | - | - | - | 25 | 4 | 29 | - | 29 | - |
| | 6d.6 | Corporate Support | - | - | - | - | - | - | - | - | - |
| | 6d.7 | Utility Staff HP Supplies | - | - | - | - | - | - | - | - | - |
| | 6d.8 | Materials and Services | - | 23 | - | - | 3 | 26 | - | 26 | - |
| | 6d.9 | Energy | - | - | - | 160 | 24 | 184 | - | 184 | - |
| | 6d.10 | NRC Inspection Fee | - | - | - | 56 | 8 | 64 | - | 64 | - |
| | 6d.11 | Licensing Fees | - | - | - | 86 | 13 | 99 | - | 99 | - |
| | 6d.12 | County Fees & FEMA Fees | - | - | - | - | - | - | - | - | - |
| | 6d.13 | Licenses & Permits | - | - | - | 17 | 3 | 20 | - | 20 | - |
| **6d Total** | **Undistributed Costs for ISFSI Decommissioning** | | **2,456** | **23** | **-** | **357** | **425** | **3,260** | **-** | **3,260** | **-** |
| | | | | | | | | | | | |
| **Period 6 Total** | **ISFSI DECOMMISSIONING** | | **5,176** | **1,154** | **-** | **453** | **1,017** | **7,800** | **-** | **7,800** | **-** |
| | | | | | | | | | | | |
| **GRAND TOTAL** | | | **366,492** | **101,285** | **104,362** | **94,863** | **102,689** | **769,690** | **573,137** | **172,524** | **24,029** |

Appendix C-2

# Florida Power and Light
# Turkey Point Unit 4
# Scenario 2 - SAFSTOR

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **1a Total** | **Planning Prior to Shutdown (by Plant Operations)** | | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| **1b Total** | **Unit 3 Post Shutdown Planning & Engineering** | | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| **1c Total** | **Unit 3 Post Shutdown Deactivation & Modifications** | | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| **1d Total** | **Unit 3 Wet Fuel Transfer to ISFSI prior to SAFSTOR** | | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| **1e Total** | **Unit 4 Wet Fuel Transfer to DOE prior to Shutdown (by Plant Operations)** | | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| | 1f.1 | Admin Activities in Preparation for Decommissioning - Unit 4 | 900 | 2 | - | - | 135 | 1,038 | 1,038 | - | - |
| | 1f.2 | Preparation of PSDAR and Licensing Documents - Unit 4 | 191 | 4 | - | - | 29 | 224 | 224 | - | - |
| | 1f.3 | Engineering Activities in Preparation for Decommissioning - Unit 4 | 455 | 42 | - | - | 75 | 571 | 571 | - | - |
| **1f Total** | **Unit 4 Post Shutdown Planning & Engineering** | | **1,546** | **48** | **-** | **-** | **239** | **1,833** | **1,833** | **-** | **-** |
| | 1g.1 | Defuel Reactor Unit 4 (by Plant Operations) | - | - | - | - | - | - | - | - | - |
| | 1g.2 | Fuel Sampling & Inspections (by Plant Operations) | - | - | - | - | - | - | - | - | - |
| | 1g.3 | Spent Fuel Pool System Modifications - Unit 4 | 7,211 | 1,212 | - | - | 1,264 | 9,687 | - | 9,687 | - |
| | 1g.4 | Implement Cold & Dark - Unit 4 | 3,508 | 630 | - | - | 621 | 4,759 | 4,759 | - | - |
| | 1g.6 | Perform Pre-SAFSTOR Baseline Radiation Survey - Unit 4 | 445 | - | - | - | 67 | 512 | 512 | - | - |
| **1g Total** | **Unit 4 Shutdown Preparations & Deactivation** | | **11,164** | **1,842** | **-** | **-** | **1,951** | **14,958** | **5,271** | **9,687** | **-** |
| | 1h.1 | Provide Transfer Casks (supplied by DOE) | - | - | - | - | - | - | - | - | - |
| | 1h.2 | Procure Spent Fuel Loading & Transfer Equipment | - | 1,463 | - | - | 219 | 1,683 | - | 1,683 | - |
| | 1h.3 | Procedures & Dry Runs | 335 | - | - | 168 | 75 | 578 | - | 578 | - |
| | 1h.4 | Remove (352) Fuel Assemblies from Pool & Load DOE Casks | 1,760 | 440 | - | - | 440 | 2,640 | - | 2,640 | - |
| | 1h.5 | Dry, Close & Inspect (11) DOE supplied Casks | 880 | 220 | - | - | 220 | 1,320 | - | 1,320 | - |
| | 1h.6 | Load Out (11) Casks to DOE Transport | 880 | 220 | - | - | 220 | 1,320 | - | 1,320 | - |
| | 1h.7 | Spent Fuel Transportation & Disposal (by DOE) | - | - | - | - | - | - | - | - | - |
| **1h Total** | **Unit 4 Wet Fuel Transfer to DOE prior to DECON** | | **3,855** | **2,343** | **-** | **168** | **1,175** | **7,541** | **-** | **7,541** | **-** |
| | 1i.1 | Provide Transfer Casks (19) | - | 16,772 | - | - | 2,516 | 19,288 | - | 19,288 | - |
| | 1i.2 | Procure Spent Fuel Loading & Transfer Equipment | - | - | - | - | - | - | - | - | - |
| | 1i.3 | Procedures & Dry Runs | 335 | - | - | 168 | 75 | 578 | - | 578 | - |
| | 1i.4 | Remove (592) Fuel Assemblies from Pool & Load Casks | 3,040 | 760 | - | - | 760 | 4,560 | - | 4,560 | - |
| | 1i.5 | Dry, Close & Inspect (19) | 1,520 | 380 | - | - | 380 | 2,280 | - | 2,280 | - |
| | 1i.6 | Load Out (19) Casks to Transport | 1,520 | 380 | - | - | 380 | 2,280 | - | 2,280 | - |
| **1i Total** | **Unit 4 Wet Fuel Transfer to ISFSI prior to SAFSTOR** | | **6,415** | **18,292** | **-** | **168** | **4,111** | **28,986** | **-** | **28,986** | **-** |

Appendix C-2

## Florida Power and Light
## Turkey Point Unit 4
## Scenario 2 - SAFSTOR

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1j.1 | Utility Staff | 31,915 | - | - | - | 4,787 | 36,703 | 29,362 | 7,341 | - |
| | 1j.2 | Security Guard Force | 20,871 | - | - | - | 3,131 | 24,002 | 7,201 | 16,801 | - |
| | 1j.3 | General Contractor Staff | - | - | - | - | - | - | - | - | - |
| | 1j.4 | Property Taxes | - | - | - | 54 | 8 | 62 | 49 | 12 | - |
| | 1j.5 | Insurance | - | - | - | 8,201 | 1,230 | 9,431 | 7,545 | 1,886 | - |
| | 1j.6 | Corporate Support | 3,236 | - | - | - | 485 | 3,721 | 1,116 | 2,605 | - |
| | 1j.7 | Utility Staff HP Supplies | - | 691 | - | - | 104 | 795 | 238 | 556 | - |
| | 1j.8 | NRC Inspection Fee | - | - | - | 2,224 | 334 | 2,558 | 2,558 | - | - |
| | 1j.9 | Licensing Fees | - | - | - | 688 | 103 | 791 | 791 | - | - |
| | 1j.10 | Materials and Services | - | 1,981 | - | - | 297 | 2,278 | 683 | 1,594 | - |
| | 1j.11 | Energy | - | - | - | 1,069 | 160 | 1,229 | 983 | 246 | - |
| | 1j.12 | EPRI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 1j.13 | NEI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 1j.14 | County & FEMA Fees | - | - | - | 2,262 | 339 | 2,601 | 2,081 | 520 | - |
| | 1j.15 | Licenses & Permits | - | - | - | 68 | 10 | 78 | 62 | 16 | - |
| | 1j.16 | INPO Membership Fees | - | - | - | - | - | - | - | - | - |
| | 1j.17 | ISFSI Operating Costs | 20 | 60 | - | - | 12 | 92 | - | 92 | - |
| | 1j.18 | Spent Fuel Maintenance | 1,020 | 340 | - | - | 204 | 1,564 | - | 1,564 | - |
| **1j Total** | **Undistributed Costs for Shutdown & Transition** | | **57,063** | **3,071** | **-** | **14,565** | **11,205** | **85,904** | **52,670** | **33,233** | **-** |
| | | | | | | | | | | | |
| **Period 1 Total** | **SHUTDOWN & TRANSITION** | | **80,043** | **25,597** | **-** | **14,900** | **18,681** | **139,221** | **59,774** | **79,447** | **-** |
| | 2a.1 | Utility Staff | 7,323 | - | - | - | 732 | 8,055 | 3,625 | 4,430 | - |
| | 2a.2 | Security Guard Force | 3,441 | - | - | - | 344 | 3,785 | - | 3,785 | - |
| | 2a.3 | General Contractor Staff | - | - | - | - | - | - | - | - | - |
| | 2a.4 | Property Taxes | - | - | - | 228 | 23 | 251 | 113 | 138 | - |
| | 2a.5 | Insurance | - | - | - | 16,537 | 2,480 | 19,017 | 8,558 | 10,459 | - |
| | 2a.6 | Corporate Support | 17,223 | - | - | - | 1,722 | 18,946 | 8,526 | 10,420 | - |
| | 2a.7 | Utility Staff HP Supplies | - | 2,787 | - | - | 279 | 3,065 | 1,379 | 1,686 | - |
| | 2a.8 | NRC Inspection Fee | - | - | - | 1,890 | 189 | 2,079 | 936 | 1,144 | - |
| | 2a.9 | Licensing Fees | - | - | - | 2,924 | 439 | 3,363 | 1,513 | 1,849 | - |
| | 2a.10 | County Fees & FEMA Fees | - | - | - | - | - | - | - | - | - |
| | 2a.11 | Licenses & Permits | - | - | - | 288 | 29 | 317 | 143 | 174 | - |
| | 2a.12 | EPRI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 2a.13 | NEI Fees | - | - | - | - | - | - | - | - | - |
| | 2a.14 | INPO Membership Fees | - | - | - | - | - | - | - | - | - |
| | 2a.15 | Materials and Services | - | 6,302 | - | - | 630 | 6,933 | 3,120 | 3,813 | - |

Appendix C-2

## Florida Power and Light
## Turkey Point Unit 4
## Scenario 2 - SAFSTOR

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2a.16 | Energy | - | - | - | 2,714 | 271 | 2,985 | 1,343 | 1,642 | - |
| | 2a.17 | Roof Replacement | 102 | 153 | - | - | 26 | 281 | 127 | 155 | - |
| **2a Total** | **Dormancy During Dry Fuel Storage** | | **28,089** | **9,243** | **-** | **24,581** | **7,164** | **69,077** | **29,381** | **39,695** | **-** |
| | 2a.1 | Utility Staff | 13,019 | - | - | - | 1,302 | 14,320 | 14,320 | - | - |
| | 2a.2 | Security Guard Force | 6,363 | - | - | - | 636 | 6,999 | 6,999 | - | - |
| | 2a.3 | General Contractor Staff | - | - | - | - | - | - | - | - | - |
| | 2a.4 | Property Taxes | - | - | - | 429 | 43 | 472 | 472 | - | - |
| | 2a.5 | Insurance | - | - | - | 18,526 | 2,779 | 21,305 | 21,305 | - | - |
| | 2c.6 | Corporate Support | 9,126 | - | - | - | 913 | 10,038 | 10,038 | - | - |
| | 2c.7 | Utility Staff HP Supplies | - | 1,243 | - | - | 124 | 1,367 | 1,367 | - | - |
| | 2a.8 | NRC Inspection Fee | - | - | - | 3,558 | 534 | 4,092 | 4,092 | - | - |
| | 2a.9 | Licensing Fees | - | - | - | 5,504 | 826 | 6,330 | 6,330 | - | - |
| | 2a.10 | County Fees & FEMA Fees | - | - | - | - | - | - | - | - | - |
| | 2a.11 | Licenses & Permits | - | - | - | 543 | 54 | 597 | 597 | - | - |
| | 2a.12 | EPRI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 2a.13 | NEI Fees | - | - | - | - | - | - | - | - | - |
| | 2a.14 | INPO Membership Fees | - | - | - | - | - | - | - | - | - |
| | 2a.15 | Materials and Services | - | 3,788 | - | - | 379 | 4,167 | 4,167 | - | - |
| | 2a.16 | Energy | - | - | - | 1,238 | 124 | 1,361 | 1,361 | - | - |
| | 2a.17 | Roof Replacement | 878 | 1,316 | - | - | 219 | 2,414 | 2,414 | - | - |
| **2b Total** | **Dormancy Only** | | **29,385** | **6,348** | **-** | **29,798** | **7,932** | **73,463** | **73,463** | **-** | **-** |
| **Period 2 Total** | **SAFSTOR** | | **57,474** | **15,590** | **-** | **54,379** | **15,097** | **142,539** | **102,844** | **39,695** | **-** |
| | 3a.1 | Decommissioning Planning and Design - Unit 4 | 1,523 | 46 | - | - | 235 | 1,804 | 1,804 | - | - |
| | 3a.2 | Site Characterization - Unit 4 | 1,953 | 53 | - | 105 | 317 | 2,429 | 2,429 | - | - |
| | 3a.3 | Prepare Integrated Work Sequence and Schedule - Unit 4 | 164 | 5 | - | - | 25 | 195 | 195 | - | - |
| | 3a.4 | Prepare Decommissioning Activity Specifications - Unit 4 | 2,294 | 71 | - | - | 355 | 2,719 | 2,719 | - | - |
| | 3a.5 | Prepare License Termination Plan - Unit 4 | 984 | - | - | 667 | 248 | 1,899 | 1,899 | - | - |
| | 3a.6 | Prepare Detailed Work Procedures for Decommissioning - Unit 4 | 1,859 | 57 | - | - | 287 | 2,204 | 2,204 | - | - |
| | 3a.7 | Design Containment and Misc System Modifications - Unit 4 | 83 | - | - | - | 12 | 96 | 96 | - | - |
| | 3a.8 | Purchase Dry Storage Modules for Unit 4 GTCC Waste | - | - | 4,708 | - | 706 | 5,414 | 5,414 | - | - |
| **3a Total** | **Decommissioning Planning** | | **8,861** | **232** | **4,708** | **772** | **2,186** | **16,759** | **16,759** | **-** | **-** |
| | 3b.1 | Mobilize Decommissioning General Contractor | - | - | - | 1,693 | 254 | 1,947 | 1,947 | - | - |
| | 3b.2 | Perform Asbestos Abatement of Pipe Insulation - Unit 4 | 3,465 | 182 | - | - | 912 | 4,559 | 4,559 | - | - |
| | 3b.3 | Implement Temporary Power Upgrades - Unit 4 | 1,033 | 937 | - | - | 296 | 2,266 | 2,266 | - | - |

Appendix C-2

## Florida Power and Light
## Turkey Point Unit 4
## Scenario 2 - SAFSTOR

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3b.4 | Construct Misc Building Modifications, In-Plant Laydown Areas | 2,996 | 508 | - | - | 526 | 4,030 | 4,030 | - | - |
| | 3b.5 | Modify Containment Access - Unit 4 | 2,223 | 377 | - | - | 390 | 2,990 | 2,990 | - | - |
| | 3b.6 | Transportation Infrastructure Modifications | 62 | 298 | - | 1,393 | 263 | 2,015 | 2,015 | - | - |
| | 3b.7 | Procure Waste Handling & Processing Tents | - | - | - | 1,476 | 221 | 1,697 | 1,697 | - | - |
| **3b Total** | **Decommissioning Transition and Preparations** | | **9,778** | **2,303** | **-** | **4,562** | **2,861** | **19,504** | **19,504** | **-** | **-** |
| | 3c.1 | Design and Procure Special Equipment | - | 27,050 | - | - | 5,410 | 32,460 | 32,460 | - | - |
| | 3c.2 | Test Special Cutting and Handling Equipment and Train Operators | 1,924 | - | - | 73 | 399 | 2,396 | 2,396 | - | - |
| | 3c.3 | Finalize Internals and Vessel Segmentation Details - Unit 4 | 458 | - | - | - | 92 | 549 | 549 | - | - |
| | 3c.4 | Segment, Package and Ship Reactor Internals - Unit 4 | 5,879 | 2,100 | - | - | 1,596 | 9,575 | 9,575 | - | - |
| | 3c.5 | Segment, Package and Ship RPV - Unit 4 | 1,394 | 1,030 | - | - | 485 | 2,909 | 2,909 | - | - |
| | 3c.6 | Package, Ship & Dispose | | | 10,753 | - | 2,151 | 12,904 | 12,904 | - | - |
| **3c Total** | **Reactor Vessel Removal** | | **9,654** | **30,180** | **10,753** | **73** | **10,132** | **60,792** | **60,792** | **-** | **-** |
| | 3d.1 | Heavy Lift / Transfer Equipment | | 3,245 | - | - | 649 | 3,893 | 3,893 | - | - |
| | 3d.2 | Remove and Dispose of Steam Generators - Unit 4 | 1,417 | 163 | - | - | 316 | 1,895 | 1,895 | - | - |
| | 3d.3 | Remove and Dispose of Pressurizer - Unit 4 | 195 | 22 | - | - | 43 | 259 | 259 | - | - |
| | 3d.4 | Remove and Dispose of Reactor Coolant Pipe - Unit 4 | 522 | 36 | - | - | 112 | 670 | 670 | - | - |
| | 3d.5 | Remove and Dispose of Reactor Coolant Pumps - Unit 4 | 537 | 59 | - | - | 119 | 716 | 716 | - | - |
| | 3d.6 | Package, Ship, & Dispose | | | 11,055 | - | 2,211 | 13,266 | 13,266 | - | - |
| **3d Total** | **Large Component Removal** | | **2,671** | **3,524** | **11,055** | **-** | **3,450** | **20,700** | **20,700** | **-** | **-** |
| | 3e.1 | Remove and Dispose of Spent Fuel Storage Racks | 68 | 20 | - | - | 18 | 106 | 106 | - | - |
| | 3e.2 | Segment, Package and Dispose of Spent Fuel Pool Island Equipment | 214 | 20 | - | - | 47 | 281 | 281 | - | - |
| | 3e.3 | Decon/Surgical Removal Containment Building - Unit 4 | 1,095 | 130 | - | - | 245 | 1,470 | 1,470 | - | - |
| | 3e.4 | Decon/Surgical Removal Fuel Building | 553 | 21 | - | - | 115 | 688 | 688 | - | - |
| | 3e.5 | Decon/Surgical Remvoal Auxiliary Building Unit 4 | 6,132 | 574 | - | - | 1,341 | 8,048 | 8,048 | - | - |
| | 3e.6 | Decon/Surgical Radwaste Building | 334 | 84 | - | - | 84 | 502 | 502 | - | - |
| | 3e.7 | Package, Dispose, & Ship | - | - | 4,952 | - | 990 | 5,942 | 5,942 | - | - |
| **3e Total** | **Plant Decontamination & Interior Rad Demolition** | | **8,397** | **849** | **4,952** | **-** | **2,839** | **17,037** | **17,037** | **-** | **-** |
| | 3f.1 | Demolish Fuel Building | 257 | 538 | - | - | 159 | 953 | 953 | - | - |
| | 3f.2 | Demolish Auxiliary Building | 2,019 | 5,508 | - | - | 1,505 | 9,033 | 9,033 | - | - |
| | 3f.3 | Demolish Radwaste Building | 531 | 1,476 | - | - | 401 | 2,409 | 2,409 | - | - |
| | 3f.4 | Demolish Unit 4 Containment Building | 2,019 | 6,120 | - | - | 1,628 | 9,767 | 9,767 | - | - |
| | 3f.5 | Demolish LLW Storage Building | 655 | 1,550 | - | - | 441 | 2,647 | 2,647 | - | - |
| | 3f.6 | Contaminated Soil | 397 | 596 | 17,930 | - | 3,785 | 22,709 | 22,709 | - | - |
| | 3f.7 | Debris Disposal | - | - | 89,687 | - | 17,937 | 107,624 | 107,624 | - | - |

Appendix C-2

## Florida Power and Light
## Turkey Point Unit 4
## Scenario 2 - SAFSTOR

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **3f Total** | **Rad Building Demolition** | | **5,878** | **15,789** | **107,617** | **-** | **25,857** | **155,141** | **155,141** | **-** | **-** |
| | 3g.1 | Final Status Survey for Structures | 5,897 | 67 | - | 227 | 1,238 | 7,428 | 7,428 | - | - |
| | 3g.2 | Final Status Survey for Land Areas (included with structures) | - | - | - | - | - | - | - | - | - |
| **3g Total** | **License Termination Activities** | | **5,897** | **67** | **-** | **227** | **1,238** | **7,428** | **7,428** | **-** | **-** |
| | 3h.1 | Utility Staff | 29,716 | - | - | - | 4,457 | 34,174 | 34,174 | - | - |
| | 3h.2 | Security Guard Force | 1,951 | - | - | - | 293 | 2,244 | 2,244 | - | - |
| | 3h.3 | General Contractor Staff | 67,660 | - | - | - | 10,149 | 77,809 | 77,809 | - | - |
| | 3h.4 | Property Taxes | - | - | - | 87 | 13 | 100 | 100 | - | - |
| | 3h.5 | Insurance | - | - | - | 3,769 | 565 | 4,334 | 4,334 | - | - |
| | 3h.6 | Corporate Support | 11,068 | - | - | - | 1,660 | 12,728 | 12,728 | - | - |
| | 3h.7 | Utility Staff HP Supplies | - | 5,673 | - | - | 851 | 6,524 | 6,524 | - | - |
| | 3h.8 | NRC Inspection Fee | - | - | - | 778 | 117 | 895 | 895 | - | - |
| | 3h.9 | Licensing Fees | - | - | - | 1,204 | 181 | 1,385 | 1,385 | - | - |
| | 3h.10 | County & FEMA Fees | - | - | - | - | - | - | - | - | - |
| | 3h.11 | Licenses & Permits | - | - | - | 110 | 17 | 127 | 127 | - | - |
| | 3h.12 | Florida LLRW Inspection Fee | - | - | - | 2,922 | 438 | 3,361 | 3,361 | - | - |
| | 3h.13 | Materials and Services | - | 1,661 | - | - | 249 | 1,910 | 1,910 | - | - |
| | 3h.14 | Energy | - | - | - | 3,288 | 493 | 3,781 | 3,781 | - | - |
| | 3h.15 | DGC HP Supplies | - | 5,132 | - | - | 770 | 5,902 | 5,902 | - | - |
| | 3h.16 | EPRI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 3h.17 | NEI Membership Fees | - | - | - | - | - | - | - | - | - |
| | 3h.18 | INPO Membership Fees | - | - | - | - | - | - | - | - | - |
| | 3h.19 | Emergency Preparedness Fees | - | - | - | - | - | - | - | - | - |
| **3h Total** | **Undistributed Costs for Decommissioning & License Termination** | | **110,396** | **12,466** | **-** | **12,159** | **20,253** | **155,274** | **155,274** | **-** | **-** |
| | | | | | | | | | | | |
| **Period 3 Total** | **DECOMMISSIONING & LICENSE TERMINATION** | | **161,530** | **65,411** | **139,085** | **17,793** | **68,817** | **452,636** | **452,636** | **-** | **-** |
| | 4a.1 | Demo Turbine Pedastal and Turbine Deck | 3,647 | 1,506 | - | - | 773 | 5,927 | - | - | 5,927 |
| | 4a.2 | Demo Intake & CWS | 2,854 | 1,830 | - | - | 703 | 5,386 | - | - | 5,386 |
| | 4a.3 | Demo Primary Water Tank Foundation | 11 | 126 | - | - | 20 | 157 | - | - | 157 |
| | 4a.4 | Demo Misc Site Structures | 3,065 | 1,506 | - | - | 686 | 5,257 | - | - | 5,257 |
| | 4a.5 | Demo Security Improvements | 667 | 459 | - | - | 169 | 1,295 | - | - | 1,295 |
| | 4a.6 | Demo Maintenance Facility | 937 | 753 | - | - | 254 | 1,944 | - | - | 1,944 |
| | 4a.7 | Demo Control Building | 145 | 251 | - | - | 59 | 456 | - | - | 456 |
| | 4a.9 | Demo Sealwell | 113 | 251 | - | - | 55 | 418 | - | - | 418 |
| | 4a.10 | Clean Concrete Processing | - | - | - | 2,054 | 308 | 2,362 | - | - | 2,362 |

Appendix C-2

## Florida Power and Light
## Turkey Point Unit 4
## Scenario 2 - SAFSTOR

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4a.11 | Demo Site Paving | 447 | 670 | - | - | 168 | 1,285 | - | - | 1,285 |
| | 4a.12 | Clean Debris Disposal/Recycle | - | - | 127 | - | 19 | 147 | - | - | 147 |
| **4a Total** | **Clean Building & Site Demolition** | | **11,886** | **7,352** | **127** | **2,054** | **3,213** | **24,633** | **-** | **-** | **24,633** |
| | 4b.1 | Procure Site Restoration Equipment | - | 490 | - | - | 74 | 564 | - | - | 564 |
| | 4b.2 | Finish Grading and Re-Vegetate Site | 477 | 26 | - | - | 75 | 578 | - | - | 578 |
| **4b Total** | **Site Restoration** | | **477** | **516** | **-** | **-** | **149** | **1,142** | **-** | **-** | **1,142** |
| | 4c.1 | Utility Staff | 2,237 | - | - | - | 336 | 2,572 | - | - | 2,572 |
| | 4c.2 | Security Guard Force | 147 | - | - | - | 22 | 169 | - | - | 169 |
| | 4c.3 | General Contractor Staff | 5,093 | - | - | - | 764 | 5,857 | - | - | 5,857 |
| | 4c.4 | Property Taxes | - | - | - | 7 | 1 | 8 | - | - | 8 |
| | 4c.5 | Insurance | - | - | - | 284 | 43 | 326 | - | - | 326 |
| | 4c.6 | Corporate Support | 833 | - | - | - | 125 | 958 | - | - | 958 |
| | 4c.7 | Energy | - | - | - | 247 | 37 | 285 | - | - | 285 |
| | 4c.8 | Materials and Services | - | 105 | - | - | 16 | 121 | - | - | 121 |
| | 4c.9 | County & FEMA Fees | - | - | - | - | - | - | - | - | - |
| | 4c.10 | Licenses & Permits | - | - | - | 8 | 1 | 10 | - | - | 10 |
| **4c Total** | **Undistributed Costs for Site Restoration** | | **8,309** | **105** | **-** | **546** | **1,344** | **10,304** | **-** | **-** | **10,304** |
| **Period 4 Total** | **SITE RESTORATION** | | **20,673** | **7,973** | **127** | **2,600** | **4,706** | **36,079** | **-** | **-** | **36,079** |
| | 5a.1 | Procure Loading & Transfer Equipment (included in Period 1) | - | - | - | - | - | - | - | - | - |
| | 5a.2 | Procedures & Dry Runs (included in Period 1) | - | - | - | - | - | - | - | - | - |
| | 5a.3 | Remove (47) Fuel Casks from ISFSI & Load DOE Transport | 3,760 | 940 | - | - | 705 | 5,405 | - | 5,405 | - |
| | 5a.4 | Spent Fuel Transportation & Disposal (by DOE) | - | - | - | - | - | - | - | - | - |
| **5a Total** | **Dry Fuel Transfer to DOE during and after DECON** | | **3,760** | **940** | **-** | **-** | **705** | **5,405** | **-** | **5,405** | **-** |
| | 5b.1 | Remove GTCC Casks from ISFSI & Loadout | 320 | - | - | 80 | 120 | 520 | 520 | - | - |
| | 5b.2 | GTCC Transportation & Disposal | - | - | 11,746 | - | 1,762 | 13,508 | 13,508 | - | - |
| **5b Total** | **GTCC Waste Disposition** | | **320** | **-** | **11,746** | **80** | **1,882** | **14,028** | **14,028** | **-** | **-** |
| | 5c.1 | Utility Staff | 5,897 | - | - | - | 885 | 6,781 | - | 6,781 | - |
| | 5c.2 | Security Guard Force | 22,749 | - | - | - | 3,412 | 26,162 | - | 26,162 | - |
| | 5c.3 | General Contractor Staff | - | - | - | - | - | - | - | - | - |
| | 5c.4 | Property Taxes | - | - | - | - | - | - | - | - | - |
| | 5c.5 | Insurance | - | - | - | - | - | - | - | - | - |
| | 5c.6 | Corporate Support | - | - | - | - | - | - | - | - | - |

Appendix C-2

## Florida Power and Light
## Turkey Point Unit 4
## Scenario 2 - SAFSTOR

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5c.7 | Utility Staff HP Supplies | - | - | - | - | - | - | - | - | - |
| | 5c.8 | NRC Inspection Fee | - | - | - | - | - | - | - | - | - |
| | 5c.9 | Licensing Fees | - | - | - | - | - | - | - | - | - |
| | 5c.10 | County & FEMA Fees | - | - | - | - | - | - | - | - | - |
| | 5c.11 | Licenses & Permits | - | - | - | - | - | - | - | - | - |
| | 5c.12 | Energy | - | - | - | - | - | - | - | - | - |
| | 5c.13 | Materials and Services | - | - | - | - | - | - | - | - | - |
| | 5c.14 | ISFSI Operating Costs | - | - | - | 2,048 | 307 | 2,355 | - | 2,355 | - |
| **5c Total** | **Undistributed Costs for Dry Fuel / GTCC Storage & Transfer** | | **28,646** | **-** | **-** | **2,048** | **4,604** | **35,298** | **-** | **35,298** | **-** |
| | | | | | | | | | | | |
| **Period 5 Total** | **DRY FUEL / GTCC STORAGE & TRANSFER** | | **32,726** | **940** | **11,746** | **2,128** | **7,191** | **54,731** | **14,028** | **40,703** | **-** |
| | | | | | | | | | | | |
| | 6a.1 | Preparation and NRC Review of License Termination Plan | 45 | - | - | 64 | 16 | 125 | - | 125 | - |
| **6a Total** | **ISFSI D&D Planning & Preparations** | | **45** | **-** | **-** | **64** | **16** | **125** | **-** | **125** | **-** |
| | | | | | | | | | | | |
| | 6b.1 | Clean Demolition of ISFSI | 1,316 | 638 | - | - | 293 | 2,248 | - | 2,248 | - |
| | 6b.2 | Demolition of ISFSI Support Structures | 240 | 94 | - | - | 50 | 384 | - | 384 | - |
| **6b Total** | **ISFSI and Support Structure Clean Demolition** | | **1,556** | **732** | **-** | **-** | **343** | **2,632** | **-** | **2,632** | **-** |
| | | | | | | | | | | | |
| | 6c.1 | Verification Surveys | 81 | 22 | - | - | 15 | 119 | - | 119 | - |
| | 6c.2 | Preparation of Final Report on Decommissioning and NRC Review | 45 | - | - | - | 7 | 52 | - | 52 | - |
| **6c Total** | **ISFSI Final Status Surveys** | | **126** | **22** | **-** | **-** | **22** | **170** | **-** | **170** | **-** |
| | | | | | | | | | | | |
| | 6d.1 | Utility Staff | 304 | - | - | - | 46 | 350 | - | 350 | - |
| | 6d.2 | Security Guard Force | 153 | - | - | - | 23 | 176 | - | 176 | - |
| | 6d.3 | General Contractor Staff | 1,999 | - | - | - | 300 | 2,299 | - | 2,299 | - |
| | 6d.4 | Property Taxes | - | - | - | 13 | 2 | 15 | - | 15 | - |
| | 6d.5 | Insurance | - | - | - | 25 | 4 | 29 | - | 29 | - |
| | 6d.6 | Corporate Support | - | - | - | - | - | - | - | - | - |
| | 6d.7 | Utility Staff HP Supplies | - | - | - | - | - | - | - | - | - |
| | 6d.8 | Materials and Services | - | 23 | - | - | 3 | 26 | - | 26 | - |
| | 6d.9 | Energy | - | - | - | 160 | 24 | 184 | - | 184 | - |
| | 6d.10 | NRC Inspection Fee | - | - | - | 56 | 8 | 64 | - | 64 | - |
| | 6d.11 | Licensing Fees | - | - | - | 86 | 13 | 99 | - | 99 | - |
| | 6d.12 | County & FEMA Fees | - | - | - | - | - | - | - | - | - |
| | 6d.13 | Licenses & Permits | - | - | - | 17 | 3 | 20 | - | 20 | - |
| **6d Total** | **Undistributed Costs for ISFSI Decommissioning** | | **2,456** | **23** | **-** | **357** | **425** | **3,260** | **-** | **3,260** | **-** |

Appendix C-2

## Florida Power and Light
## Turkey Point Unit 4
## Scenario 2 - SAFSTOR

(thousands of 2020 dollars)

| Period | Item Number | Item Description | Labor Cost | Materials & Equipment | Waste Transportation & Disposal | Other Direct Cost (ODC) | Contingency | Total Cost (Estimated) | License Termination | Spent Fuel Management | Site Restoration |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Period 6 Total** | | **ISFSI DECOMMISSIONING** | **4,183** | **777** | **-** | **421** | **807** | **6,187** | **-** | **6,187** | **-** |
| | | | | | | | | | | | |
| **GRAND TOTAL** | | | **356,628** | **116,289** | **150,959** | **92,220** | **115,298** | **831,394** | **629,282** | **166,033** | **36,079** |

**Appendix D-1**
**Florida Power and Light - Turkey Point Units 3 & 4**
**Scenario 1 - Prompt DECON following Unit 4 Shutdown**

| 2020 Estimated Staff FTEs | 2048 | 2049 | 2050 | 2051 | 2052 | 2053 | 2054 | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 | 2061 | 2062 | 2063 | 2064 | 2065 | 2066 | 2067 | 2068 | 2069 | 2070 | 2071 | 2072 | 2073 | 2074 | 2075 | 2076 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | UNIT 3 SHUTDOWN | | | | UNIT 4 SHUTDOWN | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | ZIRC FIRE ENDS | | | | FUEL POOL EMPTY | | | | | | | DECOMMISSIONING & SITE RESTORATION COMPLETE | | | | | | | | | | ISFSI EMPTY | | | |
| **Period 1 - Shutdown & Transition** | 2048 | 2049 | 2050 | 2051 | 2052 | 2053 | 2054 | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 | 2061 | 2062 | 2063 | 2064 | 2065 | 2066 | 2067 | 2068 | 2069 | 2070 | 2071 | 2072 | 2073 | 2074 | 2075 | 2076 |
| Administration | | | - | - | 6 | 12 | 12 | 7 | 4 | | | | | | | | | | | | | | | | | | | | |
| Engineering | | | | | 20 | 40 | 40 | 20 | 8 | | | | | | | | | | | | | | | | | | | | |
| Health Physics/Rad Protection | | | | | 20 | 30 | 30 | 24 | 20 | | | | | | | | | | | | | | | | | | | | |
| Management | | | | | 3 | 5 | 5 | 5 | 3 | | | | | | | | | | | | | | | | | | | | |
| Maintenance & Operations | | | | | 40 | 70 | 60 | 40 | 20 | | | | | | | | | | | | | | | | | | | | |
| Quality Assurance | | | | | 2 | 3 | 3 | 2 | 1 | | | | | | | | | | | | | | | | | | | | |
| **Utility Staff** | - | - | - | - | **91** | **160** | **150** | **98** | **56** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **General Contractor Staff** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Period 2 - SAFSTOR** | 2048 | 2049 | 2050 | 2051 | 2052 | 2053 | 2054 | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 | 2061 | 2062 | 2063 | 2064 | 2065 | 2066 | 2067 | 2068 | 2069 | 2070 | 2071 | 2072 | 2073 | 2074 | 2075 | 2076 |
| **Utility Staff** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **General Contractor Staff** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Period 3 & 4 - License Term & Site Restoration** | 2048 | 2049 | 2050 | 2051 | 2052 | 2053 | 2054 | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 | 2061 | 2062 | 2063 | 2064 | 2065 | 2066 | 2067 | 2068 | 2069 | 2070 | 2071 | 2072 | 2073 | 2074 | 2075 | 2076 |
| Administration | | | | | | | | 4 | 4 | 10 | 12 | 12 | 12 | 12 | 7 | 2 | | | | | | | | | | | | | |
| Engineering | | | | | | | | 4 | 6 | 16 | 20 | 20 | 20 | 20 | 7 | 2 | | | | | | | | | | | | | |
| Health Physics/Rad Protection | | | | | | | | | 4 | 8 | 24 | 24 | 24 | 24 | 16 | 4 | | | | | | | | | | | | | |
| Management | | | | | | | | 1 | 1 | 4 | 5 | 5 | 4 | 4 | 4 | 2 | | | | | | | | | | | | | |
| Maintenance & Operations | | | | | | | | | | 10 | 24 | 24 | 20 | 20 | 8 | 2 | | | | | | | | | | | | | |
| Quality Assurance | | | | | | | | 1 | 1 | 2 | 3 | 3 | 2 | 2 | 2 | 1 | | | | | | | | | | | | | |
| **Utility Staff** | - | - | - | - | - | - | - | **10** | **16** | **50** | **88** | **88** | **82** | **82** | **44** | **13** | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Project Management | | | | | | | | 2 | 4 | 6 | 10 | 10 | 10 | 10 | 8 | 4 | | | | | | | | | | | | | |
| Engineering | | | | | | | | 4 | 6 | 6 | 12 | 12 | 10 | 10 | 7 | 2 | | | | | | | | | | | | | |
| Health Physics/Rad Protection | | | | | | | | | 4 | 8 | 16 | 16 | 16 | 16 | 12 | 6 | | | | | | | | | | | | | |
| Administration | | | | | | | | 2 | 3 | 6 | 12 | 12 | 12 | 12 | 8 | 4 | | | | | | | | | | | | | |
| Maintenance & Operations | | | | | | | | | | | - | - | - | - | - | - | | | | | | | | | | | | | |
| Quality Assurance | | | | | | | | 1 | 1 | 2 | 4 | 4 | 4 | 4 | 3 | 2 | | | | | | | | | | | | | |
| Waste Management | | | | | | | | | 1 | 2 | 12 | 12 | 12 | 12 | 12 | 4 | | | | | | | | | | | | | |
| **General Contractor Staff** | - | - | - | - | - | - | - | **9** | **19** | **30** | **66** | **66** | **64** | **64** | **50** | **22** | - | - | - | - | - | - | - | - | - | - | - | - | - |

**Appendix D-1**
**Florida Power and Light - Turkey Point Units 3 & 4**
**Scenario 1 - Prompt DECON following Unit 4 Shutdown**

| 2020 Estimated Staff FTEs | 2048 | 2049 | 2050 | 2051 | 2052 | 2053 | 2054 | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 | 2061 | 2062 | 2063 | 2064 | 2065 | 2066 | 2067 | 2068 | 2069 | 2070 | 2071 | 2072 | 2073 | 2074 | 2075 | 2076 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | UNIT 3 SHUTDOWN | | | | UNIT 4 SHUTDOWN | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | ZIRC FIRE ENDS | | | | | FUEL POOL EMPTY | | | | | | DECOMMISSIONING & SITE RESTORATION COMPLETE | | | | | | | | | | ISFSI EMPTY | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Period 5 - Dry Fuel / GTCC Storage & Transfer** | 2048 | 2049 | 2050 | 2051 | 2052 | 2053 | 2054 | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 | 2061 | 2062 | 2063 | 2064 | 2065 | 2066 | 2067 | 2068 | 2069 | 2070 | 2071 | 2072 | 2073 | 2074 | 2075 | 2076 |
| Administration | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Engineering | | | | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | |
| Health Physics/Rad Protection | | | | | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | |
| Management | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Maintenance & Operations | | | | | | | | | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | |
| Quality Assurance | | | | | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | |
| **Utility Staff** | - | - | - | - | - | - | - | - | **1** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | **5** | - | - | - |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **General Contractor Staff** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Period 6 - ISFSI Decommissioning** | 2048 | 2049 | 2050 | 2051 | 2052 | 2053 | 2054 | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 | 2061 | 2062 | 2063 | 2064 | 2065 | 2066 | 2067 | 2068 | 2069 | 2070 | 2071 | 2072 | 2073 | 2074 | 2075 | 2076 |
| Administration | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Engineering | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Health Physics/Rad Protection | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Management | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Maintenance & Operations | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Quality Assurance | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| **Utility Staff** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **4** | - | - |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Project Management | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | |
| Engineering | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | |
| Health Physics/Rad Protection | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Administration | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Maintenance & Operations | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Quality Assurance | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | |
| Waste Management | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | |
| **General Contractor Staff** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **4** | **6** | - | - |

**Appendix D-2**
**Florida Power and Light - Turkey Point Units 3 & 4**
**Scenario 2 - SAFSTOR**

| 2020 Estimated Staff FTEs | 2048 | 2049 | 2050 | 2051 | 2052 | 2053 | 2054 | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 | 2061 | 2062 | 2063 | 2064 | 2065 | 2066 | 2067 | 2068 | 2069 | 2070 | 2071 | 2072 | 2073 | 2074 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | UNIT 3 SHUTDOWN | | | | UNIT 4 SHUTDOWN | | | | | | | | | | | | | | | | | | | | | |
| | | | | | ZIRC FIRE ENDS | | | | FUEL POOL EMPTY | | | | | | | | | | | | | | | | | ISFSI EMPTY | |
| **Period 1 - Shutdown & Transition** | 2048 | 2049 | 2050 | 2051 | 2052 | 2053 | 2054 | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 | 2061 | 2062 | 2063 | 2064 | 2065 | 2066 | 2067 | 2068 | 2069 | 2070 | 2071 | 2072 | 2073 | 2074 |
| Administration | | | - | - | 6 | 12 | 12 | 7 | 4 | | | | | | | | | | | | | | | | | | |
| Engineering | | | | | 20 | 40 | 40 | 20 | 8 | | | | | | | | | | | | | | | | | | |
| Health Physics/Rad Protection | | | | | 20 | 30 | 30 | 24 | 20 | | | | | | | | | | | | | | | | | | |
| Management | | | | | 3 | 5 | 5 | 5 | 3 | | | | | | | | | | | | | | | | | | |
| Maintenance & Operations | | | | | 40 | 70 | 60 | 40 | 20 | | | | | | | | | | | | | | | | | | |
| Quality Assurance | | | | | 2 | 3 | 3 | 2 | 1 | | | | | | | | | | | | | | | | | | |
| **Utility Staff** | - | - | - | - | **91** | **160** | **150** | **98** | **56** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **General Contractor Staff** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

| **Period 2 - SAFSTOR** | 2048 | 2049 | 2050 | 2051 | 2052 | 2053 | 2054 | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 | 2061 | 2062 | 2063 | 2064 | 2065 | 2066 | 2067 | 2068 | 2069 | 2070 | 2071 | 2072 | 2073 | 2074 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Administration | | | - | - | - | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Engineering | | | | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Health Physics/Rad Protection | | | | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Management | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Maintenance & Operations | | | | | | | | | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Quality Assurance | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Utility Staff** | - | - | - | - | - | - | - | - | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **General Contractor Staff** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

| **Period 3 & 4 - License Term & Site Restoration** | 2048 | 2049 | 2050 | 2051 | 2052 | 2053 | 2054 | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 | 2061 | 2062 | 2063 | 2064 | 2065 | 2066 | 2067 | 2068 | 2069 | 2070 | 2071 | 2072 | 2073 | 2074 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Administration | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Engineering | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Health Physics/Rad Protection | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Management | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Maintenance & Operations | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Quality Assurance | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Utility Staff** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Project Management | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Engineering | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Health Physics/Rad Protection | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Administration | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Maintenance & Operations | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Quality Assurance | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Waste Management | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **General Contractor Staff** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

**Appendix D-2**
**Florida Power and Light - Turkey Point Units 3 & 4**
**Scenario 2 - SAFSTOR**

| 2020 Estimated Staff FTEs | 2075 / 2089 | 2090 | 2091 | 2092 | 2093 | 2094 | 2095 | 2096 | 2097 | 2098 | 2099 | 2100 | 2101 | 2102 | 2103 | 2104 | 2105 | 2106 | 2107 | 2108 | 2109 | 2110 | 2111 | 2112 | 2113 | 2114 | 2115 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | | | | ISFSI DEMOLITION COMPLETE ◆ | | | | | | |
| | | | | | | | | | | | | | | | | | DECOMMISSIONING & SITE RESTORATION COMPLETE ◆ | | | | | | | | | | |
| **Period 1 - Shutdown & Transition** | 2075 / 2089 | 2090 | 2091 | 2092 | 2093 | 2094 | 2095 | 2096 | 2097 | 2098 | 2099 | 2100 | 2101 | 2102 | 2103 | 2104 | 2105 | 2106 | 2107 | 2108 | 2109 | 2110 | 2111 | 2112 | 2113 | 2114 | 2115 |
| Administration | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Engineering | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Health Physics/Rad Protection | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Management | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Maintenance & Operations | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Quality Assurance | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Utility Staff** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **General Contractor Staff** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Period 2 - SAFSTOR** | 2075 / 2089 | 2090 | 2091 | 2092 | 2093 | 2094 | 2095 | 2096 | 2097 | 2098 | 2099 | 2100 | 2101 | 2102 | 2103 | 2104 | 2105 | 2106 | 2107 | 2108 | 2109 | 2110 | 2111 | 2112 | 2113 | 2114 | 2115 |
| Administration | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | |
| Engineering | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | |
| Health Physics/Rad Protection | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | |
| Management | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Maintenance & Operations | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | | | | | | | | | |
| Quality Assurance | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Utility Staff** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | **6** | - | - | - | - | - | - | - | - | - | - |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **General Contractor Staff** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Period 3 & 4 - License Term & Site Restoration** | 2075 / 2089 | 2090 | 2091 | 2092 | 2093 | 2094 | 2095 | 2096 | 2097 | 2098 | 2099 | 2100 | 2101 | 2102 | 2103 | 2104 | 2105 | 2106 | 2107 | 2108 | 2109 | 2110 | 2111 | 2112 | 2113 | 2114 | 2115 |
| Administration | | | | | | | | | | | | | | | | 4 | 4 | 10 | 12 | 12 | 12 | 12 | 7 | 2 | | | |
| Engineering | | | | | | | | | | | | | | | | 4 | 6 | 16 | 20 | 20 | 20 | 20 | 7 | 2 | | | |
| Health Physics/Rad Protection | | | | | | | | | | | | | | | | | 4 | 8 | 24 | 24 | 24 | 24 | 16 | 4 | | | |
| Management | | | | | | | | | | | | | | | | 1 | 1 | 4 | 5 | 5 | 4 | 4 | 4 | 2 | | | |
| Maintenance & Operations | | | | | | | | | | | | | | | | | | 10 | 24 | 24 | 20 | 20 | 8 | 2 | | | |
| Quality Assurance | | | | | | | | | | | | | | | | 1 | 1 | 2 | 3 | 3 | 2 | 2 | 2 | 1 | | | |
| **Utility Staff** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **10** | **16** | **50** | **88** | **88** | **82** | **82** | **44** | **13** | - | - | - |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Project Management | | | | | | | | | | | | | | | | 2 | 4 | 6 | 10 | 10 | 10 | 10 | 8 | 4 | | | |
| Engineering | | | | | | | | | | | | | | | | 4 | 6 | 6 | 12 | 12 | 10 | 10 | 7 | 2 | | | |
| Health Physics/Rad Protection | | | | | | | | | | | | | | | | | 4 | 8 | 16 | 16 | 16 | 16 | 12 | 6 | | | |
| Administration | | | | | | | | | | | | | | | | 2 | 3 | 6 | 12 | 12 | 12 | 12 | 8 | 4 | | | |
| Maintenance & Operations | | | | | | | | | | | | | | | | | | | - | - | - | - | - | - | | | |
| Quality Assurance | | | | | | | | | | | | | | | | 1 | 1 | 2 | 4 | 4 | 4 | 4 | 3 | 2 | | | |
| Waste Management | | | | | | | | | | | | | | | | | 1 | 2 | 12 | 12 | 12 | 12 | 12 | 4 | | | |
| **General Contractor Staff** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **9** | **19** | **30** | **66** | **66** | **64** | **64** | **50** | **22** | - | - | - |

**Appendix D-2**
**Florida Power and Light - Turkey Point Units 3 & 4**
**Scenario 2 - SAFSTOR**

| 2020 Estimated Staff FTEs | 2048 | 2049 | 2050 | 2051 | 2052 | 2053 | 2054 | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 | 2061 | 2062 | 2063 | 2064 | 2065 | 2066 | 2067 | 2068 | 2069 | 2070 | 2071 | 2072 | 2073 | 2074 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | UNIT 3 SHUTDOWN | | | | UNIT 4 SHUTDOWN | | | | | | | | | | | | | | | | | | | | | |
| | | | | | ZIRC FIRE ENDS | | | | | FUEL POOL EMPTY | | | | | | | | | | | | | | | | ISFSI EMPTY | | |

| Period 5 - Dry Fuel / GTCC Storage & Transfer | 2048 | 2049 | 2050 | 2051 | 2052 | 2053 | 2054 | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 | 2061 | 2062 | 2063 | 2064 | 2065 | 2066 | 2067 | 2068 | 2069 | 2070 | 2071 | 2072 | 2073 | 2074 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Administration | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Engineering | | | | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| Health Physics/Rad Protection | | | | | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| Management | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Maintenance & Operations | | | | | | | | | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| Quality Assurance | | | | | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| **Utility Staff** | - | - | - | - | - | - | - | - | 1 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | - |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **General Contractor Staff** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

| Period 6 - ISFSI Decommissioning | 2048 | 2049 | 2050 | 2051 | 2052 | 2053 | 2054 | 2055 | 2056 | 2057 | 2058 | 2059 | 2060 | 2061 | 2062 | 2063 | 2064 | 2065 | 2066 | 2067 | 2068 | 2069 | 2070 | 2071 | 2072 | 2073 | 2074 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Administration | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Engineering | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Health Physics/Rad Protection | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Management | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Maintenance & Operations | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Quality Assurance | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Utility Staff** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Project Management | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Engineering | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Health Physics/Rad Protection | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Administration | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Maintenance & Operations | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Quality Assurance | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Waste Management | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **General Contractor Staff** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

**Appendix D-2**
**Florida Power and Light - Turkey Point Units 3 & 4**
**Scenario 2 - SAFSTOR**

| 2020 Estimated Staff FTEs | 2075 / 2089 | 2090 | 2091 | 2092 | 2093 | 2094 | 2095 | 2096 | 2097 | 2098 | 2099 | 2100 | 2101 | 2102 | 2103 | 2104 | 2105 | 2106 | 2107 | 2108 | 2109 | 2110 | 2111 | 2112 | 2113 | 2114 | 2115 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | | | | ISFSI DEMOLITION COMPLETE ◆ | | | | | | |
| | | | | | | | | | | | | | | | | | DECOMMISSIONING & SITE RESTORATION COMPLETE ◆ | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Period 5 - Dry Fuel / GTCC Storage & Transfer** | 2075 / 2089 | 2090 | 2091 | 2092 | 2093 | 2094 | 2095 | 2096 | 2097 | 2098 | 2099 | 2100 | 2101 | 2102 | 2103 | 2104 | 2105 | 2106 | 2107 | 2108 | 2109 | 2110 | 2111 | 2112 | 2113 | 2114 | 2115 |
| Administration | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Engineering | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Health Physics/Rad Protection | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Management | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Maintenance & Operations | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Quality Assurance | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Utility Staff** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **General Contractor Staff** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Period 6 - ISFSI Decommissioning** | 2075 / 2089 | 2090 | 2091 | 2092 | 2093 | 2094 | 2095 | 2096 | 2097 | 2098 | 2099 | 2100 | 2101 | 2102 | 2103 | 2104 | 2105 | 2106 | 2107 | 2108 | 2109 | 2110 | 2111 | 2112 | 2113 | 2114 | 2115 |
| Administration | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Engineering | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Health Physics/Rad Protection | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Management | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Maintenance & Operations | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Quality Assurance | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| **Utility Staff** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **4** | - | - |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Project Management | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | |
| Engineering | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | |
| Health Physics/Rad Protection | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Administration | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Maintenance & Operations | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Quality Assurance | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | |
| Waste Management | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | |
| **General Contractor Staff** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **4** | **6** | - | - |

## Appendix E-1 - Waste Disposal Summary
## Turkey Point Unit 3
## Scenario 1 - Prompt DECON following Unit 4 Shutdown
**2020 Dollars**

| Facility | Waste Form | Waste Class | Waste Weight (LBs) | Waste Volume (CF) | Burial Volume (CF) | Packaging Cost | Transportation Cost | Base Burial Cost | Total Waste Cost |
|---|---|---|---|---|---|---|---|---|---|
| **BC Facility** | | | | | | | | | |
| WCS | Class BC | BC | 245,911 | 1,412 | 2,075 | $ 282,000 | $ 1,715,383 | $ 14,726,947 | $ 16,724,330 |
| | GTCC | GTCC | 407,628 | 901 | 2,061 | $ 4,708,000 | $ 1,342,496 | $ 10,403,722 | $ 16,454,218 |
| | | | **653,539** | **2,313** | **4,136** | **$ 4,990,000** | **$ 3,057,879** | **$ 25,130,669** | **$ 33,178,548** |
| **Bear Creek** | | | | | | | | | |
| | Containerized | A | 225,284 | 2,717 | 2,717 | $ - | $ 217,810 | $ 378,056 | $ 595,866 |
| | | | **225,284** | **2,717** | **2,717** | **$ -** | **$ 217,810** | **$ 378,056** | **$ 595,866** |
| **Energy*Solutions*** | | | | | | | | | |
| Clive | Debris | A | 45,337,048 | 554,734 | 554,907 | $ 978,630 | $ 6,586,248 | $ 38,717,951 | $ 46,282,829 |
| Clive | Debris, Oversized | A | 850,165 | 14,095 | 14,098 | $ 18,840 | $ 130,412 | $ 2,278,221 | $ 2,427,472 |
| Clive | Contaminated Soil | A | 32,877,700 | 328,481 | 328,777 | $ 692,370 | $ 4,669,279 | $ 12,568,500 | $ 17,930,149 |
| Clive | Containerized | A | 46,597 | 360 | 376 | $ 180,627 | $ 179,624 | $ 185,196 | $ 545,447 |
| Clive | Large Component | A | 1,964,843 | 20,274 | 20,274 | $ 1,842,447 | $ 1,205,872 | $ 8,013,694 | $ 11,062,013 |
| | | | **81,076,353** | **917,944** | **918,432** | **$ 3,712,914** | **$ 12,771,434** | **$ 61,763,562** | **$ 78,247,910** |
| **Other** | | | | | | | | | |
| Local Landfill | Clean/Exempt | F | 1,232,426 | 23,332 | 23,332 | $ - | $ 3,033 | $ 54,364 | $ 57,397 |
| Local Scrap Metal Recycler | Recycled Metals | F | 4,564,427 | 86,408 | 86,408 | $ - | $ 44,068 | $ - | $ 44,068 |
| On Site- Reuse | Clean/Reuse | F | 61,795,906 | 671,592 | 727,200 | $ - | $ - | $ - | $ - |
| | | | **67,592,759** | **781,332** | **836,940** | **$ -** | **$ 47,101** | **$ 54,364** | **$ 101,465** |
| **Grand Total** | | | **149,547,935** | **1,704,307** | **1,762,225** | **$ 8,702,914** | **$ 16,094,224** | **$ 87,326,650** | **$ 112,123,788** |

## Appendix E-1 - Waste Disposal Summary
## Turkey Point Unit 4
## Scenario 1 - Prompt DECON following Unit 4 Shutdown
**2020 Dollars**

| Facility | Waste Form | Waste Class | Waste Weight (LBs) | Waste Volume (CF) | Burial Volume (CF) | Packaging Cost | Transportation Cost | Base Burial Cost | Total Waste Cost |
|---|---|---|---|---|---|---|---|---|---|
| **BC Facility** | | | | | | | | | |
| WCS | Class BC | BC | 245,911 | 1,532 | 2,075 | $ 282,000 | $ 1,715,383 | $ 14,726,947 | $ 16,724,330 |
| | GTCC | GTCC | 407,628 | 901 | 2,061 | $ 4,708,000 | $ 1,342,496 | $ 10,403,722 | $ 16,454,218 |
| | | | **653,539** | **2,433** | **4,136** | **$ 4,990,000** | **$ 3,057,879** | **$ 25,130,669** | **$ 33,178,548** |
| **Bear Creek** | | | | | | | | | |
| | Containerized | A | 335,454 | 4,144 | 4,144 | $ - | $ 331,450 | $ 575,302 | $ 906,752 |
| | | | **335,454** | **4,144** | **4,144** | **$ -** | **$ 331,450** | **$ 575,302** | **$ 906,752** |
| **Energy*Solutions*** | | | | | | | | | |
| Clive | Debris | A | 93,321,478 | 1,141,458 | 1,141,847 | $ 1,991,280 | $ 13,423,163 | $ 75,942,257 | $ 91,356,700 |
| Clive | Debris, Oversized | A | 904,841 | 14,096 | 14,099 | $ 18,840 | $ 130,412 | $ 2,278,221 | $ 2,427,472 |
| Clive | Contaminated Soil | A | 32,877,700 | 328,481 | 328,777 | $ 692,370 | $ 4,669,279 | $ 12,568,500 | $ 17,930,149 |
| Clive | Containerized | A | 46,597 | 360 | 376 | $ 180,627 | $ 179,624 | $ 185,196 | $ 545,447 |
| Clive | Large Component | A | 1,964,843 | 20,274 | 20,274 | $ 1,842,447 | $ 1,205,872 | $ 8,013,694 | $ 11,062,013 |
| | | | **129,115,460** | **1,504,670** | **1,505,373** | **$ 4,725,564** | **$ 19,608,349** | **$ 98,987,869** | **$ 123,321,781** |
| **Other** | | | | | | | | | |
| Local Landfill | Clean/Exempt | F | 1,232,426 | 23,332 | 20,567 | $ - | $ 2,674 | $ 47,920 | $ 50,594 |
| Local Scrap Metal Recycler | Recycled Metals | F | 5,753,932 | 124,026 | 124,416 | $ - | $ 63,452 | $ - | $ 63,452 |
| On Site- Reuse | Clean/Reuse | F | 136,848,466 | 1,421,972 | 1,610,259 | $ - | $ - | $ - | $ - |
| | | | **143,834,824** | **1,569,330** | **1,755,241** | **$ -** | **$ 66,126** | **$ 47,920** | **$ 114,046** |
| **Grand Total** | | | **273,939,276** | **3,080,577** | **3,268,895** | **9,715,564** | **23,063,804** | **124,741,760** | **157,521,127** |

## Appendix E-2 - Waste Disposal Summary
## Turkey Point Unit 3
## Scenario 2 - SAFSTOR
**2020 Dollars**

| Facility | Waste Form | Waste Class | Waste Weight (LBs) | Waste Volume (CF) | Burial Volume (CF) | Packaging Cost | Transportation Cost | Base Burial Cost | Total Waste Cost |
|---|---|---|---|---|---|---|---|---|---|
| **BC Facility** | | | | | | | | | |
| WCS | Class BC | BC | 151,559 | 1,444 | 1,343 | $ 168,000 | $ 1,258,171 | $ 9,326,758 | $ 10,752,929 |
| | GTCC | GTCC | 407,628 | 901 | 2,061 | $ 4,708,000 | $ 1,342,496 | $ 10,403,722 | $ 16,454,218 |
| | | | **559,187** | **2,345** | **3,404** | **$ 4,876,000** | **$ 2,600,667** | **$ 19,730,480** | **$ 27,207,147** |
| **Bear Creek** | | | | | | | | | |
| | Processed Waste | A | 82,738 | 1,379 | 1,379 | $ - | $ 113,640 | $ 197,247 | $ 310,887 |
| | | | **82,738** | **1,379** | **1,379** | **$ -** | **$ 113,640** | **$ 197,247** | **$ 310,887** |
| **Energy*Solutions*** | | | | | | | | | |
| Clive | Debris | A | 44,716,687 | 542,890 | 543,032 | $ 969,210 | $ 6,521,042 | $ 38,124,682 | $ 45,614,934 |
| Clive | Debris, Oversized | A | 2,118,671 | 25,836 | 25,841 | $ 28,260 | $ 195,617 | $ 3,417,331 | $ 3,641,209 |
| Clive | Contaminated Soil | A | 29,912,700 | 298,858 | 299,127 | $ 626,430 | $ 4,224,586 | $ 11,371,500 | $ 16,222,516 |
| Clive | Containerized | A | 71,322 | 611 | 632 | $ 270,940 | $ 269,436 | $ 277,794 | $ 818,170 |
| Clive | Large Component | A | 1,892,553 | 22,314 | 22,314 | $ 1,832,840 | $ 1,171,712 | $ 7,442,145 | $ 10,446,696 |
| | | | **78,711,933** | **890,509** | **890,946** | **$ 3,727,680** | **$ 12,382,392** | **$ 60,633,453** | **$ 76,743,525** |
| **Other** | | | | | | | | | |
| Local Landfill | Clean/Exempt | F | 1,232,426 | 23,332 | 20,567 | $ - | $ 2,674 | $ 47,920 | $ 50,594 |
| Local Scrap Metal Recycler | Recycled Metals | F | 4,571,145 | 96,866 | 97,200 | $ - | $ 49,572 | $ - | $ 49,572 |
| On Site- Reuse | Clean/Reuse | F | 61,795,906 | 719,334 | 727,200 | $ - | $ - | $ - | $ - |
| | | | **67,599,477** | **839,532** | **844,967** | **$ -** | **$ 52,246** | **$ 47,920** | **$ 100,166** |
| **Grand Total** | | | **146,953,335** | **1,733,765** | **1,740,695** | **$ 8,603,680** | **$ 15,148,944** | **$ 80,609,099** | **$ 104,361,724** |

## Appendix E-2 - Waste Disposal Summary
## Turkey Point Unit 4
## Scenario 2 - SAFSTOR
**2020 Dollars**

| Facility | Waste Form | Waste Class | Waste Weight (LBs) | Waste Volume (CF) | Burial Volume (CF) | Packaging Cost | Transportation Cost | Base Burial Cost | Total Waste Cost |
|---|---|---|---|---|---|---|---|---|---|
| **BC Facility** | | | | | | | | | |
| WCS | Class BC | BC | 151,559 | 1,444 | 1,343 | $ 168,000 | $ 1,258,171 | $ 9,326,758 | $ 10,752,929 |
| | GTCC | GTCC | 407,628 | 901 | 2,061 | $ 4,708,000 | $ 1,342,496 | $ 10,403,722 | $ 16,454,218 |
| | | | **559,187** | **2,345** | **3,404** | **$ 4,876,000** | **$ 2,600,667** | **$ 19,730,480** | **$ 27,207,147** |
| **Bear Creek** | | | | | | | | | |
| | Processed Waste | A | 134,389 | 2,257 | 2,257 | $ - | $ 179,930 | $ 312,307 | $ 492,237 |
| | | | **134,389** | **2,257** | **2,257** | **$ -** | **$ 179,930** | **$ 312,307** | **$ 492,237** |
| **Energy*Solutions*** | | | | | | | | | |
| Clive | Debris | A | 92,245,252 | 1,119,433 | 1,119,765 | $ 1,967,730 | $ 13,260,148 | $ 74,459,086 | $ 89,686,964 |
| Clive | Debris, Oversized | A | 2,111,297 | 25,836 | 25,841 | $ 28,260 | $ 195,617 | $ 3,417,331 | $ 3,641,209 |
| Clive | Contaminated Soil | A | 32,877,700 | 328,481 | 328,777 | $ 692,370 | $ 4,669,279 | $ 12,568,500 | $ 17,930,149 |
| Clive | Containerized | A | 71,322 | 611 | 632 | $ 270,940 | $ 269,436 | $ 277,794 | $ 818,170 |
| Clive | Large Component | A | 1,908,461 | 20,498 | 20,498 | $ 1,837,550 | $ 1,204,117 | $ 8,013,694 | $ 11,055,362 |
| | | | **129,214,032** | **1,494,859** | **1,495,513** | **$ 4,796,850** | **$ 19,598,597** | **$ 98,736,406** | **$ 123,131,854** |
| **Other** | | | | | | | | | |
| Local Landfill | Clean/Exempt | F | 1,232,426 | 23,332 | 20,567 | $ - | $ 2,674 | $ 47,920 | $ 50,594 |
| Local Scrap Metal Recycler | Recycled Metals | F | 6,123,518 | 150,514 | 150,660 | $ - | $ 76,837 | $ - | $ 76,837 |
| On Site- Reuse | Clean/Reuse | F | 136,898,566 | 1,422,562 | 1,610,682 | $ - | $ - | $ - | $ - |
| | | | **144,254,510** | **1,596,408** | **1,781,909** | **$ -** | **$ 79,510** | **$ 47,920** | **$ 127,431** |
| **Grand Total** | | | **274,162,118** | **3,095,869** | **3,283,083** | **9,672,850** | **$ 22,458,704** | **$ 118,827,113** | **$ 150,958,668** |

**Appendix F-1**

**Florida Power and Light - Turkey Point Units 3 & 4**
**SCENARIO 1 - PROMPT DECON**
**Estimated Annual Spending**
(thousands of 2020 dollars)

| Year | License Termination | Spent Fuel | Site Restoration | Total |
|---|---|---|---|---|
| 2050 | - | - | - | - |
| 2051 | - | - | - | - |
| 2052 | 6,592 | 7,762 | - | 14,354 |
| 2053 | 36,328 | 34,112 | - | 70,440 |
| 2054 | 33,686 | 29,383 | - | 63,070 |
| 2055 | 38,148 | 57,082 | - | 95,230 |
| 2056 | 75,678 | 35,738 | - | 111,416 |
| 2057 | 111,558 | 6,391 | - | 117,949 |
| 2058 | 108,716 | 6,391 | 10,094 | 125,201 |
| 2059 | 145,403 | 6,391 | 15,637 | 167,431 |
| 2060 | 162,857 | 6,391 | 16,077 | 185,325 |
| 2061 | 184,872 | 6,391 | 12,065 | 203,329 |
| 2062 | 78,156 | 6,391 | 4,106 | 88,653 |
| 2063 | 8,304 | 6,391 | 1,909 | 16,605 |
| 2064 | - | 6,391 | - | 6,391 |
| 2065 | - | 6,391 | - | 6,391 |
| 2066 | - | 6,391 | - | 6,391 |
| 2067 | - | 6,391 | - | 6,391 |
| 2068 | - | 6,391 | - | 6,391 |
| 2069 | - | 6,391 | - | 6,391 |
| 2070 | - | 6,391 | - | 6,391 |
| 2071 | 7,014 | 6,391 | - | 13,405 |
| 2072 | 14,028 | 6,913 | - | 20,941 |
| 2073 | 7,014 | 15,290 | - | 22,304 |
| 2074 | - | 800 | - | 800 |
| 2075 | - | - | - | - |
| Total | 1,018,355 | 282,949 | 59,888 | 1,361,192 |

**Appendix F-1**

**Florida Power and Light - Turkey Point Unit 3**
**SCENARIO 1 - PROMPT DECON**
**Estimated Annual Spending**
(thousands of 2020 dollars)

| Year | License Termination | Spent Fuel | Site Restoration | Total |
|---|---|---|---|---|
| 2050 | - | - | - | - |
| 2051 | - | - | - | - |
| 2052 | 6,592 | 7,762 | - | 14,354 |
| 2053 | 24,253 | 21,095 | - | 45,347 |
| 2054 | 15,552 | 13,024 | - | 28,577 |
| 2055 | 18,117 | 25,444 | - | 43,561 |
| 2056 | 43,825 | 17,100 | - | 60,925 |
| 2057 | 58,453 | 3,198 | - | 61,650 |
| 2058 | 58,891 | 3,198 | 3,380 | 65,469 |
| 2059 | 71,369 | 3,198 | 6,816 | 81,382 |
| 2060 | 82,846 | 3,198 | 6,870 | 92,914 |
| 2061 | 65,889 | 3,198 | 3,540 | 72,627 |
| 2062 | 22,573 | 3,198 | 2,187 | 27,958 |
| 2063 | 1,674 | 3,198 | 1,086 | 5,958 |
| 2064 | - | 3,198 | - | 3,198 |
| 2065 | - | 3,198 | - | 3,198 |
| 2066 | - | 3,198 | - | 3,198 |
| 2067 | - | 3,198 | - | 3,198 |
| 2068 | - | 3,198 | - | 3,198 |
| 2069 | - | 3,198 | - | 3,198 |
| 2070 | - | 3,198 | - | 3,198 |
| 2071 | 3,507 | 3,198 | - | 6,705 |
| 2072 | 7,014 | 3,475 | - | 10,489 |
| 2073 | 3,507 | 8,388 | - | 11,895 |
| 2074 | - | 448 | - | 448 |
| 2075 | - | - | - | - |
| Total | 484,062 | 144,704 | 23,879 | 652,645 |

**Appendix F-1**

**Florida Power and Light - Turkey Point Unit 4**
**SCENARIO 1 - PROMPT DECON**
**Estimated Annual Spending**
(thousands of 2020 dollars)

| Year | License Termination | Spent Fuel | Site Restoration | Total |
|---|---|---|---|---|
| 2050 | - | - | - | - |
| 2051 | - | - | - | - |
| 2052 | - | - | - | - |
| 2053 | 12,076 | 13,017 | - | 25,093 |
| 2054 | 18,134 | 16,359 | - | 34,493 |
| 2055 | 20,031 | 31,638 | - | 51,669 |
| 2056 | 31,852 | 18,639 | - | 50,491 |
| 2057 | 53,105 | 3,193 | - | 56,299 |
| 2058 | 49,826 | 3,193 | 6,714 | 59,733 |
| 2059 | 74,034 | 3,193 | 8,821 | 86,049 |
| 2060 | 80,011 | 3,193 | 9,207 | 92,411 |
| 2061 | 118,983 | 3,193 | 8,525 | 130,702 |
| 2062 | 55,583 | 3,193 | 1,919 | 60,695 |
| 2063 | 6,630 | 3,193 | 823 | 10,647 |
| 2064 | - | 3,193 | - | 3,193 |
| 2065 | - | 3,193 | - | 3,193 |
| 2066 | - | 3,193 | - | 3,193 |
| 2067 | - | 3,193 | - | 3,193 |
| 2068 | - | 3,193 | - | 3,193 |
| 2069 | - | 3,193 | - | 3,193 |
| 2070 | - | 3,193 | - | 3,193 |
| 2071 | 3,507 | 3,193 | - | 6,700 |
| 2072 | 7,014 | 3,437 | - | 10,451 |
| 2073 | 3,507 | 6,902 | - | 10,409 |
| 2074 | - | 351 | - | 351 |
| 2075 | - | - | - | - |
| Total | 534,293 | 138,245 | 36,009 | 708,547 |

**Appendix F-2**

**Florida Power and Light - Turkey Point Units 3 & 4**
**SCENARIO 2 - SAFSTOR**
**Estimated Annual Spending**
(thousands of 2020 dollars)

| Year | License Termination | Spent Fuel | Site Restoration | Total |
|---|---|---|---|---|
| 2050 | - | - | - | - |
| 2051 | - | - | - | - |
| 2052 | 7,928 | 7,872 | - | 15,800 |
| 2053 | 40,444 | 34,340 | - | 74,784 |
| 2054 | 35,808 | 29,441 | - | 65,249 |
| 2055 | 27,750 | 57,118 | - | 84,868 |
| 2056 | 24,791 | 35,744 | - | 60,535 |
| 2057 | 3,441 | 9,559 | - | 13,000 |
| 2058 | 3,441 | 9,559 | - | 13,000 |
| 2059 | 3,441 | 9,559 | - | 13,000 |
| 2060 | 3,441 | 9,559 | - | 13,000 |
| 2061 | 3,441 | 9,559 | - | 13,000 |
| 2062 | 3,441 | 9,559 | - | 13,000 |
| 2063 | 3,441 | 9,559 | - | 13,000 |
| 2064 | 3,441 | 9,559 | - | 13,000 |
| 2065 | 3,441 | 9,559 | - | 13,000 |
| 2066 | 3,441 | 9,559 | - | 13,000 |
| 2067 | 3,441 | 9,559 | - | 13,000 |
| 2068 | 3,441 | 9,559 | - | 13,000 |
| 2069 | 3,441 | 9,559 | - | 13,000 |
| 2070 | 3,441 | 9,559 | - | 13,000 |
| 2071 | 3,441 | 9,559 | - | 13,000 |
| 2072 | 3,441 | 9,559 | - | 13,000 |
| 2073 | 3,441 | 7,105 | - | 10,546 |
| 2074 | 4,448 | - | - | 4,448 |
| 2075 | 4,448 | - | - | 4,448 |
| 2076 | 4,448 | - | - | 4,448 |
| 2077 | 4,448 | - | - | 4,448 |
| 2078 | 4,448 | - | - | 4,448 |
| 2079 | 4,448 | - | - | 4,448 |
| 2080 | 4,448 | - | - | 4,448 |
| 2081 | 4,448 | - | - | 4,448 |
| 2082 | 4,448 | - | - | 4,448 |
| 2083 | 4,448 | - | - | 4,448 |
| 2084 | 4,448 | - | - | 4,448 |
| 2085 | 4,448 | - | - | 4,448 |
| 2086 | 4,448 | - | - | 4,448 |
| 2087 | 4,448 | - | - | 4,448 |
| 2088 | 4,448 | - | - | 4,448 |

**Appendix F-2**

**Florida Power and Light - Turkey Point Units 3 & 4**
**SCENARIO 2 - SAFSTOR**
**Estimated Annual Spending**
(thousands of 2020 dollars)

| Year | License Termination | Spent Fuel | Site Restoration | Total |
|---|---|---|---|---|
| 2089 | 4,448 | - | - | 4,448 |
| 2090 | 4,448 | - | - | 4,448 |
| 2091 | 4,448 | - | - | 4,448 |
| 2092 | 4,448 | - | - | 4,448 |
| 2093 | 4,448 | - | - | 4,448 |
| 2094 | 4,448 | - | - | 4,448 |
| 2095 | 4,448 | - | - | 4,448 |
| 2096 | 4,448 | - | - | 4,448 |
| 2097 | 4,448 | - | - | 4,448 |
| 2098 | 4,448 | - | - | 4,448 |
| 2099 | 4,448 | - | - | 4,448 |
| 2100 | 4,448 | - | - | 4,448 |
| 2101 | 4,448 | - | - | 4,448 |
| 2102 | 4,448 | - | - | 4,448 |
| 2103 | 4,448 | - | - | 4,448 |
| 2104 | 8,805 | - | - | 8,805 |
| 2105 | 52,146 | - | - | 52,146 |
| 2106 | 79,727 | - | - | 79,727 |
| 2107 | 131,319 | - | 5,847 | 137,167 |
| 2108 | 134,788 | - | 18,504 | 153,292 |
| 2109 | 154,720 | - | 16,573 | 171,293 |
| 2110 | 184,753 | - | 13,190 | 197,943 |
| 2111 | 104,749 | - | 4,122 | 108,871 |
| 2112 | 22,759 | 3,578 | 1,871 | 28,208 |
| 2113 | - | 10,411 | - | 10,411 |
| Total | 1,202,419 | 338,557 | 60,108 | 1,601,084 |

**Appendix F-2**

**Florida Power and Light - Turkey Point Unit 3**
**SCENARIO 2 - SAFSTOR**
**Estimated Annual Spending**
(thousands of 2020 dollars)

| Year | License Termination | Spent Fuel | Site Restoration | Total |
|---|---|---|---|---|
| 2050 | - | - | - | - |
| 2051 | - | - | - | - |
| 2052 | 7,928 | 7,872 | - | 15,800 |
| 2053 | 26,028 | 21,344 | - | 47,372 |
| 2054 | 16,373 | 13,157 | - | 29,530 |
| 2055 | 13,987 | 25,534 | - | 39,521 |
| 2056 | 12,628 | 17,164 | - | 29,792 |
| 2057 | 1,713 | 4,757 | - | 6,470 |
| 2058 | 1,713 | 4,757 | - | 6,470 |
| 2059 | 1,713 | 4,757 | - | 6,470 |
| 2060 | 1,713 | 4,757 | - | 6,470 |
| 2061 | 1,713 | 4,757 | - | 6,470 |
| 2062 | 1,713 | 4,757 | - | 6,470 |
| 2063 | 1,713 | 4,757 | - | 6,470 |
| 2064 | 1,713 | 4,757 | - | 6,470 |
| 2065 | 1,713 | 4,757 | - | 6,470 |
| 2066 | 1,713 | 4,757 | - | 6,470 |
| 2067 | 1,713 | 4,757 | - | 6,470 |
| 2068 | 1,713 | 4,757 | - | 6,470 |
| 2069 | 1,713 | 4,757 | - | 6,470 |
| 2070 | 1,713 | 4,757 | - | 6,470 |
| 2071 | 1,713 | 4,757 | - | 6,470 |
| 2072 | 1,713 | 4,757 | - | 6,470 |
| 2073 | 1,713 | 3,537 | - | 5,249 |
| 2074 | 2,152 | - | - | 2,152 |
| 2075 | 2,152 | - | - | 2,152 |
| 2076 | 2,152 | - | - | 2,152 |
| 2077 | 2,152 | - | - | 2,152 |
| 2078 | 2,152 | - | - | 2,152 |
| 2079 | 2,152 | - | - | 2,152 |
| 2080 | 2,152 | - | - | 2,152 |
| 2081 | 2,152 | - | - | 2,152 |
| 2082 | 2,152 | - | - | 2,152 |
| 2083 | 2,152 | - | - | 2,152 |
| 2084 | 2,152 | - | - | 2,152 |
| 2085 | 2,152 | - | - | 2,152 |
| 2086 | 2,152 | - | - | 2,152 |
| 2087 | 2,152 | - | - | 2,152 |
| 2088 | 2,152 | - | - | 2,152 |

**Appendix F-2**

**Florida Power and Light - Turkey Point Unit 3**
**SCENARIO 2 - SAFSTOR**
**Estimated Annual Spending**
(thousands of 2020 dollars)

| Year | License Termination | Spent Fuel | Site Restoration | Total |
|---|---|---|---|---|
| 2089 | 2,152 | - | - | 2,152 |
| 2090 | 2,152 | - | - | 2,152 |
| 2091 | 2,152 | - | - | 2,152 |
| 2092 | 2,152 | - | - | 2,152 |
| 2093 | 2,152 | - | - | 2,152 |
| 2094 | 2,152 | - | - | 2,152 |
| 2095 | 2,152 | - | - | 2,152 |
| 2096 | 2,152 | - | - | 2,152 |
| 2097 | 2,152 | - | - | 2,152 |
| 2098 | 2,152 | - | - | 2,152 |
| 2099 | 2,152 | - | - | 2,152 |
| 2100 | 2,152 | - | - | 2,152 |
| 2101 | 2,152 | - | - | 2,152 |
| 2102 | 2,152 | - | - | 2,152 |
| 2103 | 2,152 | - | - | 2,152 |
| 2104 | 6,509 | - | - | 6,509 |
| 2105 | 32,022 | - | - | 32,022 |
| 2106 | 52,972 | - | - | 52,972 |
| 2107 | 62,709 | - | 1,989 | 64,698 |
| 2108 | 65,449 | - | 7,277 | 72,726 |
| 2109 | 68,302 | - | 6,874 | 75,176 |
| 2110 | 83,874 | - | 4,619 | 88,493 |
| 2111 | 26,609 | - | 2,201 | 28,810 |
| 2112 | 4,069 | 1,822 | 1,068 | 6,958 |
| 2113 | - | 5,978 | - | 5,978 |
| Total | 573,137 | 172,524 | 24,029 | 769,690 |

**Appendix F-2**

**Florida Power and Light - Turkey Point Unit 4**
**SCENARIO 2 - SAFSTOR**
**Estimated Annual Spending**
(thousands of 2020 dollars)

| Year | License Termination | Spent Fuel | Site Restoration | Total |
|---|---|---|---|---|
| 2050 | - | - | - | - |
| 2051 | - | - | - | - |
| 2052 | - | - | - | - |
| 2053 | 14,416 | 12,996 | - | 27,412 |
| 2054 | 19,435 | 16,284 | - | 35,720 |
| 2055 | 13,763 | 31,584 | - | 45,347 |
| 2056 | 12,163 | 18,581 | - | 30,743 |
| 2057 | 1,728 | 4,802 | - | 6,530 |
| 2058 | 1,728 | 4,802 | - | 6,530 |
| 2059 | 1,728 | 4,802 | - | 6,530 |
| 2060 | 1,728 | 4,802 | - | 6,530 |
| 2061 | 1,728 | 4,802 | - | 6,530 |
| 2062 | 1,728 | 4,802 | - | 6,530 |
| 2063 | 1,728 | 4,802 | - | 6,530 |
| 2064 | 1,728 | 4,802 | - | 6,530 |
| 2065 | 1,728 | 4,802 | - | 6,530 |
| 2066 | 1,728 | 4,802 | - | 6,530 |
| 2067 | 1,728 | 4,802 | - | 6,530 |
| 2068 | 1,728 | 4,802 | - | 6,530 |
| 2069 | 1,728 | 4,802 | - | 6,530 |
| 2070 | 1,728 | 4,802 | - | 6,530 |
| 2071 | 1,728 | 4,802 | - | 6,530 |
| 2072 | 1,728 | 4,802 | - | 6,530 |
| 2073 | 1,728 | 3,568 | - | 5,297 |
| 2074 | 2,296 | - | - | 2,296 |
| 2075 | 2,296 | - | - | 2,296 |
| 2076 | 2,296 | - | - | 2,296 |
| 2077 | 2,296 | - | - | 2,296 |
| 2078 | 2,296 | - | - | 2,296 |
| 2079 | 2,296 | - | - | 2,296 |
| 2080 | 2,296 | - | - | 2,296 |
| 2081 | 2,296 | - | - | 2,296 |
| 2082 | 2,296 | - | - | 2,296 |
| 2083 | 2,296 | - | - | 2,296 |
| 2084 | 2,296 | - | - | 2,296 |
| 2085 | 2,296 | - | - | 2,296 |
| 2086 | 2,296 | - | - | 2,296 |
| 2087 | 2,296 | - | - | 2,296 |
| 2088 | 2,296 | - | - | 2,296 |

**Appendix F-2**

**Florida Power and Light - Turkey Point Unit 4**
**SCENARIO 2 - SAFSTOR**
**Estimated Annual Spending**
(thousands of 2020 dollars)

| Year | License Termination | Spent Fuel | Site Restoration | Total |
|---|---|---|---|---|
| 2089 | 2,296 | - | - | 2,296 |
| 2090 | 2,296 | - | - | 2,296 |
| 2091 | 2,296 | - | - | 2,296 |
| 2092 | 2,296 | - | - | 2,296 |
| 2093 | 2,296 | - | - | 2,296 |
| 2094 | 2,296 | - | - | 2,296 |
| 2095 | 2,296 | - | - | 2,296 |
| 2096 | 2,296 | - | - | 2,296 |
| 2097 | 2,296 | - | - | 2,296 |
| 2098 | 2,296 | - | - | 2,296 |
| 2099 | 2,296 | - | - | 2,296 |
| 2100 | 2,296 | - | - | 2,296 |
| 2101 | 2,296 | - | - | 2,296 |
| 2102 | 2,296 | - | - | 2,296 |
| 2103 | 2,296 | - | - | 2,296 |
| 2104 | 2,296 | - | - | 2,296 |
| 2105 | 20,124 | - | - | 20,124 |
| 2106 | 26,755 | - | - | 26,755 |
| 2107 | 68,611 | - | 3,858 | 72,469 |
| 2108 | 69,339 | - | 11,227 | 80,566 |
| 2109 | 86,418 | - | 9,699 | 96,117 |
| 2110 | 100,879 | - | 8,571 | 109,450 |
| 2111 | 78,140 | - | 1,921 | 80,061 |
| 2112 | 18,691 | 1,756 | 803 | 21,249 |
| 2113 | - | 4,433 | - | 4,433 |
| Total | 629,282 | 166,033 | 36,079 | 831,394 |

**Appendix F-3**

**Florida Power and Light - Turkey Point Units 3 & 4**

**SCENARIO 1 - PROMPT DECON**

**Estimated Annual Spending**

**Labor, Material/Equip, Waste, Other Direct Cost**

(thousands of 2020 dollars)

| Year | Labor | Material & Equipment | Waste Packaging & Transportation | Waste Disposal | Other Direct Cost | Total |
|---|---|---|---|---|---|---|
| 2050 | - | - | | - | - | - |
| 2051 | - | - | - | - | - | - |
| 2052 | 10,954 | 1,126 | - | - | 2,274 | 14,354 |
| 2053 | 57,237 | 4,672 | - | - | 8,531 | 70,440 |
| 2054 | 49,256 | 4,201 | - | - | 9,613 | 63,070 |
| 2055 | 44,602 | 38,634 | - | - | 11,993 | 95,230 |
| 2056 | 78,403 | 8,330 | 8,512 | - | 16,170 | 111,416 |
| 2057 | 63,796 | 29,082 | 2,065 | 8,643 | 14,363 | 117,949 |
| 2058 | 70,351 | 31,533 | 3,084 | 11,016 | 9,217 | 125,202 |
| 2059 | 97,116 | 36,997 | 5,010 | 19,454 | 8,854 | 167,431 |
| 2060 | 90,467 | 29,365 | 12,816 | 46,930 | 5,748 | 185,325 |
| 2061 | 53,481 | 22,428 | 22,362 | 99,910 | 5,147 | 203,329 |
| 2062 | 28,185 | 9,944 | 9,411 | 36,363 | 4,750 | 88,653 |
| 2063 | 7,080 | 999 | 1,424 | 3,999 | 3,104 | 16,605 |
| 2064 | 4,495 | 194 | - | - | 1,703 | 6,391 |
| 2065 | 4,495 | 194 | - | - | 1,703 | 6,391 |
| 2066 | 4,495 | 194 | - | - | 1,703 | 6,391 |
| 2067 | 4,495 | 194 | - | - | 1,703 | 6,391 |
| 2068 | 4,495 | 194 | - | - | 1,703 | 6,391 |
| 2069 | 4,495 | 194 | - | - | 1,703 | 6,391 |
| 2070 | 4,495 | 194 | - | - | 1,703 | 6,391 |
| 2071 | 4,689 | 194 | - | 6,769 | 1,752 | 13,405 |
| 2072 | 5,259 | 197 | - | 13,547 | 1,938 | 20,941 |
| 2073 | 12,143 | 2,253 | - | 6,763 | 1,145 | 22,304 |
| 2074 | 688 | 66 | - | - | 46 | 800 |
| 2075 | - | - | - | - | - | - |
| 2076 | - | - | - | - | - | - |
| Total | 705,172 | 221,379 | 64,684 | 253,394 | 116,563 | 1,361,192 |

**Appendix F-3**

**Florida Power and Light - Turkey Point Unit 3**

**SCENARIO 1 - PROMPT DECON**

**Estimated Annual Spending**

**Labor, Material/Equip, Waste, Other Direct Cost**

(thousands of 2020 dollars)

| Year | Labor | Material & Equipment | Waste Packaging & Transportation | Waste Disposal | Other Direct Cost | Total |
|---|---|---|---|---|---|---|
| 2050 | - | - | | - | - | - |
| 2051 | - | - | - | - | - | - |
| 2052 | 10,954 | 1,126 | - | - | 2,274 | 14,354 |
| 2053 | 37,627 | 2,718 | - | - | 5,003 | 45,347 |
| 2054 | 21,953 | 1,870 | - | - | 4,754 | 28,577 |
| 2055 | 21,340 | 16,698 | - | - | 5,523 | 43,561 |
| 2056 | 42,576 | 4,771 | 4,645 | - | 8,933 | 60,925 |
| 2057 | 31,594 | 17,117 | 664 | 4,893 | 7,383 | 61,651 |
| 2058 | 35,477 | 17,787 | 1,304 | 7,024 | 3,876 | 65,469 |
| 2059 | 48,420 | 17,650 | 2,471 | 8,676 | 4,166 | 81,382 |
| 2060 | 43,447 | 10,895 | 7,676 | 27,972 | 2,924 | 92,914 |
| 2061 | 22,351 | 6,145 | 8,359 | 33,167 | 2,605 | 72,627 |
| 2062 | 11,619 | 2,769 | 2,385 | 8,796 | 2,389 | 27,958 |
| 2063 | 3,827 | 559 | - | - | 1,572 | 5,958 |
| 2064 | 2,236 | 94 | - | - | 867 | 3,198 |
| 2065 | 2,236 | 94 | - | - | 867 | 3,198 |
| 2066 | 2,236 | 94 | - | - | 867 | 3,198 |
| 2067 | 2,236 | 94 | - | - | 867 | 3,198 |
| 2068 | 2,236 | 94 | - | - | 867 | 3,198 |
| 2069 | 2,236 | 94 | - | - | 867 | 3,198 |
| 2070 | 2,236 | 94 | - | - | 867 | 3,198 |
| 2071 | 2,334 | 94 | - | 3,385 | 892 | 6,705 |
| 2072 | 2,626 | 96 | - | 6,774 | 994 | 10,489 |
| 2073 | 6,588 | 1,336 | - | 3,381 | 590 | 11,895 |
| 2074 | 386 | 39 | - | - | 23 | 448 |
| 2075 | - | - | - | - | - | - |
| 2076 | - | - | - | - | - | - |
| Total | 358,772 | 102,330 | 27,505 | 104,067 | 59,971 | 652,646 |

**Appendix F-3**

**Florida Power and Light - Turkey Point Unit 4**

**SCENARIO 1 - PROMPT DECON**

**Estimated Annual Spending**

**Labor, Material/Equip, Waste, Other Direct Cost**

(thousands of 2020 dollars)

| Year | Labor | Material & Equipment | Waste Packaging & Transportation | Waste Disposal | Other Direct Cost | Total |
|---|---|---|---|---|---|---|
| 2050 | - | - | | - | - | - |
| 2051 | - | - | | - | - | - |
| 2052 | - | - | - | - | - | - |
| 2053 | 19,611 | 1,954 | - | - | 3,529 | 25,093 |
| 2054 | 27,303 | 2,331 | - | - | 4,859 | 34,493 |
| 2055 | 23,262 | 21,937 | - | - | 6,470 | 51,669 |
| 2056 | 35,827 | 3,559 | 3,868 | - | 7,237 | 50,491 |
| 2057 | 32,202 | 11,965 | 1,401 | 3,750 | 6,980 | 56,299 |
| 2058 | 34,874 | 13,746 | 1,780 | 3,992 | 5,341 | 59,733 |
| 2059 | 48,696 | 19,347 | 2,539 | 10,778 | 4,689 | 86,049 |
| 2060 | 47,020 | 18,470 | 5,140 | 18,957 | 2,824 | 92,411 |
| 2061 | 31,130 | 16,283 | 14,003 | 66,744 | 2,542 | 130,702 |
| 2062 | 16,566 | 7,175 | 7,025 | 27,567 | 2,361 | 60,695 |
| 2063 | 3,252 | 439 | 1,424 | 3,999 | 1,532 | 10,647 |
| 2064 | 2,259 | 100 | - | - | 835 | 3,193 |
| 2065 | 2,259 | 100 | - | - | 835 | 3,193 |
| 2066 | 2,259 | 100 | - | - | 835 | 3,193 |
| 2067 | 2,259 | 100 | - | - | 835 | 3,193 |
| 2068 | 2,259 | 100 | - | - | 835 | 3,193 |
| 2069 | 2,259 | 100 | - | - | 835 | 3,193 |
| 2070 | 2,259 | 100 | - | - | 835 | 3,193 |
| 2071 | 2,356 | 100 | - | 3,385 | 860 | 6,700 |
| 2072 | 2,633 | 101 | - | 6,773 | 944 | 10,451 |
| 2073 | 5,555 | 917 | - | 3,382 | 555 | 10,409 |
| 2074 | 302 | 27 | - | - | 23 | 351 |
| 2075 | - | - | - | - | - | - |
| 2076 | - | - | - | - | - | - |
| Total | 346,399 | 119,049 | 37,180 | 149,327 | 56,592 | 708,547 |

**Appendix F-4**

**Florida Power and Light - Turkey Point Units 3 & 4**

**SCENARIO 2 - SAFSTOR**

**Estimated Annual Spending**

**Labor, Material/Equip, Waste, Other Direct Cost**

(thousands of 2020 dollars)

| Year | Labor | Material & Equipment | Waste Packaging & Transportation | Waste Disposal | Other Direct Cost | Total |
|---|---|---|---|---|---|---|
| 2050 | - | - | - | - | - | - |
| 2051 | - | - | - | - | - | - |
| 2052 | 12,150 | 1,394 | - | - | 2,255 | 15,800 |
| 2053 | 60,940 | 5,598 | - | - | 8,247 | 74,784 |
| 2054 | 51,212 | 4,750 | - | - | 9,287 | 65,249 |
| 2055 | 39,562 | 36,188 | - | - | 9,118 | 84,868 |
| 2056 | 42,350 | 8,583 | - | - | 9,602 | 60,535 |
| 2057 | 8,069 | 1,335 | - | - | 3,597 | 13,000 |
| 2058 | 8,069 | 1,335 | - | - | 3,597 | 13,000 |
| 2059 | 8,069 | 1,335 | - | - | 3,597 | 13,000 |
| 2060 | 8,069 | 1,335 | - | - | 3,597 | 13,000 |
| 2061 | 8,069 | 1,335 | - | - | 3,597 | 13,000 |
| 2062 | 8,069 | 1,335 | - | - | 3,597 | 13,000 |
| 2063 | 8,069 | 1,335 | - | - | 3,597 | 13,000 |
| 2064 | 8,069 | 1,335 | - | - | 3,597 | 13,000 |
| 2065 | 8,069 | 1,335 | - | - | 3,597 | 13,000 |
| 2066 | 8,069 | 1,335 | - | - | 3,597 | 13,000 |
| 2067 | 8,069 | 1,335 | - | - | 3,597 | 13,000 |
| 2068 | 8,069 | 1,335 | - | - | 3,597 | 13,000 |
| 2069 | 8,069 | 1,335 | - | - | 3,597 | 13,000 |
| 2070 | 8,069 | 1,335 | - | - | 3,597 | 13,000 |
| 2071 | 8,069 | 1,335 | - | - | 3,597 | 13,000 |
| 2072 | 8,069 | 1,335 | - | - | 3,597 | 13,000 |
| 2073 | 5,847 | 1,265 | - | - | 3,434 | 10,546 |
| 2074 | 1,996 | 386 | - | - | 2,066 | 4,448 |
| 2075 | 1,996 | 386 | - | - | 2,066 | 4,448 |
| 2076 | 1,996 | 386 | - | - | 2,066 | 4,448 |
| 2077 | 1,996 | 386 | - | - | 2,066 | 4,448 |
| 2078 | 1,996 | 386 | - | - | 2,066 | 4,448 |
| 2079 | 1,996 | 386 | - | - | 2,066 | 4,448 |
| 2080 | 1,996 | 386 | - | - | 2,066 | 4,448 |
| 2081 | 1,996 | 386 | - | - | 2,066 | 4,448 |
| 2082 | 1,996 | 386 | - | - | 2,066 | 4,448 |
| 2083 | 1,996 | 386 | - | - | 2,066 | 4,448 |
| 2084 | 1,996 | 386 | - | - | 2,066 | 4,448 |
| 2085 | 1,996 | 386 | - | - | 2,066 | 4,448 |
| 2086 | 1,996 | 386 | - | - | 2,066 | 4,448 |
| 2087 | 1,996 | 386 | - | - | 2,066 | 4,448 |
| 2088 | 1,996 | 386 | - | - | 2,066 | 4,448 |
| 2089 | 1,996 | 386 | - | - | 2,066 | 4,448 |
| 2090 | 1,996 | 386 | - | - | 2,066 | 4,448 |
| 2091 | 1,996 | 386 | - | - | 2,066 | 4,448 |
| 2092 | 1,996 | 386 | - | - | 2,066 | 4,448 |

**Appendix F-4**

**Florida Power and Light - Turkey Point Units 3 & 4**

**SCENARIO 2 - SAFSTOR**

**Estimated Annual Spending**

**Labor, Material/Equip, Waste, Other Direct Cost**

(thousands of 2020 dollars)

| Year | Labor | Material & Equipment | Waste Packaging & Transportation | Waste Disposal | Other Direct Cost | Total |
|---|---|---|---|---|---|---|
| 2093 | 1,996 | 386 | - | - | 2,066 | 4,448 |
| 2094 | 1,996 | 386 | - | - | 2,066 | 4,448 |
| 2095 | 1,996 | 386 | - | - | 2,066 | 4,448 |
| 2096 | 1,996 | 386 | - | - | 2,066 | 4,448 |
| 2097 | 1,996 | 386 | - | - | 2,066 | 4,448 |
| 2098 | 1,996 | 386 | - | - | 2,066 | 4,448 |
| 2099 | 1,996 | 386 | - | - | 2,066 | 4,448 |
| 2100 | 1,996 | 386 | - | - | 2,066 | 4,448 |
| 2101 | 1,996 | 386 | - | - | 2,066 | 4,448 |
| 2102 | 1,996 | 386 | - | - | 2,066 | 4,448 |
| 2103 | 1,996 | 386 | - | - | 2,066 | 4,448 |
| 2104 | 5,523 | 487 | - | - | 2,795 | 8,805 |
| 2105 | 36,910 | 2,253 | 4,617 | - | 8,367 | 52,146 |
| 2106 | 36,836 | 20,301 | 7,385 | 3,104 | 12,100 | 79,727 |
| 2107 | 76,621 | 43,479 | 2,203 | 7,278 | 7,585 | 137,167 |
| 2108 | 83,557 | 29,370 | 5,680 | 22,184 | 7,501 | 148,293 |
| 2109 | 93,819 | 26,635 | 9,345 | 36,572 | 4,923 | 171,293 |
| 2110 | 57,858 | 22,219 | 20,968 | 95,833 | 3,566 | 200,443 |
| 2111 | 22,881 | 13,793 | 12,571 | 56,764 | 2,863 | 108,872 |
| 2112 | 10,554 | 1,336 | 2,950 | 14,042 | 1,826 | 30,707 |
| 2113 | 7,806 | 2,195 | - | - | 410 | 10,411 |
| 2114 | - | - | - | - | - | - |
| 2115 | - | - | - | - | - | - |
| Total | 833,394 | 252,795 | 65,719 | 235,777 | 213,398 | 1,601,084 |

**Appendix F-4**

**Florida Power and Light - Turkey Point Unit 3**

**SCENARIO 2 - SAFSTOR**

**Estimated Annual Spending**

**Labor, Material/Equip, Waste, Other Direct Cost**

(thousands of 2020 dollars)

| Year | Labor | Material & Equipment | Waste Packaging & Transportation | Waste Disposal | Other Direct Cost | Total |
|---|---|---|---|---|---|---|
| 2050 | - | - | - | - | - | - |
| 2051 | - | - | - | - | - | - |
| 2052 | 12,150 | 1,394 | - | - | 2,255 | 15,800 |
| 2053 | 39,268 | 3,251 | - | - | 4,853 | 47,372 |
| 2054 | 22,723 | 2,145 | - | - | 4,661 | 29,530 |
| 2055 | 18,122 | 16,774 | - | - | 4,625 | 39,521 |
| 2056 | 21,574 | 3,303 | - | - | 4,914 | 29,792 |
| 2057 | 4,014 | 661 | - | - | 1,795 | 6,470 |
| 2058 | 4,014 | 661 | - | - | 1,795 | 6,470 |
| 2059 | 4,014 | 661 | - | - | 1,795 | 6,470 |
| 2060 | 4,014 | 661 | - | - | 1,795 | 6,470 |
| 2061 | 4,014 | 661 | - | - | 1,795 | 6,470 |
| 2062 | 4,014 | 661 | - | - | 1,795 | 6,470 |
| 2063 | 4,014 | 661 | - | - | 1,795 | 6,470 |
| 2064 | 4,014 | 661 | - | - | 1,795 | 6,470 |
| 2065 | 4,014 | 661 | - | - | 1,795 | 6,470 |
| 2066 | 4,014 | 661 | - | - | 1,795 | 6,470 |
| 2067 | 4,014 | 661 | - | - | 1,795 | 6,470 |
| 2068 | 4,014 | 661 | - | - | 1,795 | 6,470 |
| 2069 | 4,014 | 661 | - | - | 1,795 | 6,470 |
| 2070 | 4,014 | 661 | - | - | 1,795 | 6,470 |
| 2071 | 4,014 | 661 | - | - | 1,795 | 6,470 |
| 2072 | 4,014 | 661 | - | - | 1,795 | 6,470 |
| 2073 | 2,910 | 628 | - | - | 1,711 | 5,249 |
| 2074 | 966 | 164 | - | - | 1,022 | 2,152 |
| 2075 | 966 | 164 | - | - | 1,022 | 2,152 |
| 2076 | 966 | 164 | - | - | 1,022 | 2,152 |
| 2077 | 966 | 164 | - | - | 1,022 | 2,152 |
| 2078 | 966 | 164 | - | - | 1,022 | 2,152 |
| 2079 | 966 | 164 | - | - | 1,022 | 2,152 |
| 2080 | 966 | 164 | - | - | 1,022 | 2,152 |
| 2081 | 966 | 164 | - | - | 1,022 | 2,152 |
| 2082 | 966 | 164 | - | - | 1,022 | 2,152 |
| 2083 | 966 | 164 | - | - | 1,022 | 2,152 |
| 2084 | 966 | 164 | - | - | 1,022 | 2,152 |
| 2085 | 966 | 164 | - | - | 1,022 | 2,152 |
| 2086 | 966 | 164 | - | - | 1,022 | 2,152 |
| 2087 | 966 | 164 | - | - | 1,022 | 2,152 |
| 2088 | 966 | 164 | - | - | 1,022 | 2,152 |
| 2089 | 966 | 164 | - | - | 1,022 | 2,152 |
| 2090 | 966 | 164 | - | - | 1,022 | 2,152 |
| 2091 | 966 | 164 | - | - | 1,022 | 2,152 |
| 2092 | 966 | 164 | - | - | 1,022 | 2,152 |
| 2093 | 966 | 164 | - | - | 1,022 | 2,152 |

**Appendix F-4**

**Florida Power and Light - Turkey Point Unit 3**

**SCENARIO 2 - SAFSTOR**

**Estimated Annual Spending**

**Labor, Material/Equip, Waste, Other Direct Cost**

(thousands of 2020 dollars)

| Year | Labor | Material & Equipment | Waste Packaging & Transportation | Waste Disposal | Other Direct Cost | Total |
|---|---|---|---|---|---|---|
| 2094 | 966 | 164 | - | - | 1,022 | 2,152 |
| 2095 | 966 | 164 | - | - | 1,022 | 2,152 |
| 2096 | 966 | 164 | - | - | 1,022 | 2,152 |
| 2097 | 966 | 164 | - | - | 1,022 | 2,152 |
| 2098 | 966 | 164 | - | - | 1,022 | 2,152 |
| 2099 | 966 | 164 | - | - | 1,022 | 2,152 |
| 2100 | 966 | 164 | - | - | 1,022 | 2,152 |
| 2101 | 966 | 164 | - | - | 1,022 | 2,152 |
| 2102 | 966 | 164 | - | - | 1,022 | 2,152 |
| 2103 | 966 | 164 | - | - | 1,022 | 2,152 |
| 2104 | 4,493 | 265 | - | - | 1,751 | 6,509 |
| 2105 | 21,022 | 1,585 | 4,617 | - | 4,799 | 32,022 |
| 2106 | 24,039 | 17,479 | 1,975 | 3,104 | 6,375 | 52,972 |
| 2107 | 37,928 | 19,516 | 930 | 3,532 | 2,792 | 64,698 |
| 2108 | 37,006 | 17,368 | 2,229 | 7,765 | 3,360 | 67,727 |
| 2109 | 44,739 | 8,806 | 3,706 | 15,668 | 2,258 | 75,176 |
| 2110 | 25,466 | 5,491 | 10,764 | 47,617 | 1,655 | 90,993 |
| 2111 | 8,059 | 1,651 | 3,084 | 14,676 | 1,340 | 28,811 |
| 2112 | 4,595 | 976 | 500 | 2,494 | 892 | 9,458 |
| 2113 | 4,459 | 1,314 | - | - | 205 | 5,978 |
| 2114 | - | - | - | - | - | - |
| 2115 | - | - | - | - | - | - |
| Total | 421,764 | 117,450 | 27,804 | 94,855 | 107,816 | 769,690 |

**Appendix F-4**

**Florida Power and Light - Turkey Point Unit 4**

**SCENARIO 2 - SAFSTOR**

**Estimated Annual Spending**

**Labor, Material/Equip, Waste, Other Direct Cost**

(thousands of 2020 dollars)

| Year | Labor | Material & Equipment | Waste Packaging & Transportation | Waste Disposal | Other Direct Cost | Total |
|---|---|---|---|---|---|---|
| 2050 | - | - | - | - | - | - |
| 2051 | - | - | - | - | - | - |
| 2052 | - | - | - | - | - | - |
| 2053 | 21,672 | 2,346 | - | - | 3,394 | 27,412 |
| 2054 | 28,488 | 2,605 | - | - | 4,626 | 35,720 |
| 2055 | 21,440 | 19,414 | - | - | 4,493 | 45,347 |
| 2056 | 20,775 | 5,280 | - | - | 4,688 | 30,743 |
| 2057 | 4,055 | 673 | - | - | 1,802 | 6,530 |
| 2058 | 4,055 | 673 | - | - | 1,802 | 6,530 |
| 2059 | 4,055 | 673 | - | - | 1,802 | 6,530 |
| 2060 | 4,055 | 673 | - | - | 1,802 | 6,530 |
| 2061 | 4,055 | 673 | - | - | 1,802 | 6,530 |
| 2062 | 4,055 | 673 | - | - | 1,802 | 6,530 |
| 2063 | 4,055 | 673 | - | - | 1,802 | 6,530 |
| 2064 | 4,055 | 673 | - | - | 1,802 | 6,530 |
| 2065 | 4,055 | 673 | - | - | 1,802 | 6,530 |
| 2066 | 4,055 | 673 | - | - | 1,802 | 6,530 |
| 2067 | 4,055 | 673 | - | - | 1,802 | 6,530 |
| 2068 | 4,055 | 673 | - | - | 1,802 | 6,530 |
| 2069 | 4,055 | 673 | - | - | 1,802 | 6,530 |
| 2070 | 4,055 | 673 | - | - | 1,802 | 6,530 |
| 2071 | 4,055 | 673 | - | - | 1,802 | 6,530 |
| 2072 | 4,055 | 673 | - | - | 1,802 | 6,530 |
| 2073 | 2,937 | 638 | - | - | 1,722 | 5,297 |
| 2074 | 1,029 | 222 | - | - | 1,044 | 2,296 |
| 2075 | 1,029 | 222 | - | - | 1,044 | 2,296 |
| 2076 | 1,029 | 222 | - | - | 1,044 | 2,296 |
| 2077 | 1,029 | 222 | - | - | 1,044 | 2,296 |
| 2078 | 1,029 | 222 | - | - | 1,044 | 2,296 |
| 2079 | 1,029 | 222 | - | - | 1,044 | 2,296 |
| 2080 | 1,029 | 222 | - | - | 1,044 | 2,296 |
| 2081 | 1,029 | 222 | - | - | 1,044 | 2,296 |
| 2082 | 1,029 | 222 | - | - | 1,044 | 2,296 |
| 2083 | 1,029 | 222 | - | - | 1,044 | 2,296 |
| 2084 | 1,029 | 222 | - | - | 1,044 | 2,296 |
| 2085 | 1,029 | 222 | - | - | 1,044 | 2,296 |
| 2086 | 1,029 | 222 | - | - | 1,044 | 2,296 |
| 2087 | 1,029 | 222 | - | - | 1,044 | 2,296 |
| 2088 | 1,029 | 222 | - | - | 1,044 | 2,296 |
| 2089 | 1,029 | 222 | - | - | 1,044 | 2,296 |
| 2090 | 1,029 | 222 | - | - | 1,044 | 2,296 |
| 2091 | 1,029 | 222 | - | - | 1,044 | 2,296 |
| 2092 | 1,029 | 222 | - | - | 1,044 | 2,296 |

**Appendix F-4**

**Florida Power and Light - Turkey Point Unit 4**

**SCENARIO 2 - SAFSTOR**

**Estimated Annual Spending**

**Labor, Material/Equip, Waste, Other Direct Cost**

(thousands of 2020 dollars)

| Year | Labor | Material & Equipment | Waste Packaging & Transportation | Waste Disposal | Other Direct Cost | Total |
|---|---|---|---|---|---|---|
| 2093 | 1,029 | 222 | - | - | 1,044 | 2,296 |
| 2094 | 1,029 | 222 | - | - | 1,044 | 2,296 |
| 2095 | 1,029 | 222 | - | - | 1,044 | 2,296 |
| 2096 | 1,029 | 222 | - | - | 1,044 | 2,296 |
| 2097 | 1,029 | 222 | - | - | 1,044 | 2,296 |
| 2098 | 1,029 | 222 | - | - | 1,044 | 2,296 |
| 2099 | 1,029 | 222 | - | - | 1,044 | 2,296 |
| 2100 | 1,029 | 222 | - | - | 1,044 | 2,296 |
| 2101 | 1,029 | 222 | - | - | 1,044 | 2,296 |
| 2102 | 1,029 | 222 | - | - | 1,044 | 2,296 |
| 2103 | 1,029 | 222 | - | - | 1,044 | 2,296 |
| 2104 | 1,029 | 222 | - | - | 1,044 | 2,296 |
| 2105 | 15,888 | 669 | - | - | 3,567 | 20,124 |
| 2106 | 12,798 | 2,822 | 5,411 | - | 5,725 | 26,755 |
| 2107 | 38,693 | 23,962 | 1,274 | 3,746 | 4,794 | 72,469 |
| 2108 | 46,552 | 12,002 | 3,452 | 14,420 | 4,141 | 80,566 |
| 2109 | 49,080 | 17,829 | 5,639 | 20,905 | 2,665 | 96,117 |
| 2110 | 32,392 | 16,727 | 10,205 | 48,216 | 1,911 | 109,450 |
| 2111 | 14,822 | 12,141 | 9,487 | 42,087 | 1,524 | 80,061 |
| 2112 | 5,958 | 359 | 2,450 | 11,548 | 934 | 21,249 |
| 2113 | 3,347 | 881 | - | - | 205 | 4,433 |
| 2114 | - | - | - | - | - | - |
| 2115 | - | - | - | - | - | - |
| Total | 411,630 | 135,345 | 37,915 | 140,922 | 105,582 | 831,394 |

**Appendix F-5**

**Florida Power and Light - Turkey Point Units 3 & 4**

**SCENARIO 1 - PROMPT DECON**

**Estimated DOE Reimbursement**

**Labor, Material/Equip, Waste, Other Direct Cost**

(thousands of 2020 dollars)

| Year | Labor | Material & Equipment | Waste Transportation & Disposal | Other Direct Cost | Total |
|---|---|---|---|---|---|
| 2050 | - | - | - | - | - |
| 2051 | - | - | - | - | - |
| 2052 | - | - | - | - | - |
| 2053 | 6,377 | 1,000 | - | 385 | 7,762 |
| 2054 | 28,579 | 4,065 | - | 1,468 | 34,112 |
| 2055 | 24,079 | 3,652 | - | 1,653 | 29,383 |
| 2056 | 17,510 | 37,969 | - | 1,603 | 57,082 |
| 2057 | 27,983 | 5,672 | - | 2,083 | 35,738 |
| 2058 | 4,495 | 194 | - | 1,703 | 6,391 |
| 2059 | 4,495 | 194 | - | 1,703 | 6,391 |
| 2060 | - | - | - | - | - |
| 2061 | - | - | - | - | - |
| 2062 | - | - | - | - | - |
| 2063 | - | - | - | - | - |
| 2064 | - | - | - | - | - |
| 2065 | - | - | - | - | - |
| 2066 | - | - | - | - | - |
| 2067 | - | - | - | - | - |
| 2068 | - | - | - | - | - |
| 2069 | - | - | - | - | - |
| 2070 | - | - | - | - | - |
| 2071 | - | - | - | - | - |
| 2072 | - | - | - | - | - |
| 2073 | - | - | - | - | - |
| 2074 | - | - | - | - | - |
| 2075 | - | - | - | - | - |
| 2076 | - | - | - | - | - |
| Total | 113,518 | 52,745 | - | 10,597 | 176,860 |

**Appendix F-5**

**Florida Power and Light - Turkey Point Unit 3**

**SCENARIO 1 - PROMPT DECON**

**Estimated DOE Reimbursement**

**Labor, Material/Equip, Waste, Other Direct Cost**

(thousands of 2020 dollars)

| Year | Labor | Material & Equipment | Waste Transportation & Disposal | Other Direct Cost | Total |
|---|---|---|---|---|---|
| 2050 | - | - | - | - | - |
| 2051 | - | - | - | - | - |
| 2052 | - | - | - | - | - |
| 2053 | 6,377 | 1,000 | - | 385 | 7,762 |
| 2054 | 17,895 | 2,335 | - | 864 | 21,095 |
| 2055 | 10,545 | 1,662 | - | 817 | 13,024 |
| 2056 | 8,202 | 16,433 | - | 809 | 25,444 |
| 2057 | 12,909 | 3,094 | - | 1,097 | 17,100 |
| 2058 | 2,236 | 94 | - | 867 | 3,198 |
| 2059 | 2,236 | 94 | - | 867 | 3,198 |
| 2060 | - | - | - | - | - |
| 2061 | - | - | - | - | - |
| 2062 | - | - | - | - | - |
| 2063 | - | - | - | - | - |
| 2064 | - | - | - | - | - |
| 2065 | - | - | - | - | - |
| 2066 | - | - | - | - | - |
| 2067 | - | - | - | - | - |
| 2068 | - | - | - | - | - |
| 2069 | - | - | - | - | - |
| 2070 | - | - | - | - | - |
| 2071 | - | - | - | - | - |
| 2072 | - | - | - | - | - |
| 2073 | - | - | - | - | - |
| 2074 | - | - | - | - | - |
| 2075 | - | - | - | - | - |
| 2076 | - | - | - | - | - |
| Total | 60,401 | 24,713 | - | 5,707 | 90,821 |

**Appendix F-5**

**Florida Power and Light - Turkey Point Unit 4**

**SCENARIO 1 - PROMPT DECON**

**Estimated DOE Reimbursement**

**Labor, Material/Equip, Waste, Other Direct Cost**

(thousands of 2020 dollars)

| Year | Labor | Material & Equipment | Waste Transportation & Disposal | Other Direct Cost | Total |
|---|---|---|---|---|---|
| 2050 | - | - | - | - | - |
| 2051 | - | - | - | - | - |
| 2052 | - | - | - | - | - |
| 2053 | - | - | - | - | - |
| 2054 | 10,684 | 1,730 | - | 603 | 13,017 |
| 2055 | 13,534 | 1,990 | - | 836 | 16,359 |
| 2056 | 9,308 | 21,535 | - | 795 | 31,638 |
| 2057 | 15,073 | 2,579 | - | 987 | 18,639 |
| 2058 | 2,259 | 100 | - | 835 | 3,193 |
| 2059 | 2,259 | 100 | - | 835 | 3,193 |
| 2060 | - | - | - | - | - |
| 2061 | - | - | - | - | - |
| 2062 | - | - | - | - | - |
| 2063 | - | - | - | - | - |
| 2064 | - | - | - | - | - |
| 2065 | - | - | - | - | - |
| 2066 | - | - | - | - | - |
| 2067 | - | - | - | - | - |
| 2068 | - | - | - | - | - |
| 2069 | - | - | - | - | - |
| 2070 | - | - | - | - | - |
| 2071 | - | - | - | - | - |
| 2072 | - | - | - | - | - |
| 2073 | - | - | - | - | - |
| 2074 | - | - | - | - | - |
| 2075 | - | - | - | - | - |
| 2076 | - | - | - | - | - |
| Total | 53,116 | 28,033 | - | 4,891 | 86,040 |

**Appendix F-6**

**Florida Power and Light - Turkey Point Units 3 & 4**

**SCENARIO 2 - SAFSTOR**

**Estimated DOE Reimbursement**

**Labor, Material/Equip, Waste, Other Direct Cost**

(thousands of 2020 dollars)

| Year | Labor | Material & Equipment | Waste Transportation & Disposal | Other Direct Cost | Total |
|---|---|---|---|---|---|
| 2050 | - | - | - | - | - |
| 2051 | - | - | - | - | - |
| 2052 | - | - | - | - | - |
| 2053 | 6,471 | 1,019 | - | 381 | 7,872 |
| 2054 | 28,670 | 4,259 | - | 1,411 | 34,340 |
| 2055 | 24,039 | 3,814 | - | 1,588 | 29,441 |
| 2056 | 19,963 | 35,600 | - | 1,555 | 57,118 |
| 2057 | 25,414 | 8,291 | - | 2,040 | 35,744 |
| 2058 | 6,648 | 794 | - | 2,117 | 9,559 |
| 2059 | 6,648 | 794 | - | 2,117 | 9,559 |
| 2060 | - | - | - | - | - |
| 2061 | - | - | - | - | - |
| 2062 | - | - | - | - | - |
| 2063 | - | - | - | - | - |
| 2064 | - | - | - | - | - |
| 2065 | - | - | - | - | - |
| 2066 | - | - | - | - | - |
| 2067 | - | - | - | - | - |
| 2068 | - | - | - | - | - |
| 2069 | - | - | - | - | - |
| 2070 | - | - | - | - | - |
| 2071 | - | - | - | - | - |
| 2072 | - | - | - | - | - |
| 2073 | - | - | - | - | - |
| 2074 | - | - | - | - | - |
| 2075 | - | - | - | - | - |
| 2076 | - | - | - | - | - |
| 2077 | - | - | - | - | - |
| 2078 | - | - | - | - | - |
| 2079 | - | - | - | - | - |
| 2080 | - | - | - | - | - |
| 2081 | - | - | - | - | - |
| 2082 | - | - | - | - | - |
| 2083 | - | - | - | - | - |
| 2084 | - | - | - | - | - |
| 2085 | - | - | - | - | - |
| 2086 | - | - | - | - | - |
| 2087 | - | - | - | - | - |

**Appendix F-6**

**Florida Power and Light - Turkey Point Units 3 & 4**

**SCENARIO 2 - SAFSTOR**

**Estimated DOE Reimbursement**

**Labor, Material/Equip, Waste, Other Direct Cost**

(thousands of 2020 dollars)

| Year | Labor | Material & Equipment | Waste Transportation & Disposal | Other Direct Cost | Total |
|---|---|---|---|---|---|
| 2088 | - | - | - | - | - |
| 2089 | - | - | - | - | - |
| 2090 | - | - | - | - | - |
| 2091 | - | - | - | - | - |
| 2092 | - | - | - | - | - |
| 2093 | - | - | - | - | - |
| 2094 | - | - | - | - | - |
| 2095 | - | - | - | - | - |
| 2096 | - | - | - | - | - |
| 2097 | - | - | - | - | - |
| 2098 | - | - | - | - | - |
| 2099 | - | - | - | - | - |
| 2100 | - | - | - | - | - |
| 2101 | - | - | - | - | - |
| 2102 | - | - | - | - | - |
| 2103 | - | - | - | - | - |
| 2104 | - | - | - | - | - |
| 2105 | - | - | - | - | - |
| 2106 | - | - | - | - | - |
| 2107 | - | - | - | - | - |
| 2108 | - | - | - | - | - |
| 2109 | - | - | - | - | - |
| 2110 | - | - | - | - | - |
| 2111 | - | - | - | - | - |
| 2112 | - | - | - | - | - |
| 2113 | - | - | - | - | - |
| 2114 | - | - | - | - | - |
| 2115 | - | - | - | - | - |
| **Total** | **117,853** | **54,571** | **-** | **11,210** | **183,634** |

**Appendix F-6**

**Florida Power and Light - Turkey Point Unit 3**

**SCENARIO 2 - SAFSTOR**

**Estimated DOE Reimbursement**

**Labor, Material/Equip, Waste, Other Direct Cost**

(thousands of 2020 dollars)

| Year | Labor | Material & Equipment | Waste Transportation & Disposal | Other Direct Cost | Total |
|---|---|---|---|---|---|
| 2050 | - | - | - | - | - |
| 2051 | - | - | - | - | - |
| 2052 | - | - | - | - | - |
| 2053 | 6,471 | 1,019 | - | 381 | 7,872 |
| 2054 | 18,012 | 2,497 | - | 834 | 21,344 |
| 2055 | 10,597 | 1,761 | - | 799 | 13,157 |
| 2056 | 8,221 | 16,521 | - | 792 | 25,534 |
| 2057 | 12,909 | 3,172 | - | 1,082 | 17,164 |
| 2058 | 3,307 | 393 | - | 1,058 | 4,757 |
| 2059 | 3,307 | 393 | - | 1,058 | 4,757 |
| 2060 | - | - | - | - | - |
| 2061 | - | - | - | - | - |
| 2062 | - | - | - | - | - |
| 2063 | - | - | - | - | - |
| 2064 | - | - | - | - | - |
| 2065 | - | - | - | - | - |
| 2066 | - | - | - | - | - |
| 2067 | - | - | - | - | - |
| 2068 | - | - | - | - | - |
| 2069 | - | - | - | - | - |
| 2070 | - | - | - | - | - |
| 2071 | - | - | - | - | - |
| 2072 | - | - | - | - | - |
| 2073 | - | - | - | - | - |
| 2074 | - | - | - | - | - |
| 2075 | - | - | - | - | - |
| 2076 | - | - | - | - | - |
| 2077 | - | - | - | - | - |
| 2078 | - | - | - | - | - |
| 2079 | - | - | - | - | - |
| 2080 | - | - | - | - | - |
| 2081 | - | - | - | - | - |
| 2082 | - | - | - | - | - |
| 2083 | - | - | - | - | - |
| 2084 | - | - | - | - | - |
| 2085 | - | - | - | - | - |
| 2086 | - | - | - | - | - |
| 2087 | - | - | - | - | - |

**Appendix F-6**

**Florida Power and Light - Turkey Point Unit 3**

**SCENARIO 2 - SAFSTOR**

**Estimated DOE Reimbursement**

**Labor, Material/Equip, Waste, Other Direct Cost**

(thousands of 2020 dollars)

| Year | Labor | Material & Equipment | Waste Transportation & Disposal | Other Direct Cost | Total |
|---|---|---|---|---|---|
| 2088 | - | - | - | - | - |
| 2089 | - | - | - | - | - |
| 2090 | - | - | - | - | - |
| 2091 | - | - | - | - | - |
| 2092 | - | - | - | - | - |
| 2093 | - | - | - | - | - |
| 2094 | - | - | - | - | - |
| 2095 | - | - | - | - | - |
| 2096 | - | - | - | - | - |
| 2097 | - | - | - | - | - |
| 2098 | - | - | - | - | - |
| 2099 | - | - | - | - | - |
| 2100 | - | - | - | - | - |
| 2101 | - | - | - | - | - |
| 2102 | - | - | - | - | - |
| 2103 | - | - | - | - | - |
| 2104 | - | - | - | - | - |
| 2105 | - | - | - | - | - |
| 2106 | - | - | - | - | - |
| 2107 | - | - | - | - | - |
| 2108 | - | - | - | - | - |
| 2109 | - | - | - | - | - |
| 2110 | - | - | - | - | - |
| 2111 | - | - | - | - | - |
| 2112 | - | - | - | - | - |
| 2113 | - | - | - | - | - |
| 2114 | - | - | - | - | - |
| 2115 | - | - | - | - | - |
| **Total** | **62,823** | **25,757** | **-** | **6,005** | **94,585** |

**Appendix F-6**

**Florida Power and Light - Turkey Point Unit 4**

**SCENARIO 2 - SAFSTOR**

**Estimated DOE Reimbursement**

**Labor, Material/Equip, Waste, Other Direct Cost**

(thousands of 2020 dollars)

| Year | Labor | Material & Equipment | Waste Transportation & Disposal | Other Direct Cost | Total |
|---|---|---|---|---|---|
| 2050 | - | - | - | - | - |
| 2051 | - | - | - | - | - |
| 2052 | - | - | - | - | - |
| 2053 | - | - | - | - | - |
| 2054 | 10,658 | 1,762 | - | 577 | 12,996 |
| 2055 | 13,443 | 2,053 | - | 789 | 16,284 |
| 2056 | 11,743 | 19,078 | - | 763 | 31,584 |
| 2057 | 12,505 | 5,118 | - | 958 | 18,581 |
| 2058 | 3,341 | 401 | - | 1,059 | 4,802 |
| 2059 | 3,341 | 401 | - | 1,059 | 4,802 |
| 2060 | - | - | - | - | - |
| 2061 | - | - | - | - | - |
| 2062 | - | - | - | - | - |
| 2063 | - | - | - | - | - |
| 2064 | - | - | - | - | - |
| 2065 | - | - | - | - | - |
| 2066 | - | - | - | - | - |
| 2067 | - | - | - | - | - |
| 2068 | - | - | - | - | - |
| 2069 | - | - | - | - | - |
| 2070 | - | - | - | - | - |
| 2071 | - | - | - | - | - |
| 2072 | - | - | - | - | - |
| 2073 | - | - | - | - | - |
| 2074 | - | - | - | - | - |
| 2075 | - | - | - | - | - |
| 2076 | - | - | - | - | - |
| 2077 | - | - | - | - | - |
| 2078 | - | - | - | - | - |
| 2079 | - | - | - | - | - |
| 2080 | - | - | - | - | - |
| 2081 | - | - | - | - | - |
| 2082 | - | - | - | - | - |
| 2083 | - | - | - | - | - |
| 2084 | - | - | - | - | - |
| 2085 | - | - | - | - | - |
| 2086 | - | - | - | - | - |
| 2087 | - | - | - | - | - |

**Appendix F-6**

**Florida Power and Light - Turkey Point Unit 4**

**SCENARIO 2 - SAFSTOR**

**Estimated DOE Reimbursement**

**Labor, Material/Equip, Waste, Other Direct Cost**

(thousands of 2020 dollars)

| Year | Labor | Material & Equipment | Waste Transportation & Disposal | Other Direct Cost | Total |
|---|---|---|---|---|---|
| 2088 | - | - | - | - | - |
| 2089 | - | - | - | - | - |
| 2090 | - | - | - | - | - |
| 2091 | - | - | - | - | - |
| 2092 | - | - | - | - | - |
| 2093 | - | - | - | - | - |
| 2094 | - | - | - | - | - |
| 2095 | - | - | - | - | - |
| 2096 | - | - | - | - | - |
| 2097 | - | - | - | - | - |
| 2098 | - | - | - | - | - |
| 2099 | - | - | - | - | - |
| 2100 | - | - | - | - | - |
| 2101 | - | - | - | - | - |
| 2102 | - | - | - | - | - |
| 2103 | - | - | - | - | - |
| 2104 | - | - | - | - | - |
| 2105 | - | - | - | - | - |
| 2106 | - | - | - | - | - |
| 2107 | - | - | - | - | - |
| 2108 | - | - | - | - | - |
| 2109 | - | - | - | - | - |
| 2110 | - | - | - | - | - |
| 2111 | - | - | - | - | - |
| 2112 | - | - | - | - | - |
| 2113 | - | - | - | - | - |
| 2114 | - | - | - | - | - |
| 2115 | - | - | - | - | - |
| **Total** | **55,030** | **28,814** | **-** | **5,205** | **89,050** |

# SECTION 11

# COMPARISON REPORT:
# Comparative Analysis of Cost Studies
# 2015 & 2020 Cost Studies

ENERGYSOLUTIONS

# COMPARISON REPORT 2015 - 2020
# of the
# Turkey Point Nuclear Plant, Units 3 and 4

**Project No. 164086-01** **Rev. 1**

**Prepared for:**
Florida Power & Light Company


**Prepared by:**
Energy*Solutions*, LLC
121 W. Trade Street, Suite 2700
Charlotte, NC 28202


Authored By: Kevin M. Kirkley, Sr. Estimator — Date: 11/19/2020

Reviewed By: Jake H. Oleksiak, Project Controls Manager — Date: 11/19/20

- [X] New Report
- [ ] Title Change
- [ ] Report Revision
- [ ] Report Rewrite

Effective Date: November 19, 2020

# Table of Contents

# SUMMARY

This document provides a comparative discussion on decommissioning cost estimates prepared for the Turkey Point Nuclear Plant (Turkey Point) in 2015 (by TLG Services, Inc.) and prepared in 2020 (Energy*Solutions*). The estimates described in this document were constructed for a prompt decommissioning scenario (Prompt DECON) following the scheduled cessation of operations, recognizing that there is approximately a one year offset in the scheduled shutdown dates for the two nuclear units. The scope of the two estimates is consistent, including cost subcategories for license termination, spent fuel management and site restoration activities.

The estimates were generated in 2015 and 2020 dollars, respectively. The 2020, or current estimate, was developed using the basic inventory and plant design information from the 2010 cost model. The data, estimating assumptions and site-specific considerations were reviewed for the 2015 analysis. The cost model was modified where new information was available, updated site-specific information was obtained, or experience from past decommissioning programs justified such changes.

The overall estimate to decommission Turkey Point (for the Prompt DECON alternative) decreased 23.5% over the five-year period between estimates or approximately a 5.2% decrease annually. The decrease in the individual cost subcategories is shown in Table 1.

The cost elements were assigned to one of three subcategories: License Termination, Spent Fuel Management, and Site Restoration. Delegation of cost elements into these categories was for the purpose of comparison (e.g., with NRC financial guidelines) or to permit specific financial treatment (e.g., Asset Retirement Obligation (ARO) determinations). In reality, there can be considerable interaction or overlap between the activities in the three subcategories.

**Table 1 – Cost Subcategory Comparison Between 2015 and 2020 Estimates**

| Cost Subcategory | 2015 ($1,000s) | 2020 ($1,000s) | Delta ($1,000s) | Percent Change | Annual Change |
|---|---|---|---|---|---|
| License Termination | 1,205,581 | 1,018,355 | (187,226) | -15.5% | -3.3% |
| Spent Fuel Management | 479,670 | 282,949 | (196,721) | -41.0% | -10.0% |
| Site Restoration | 94,298 | 59,888 | (34,410) | -36.5% | -8.7% |
| Total | **1,779,549** | **1,361,192** | **(418,357)** | **-23.5%** | **-5.2%** |

The subcategory License Termination was used to accumulate costs that are consistent with the NRC's definition of decommissioning in its financial assurance regulations (i.e., 10 CFR Part 50.75, Reporting and recordkeeping for decommissioning planning, etc.). The cost reported for this subcategory is generally sufficient to terminate the operating licenses for the two reactors, recognizing that there may be some additional cost impact from spent fuel management. The cost associated with Turkey Point License Termination activities decreased 15.5% over the five years or approximately 3.3% decrease annually. The primary driver is Energy*Solutions'* 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 exposure to dose, increase general site safety, and provide schedule certainty. Within the 2020 DCE are shifts in scope from the 2015 TLG study with the movement of the

Reactor Buildings, Auxiliary Building, Fuel Handling Buildings, and the Radwaste Building to the License Termination subcategory from the Site Restoration subcategory. The additional debris waste generated from this methodology is offset by the labor decrease in previously mentioned high decontamination areas. Disposal rates for all waste have been updated based on the 2020 Life-of-Plant (LOP) rates provided by FPL.

The Spent Fuel Management subcategory contains costs anticipated to be incurred once the nuclear units cease operation for the off-loading of the pools either directly to the Department of Energy (DOE) or to the Independent Spent Fuel Storage Installation (ISFSI) for interim storage, and the eventual transfer of fuel from the ISFSI to the DOE. The 2020 DCE includes equipment and transfer costs only for shipment of spent fuel to the DOE prior to the cessation of the units, however any staffing costs that is deemed necessary for this work prior to cessation of the units is assumed to be covered by plant operating costs. Costs were also included for the operation of the ISFSI until such time that the transfer of all fuel from this facility to an off-site location (e.g., geologic repository or interim facility) is complete. The costs assigned to this subcategory decreased by 41.0% over the five years or approximately 10.0% decrease annually. The primary driver in the difference is the reduction of the ISFSI operating period. Due to the operating license extension the ISFSI operating period post shutdown of Unit 4 decreased by 20 years. Another major contributor to this difference is the quantity of spent fuel containers that was to be purchased in the 2015 estimate (60) as compared to the number required to be purchased in the 2020 estimate (34). Also, the 2015 estimate includes the cost to expand the existing ISFSI (approximately $0.4M), but the 2020 cost estimate does not. In addition, it is unclear if TLG included the movement of spent fuel loading campaign to the DOE from the Spent Fuel Pool prior to shut down in the 2015 DCE. This cost is excluded in the Energy*Solutions* 2020 DCE.

Site Restoration was 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. Structures that have been exposed to radioactive material and require decontamination such as the Reactor Buildings, Auxiliary Building, Fuel Handling Buildings, and the Radwaste Building are included in the License Termination subcategory of the 2020 DCE. Structures are removed to a depth of three feet below grade and backfilled to conform to local grade. The costs assigned to the Site Restoration subcategory decreased 36.5% decrease over the five years or approximately 8.7% decrease annually. The primary driver in this difference is the movement of the Reactor Buildings, Auxiliary Building, Fuel Handling Buildings, and the Radwaste Building to the License Termination subcategory. In addition, it is unclear on how the TLG allocated costs (staffing, insurances, taxes, etc.) are derived. The majority of these costs in the 2020 study between Period 3 and Period 4 (License Termination and Site Restoration) are split 93% to License Termination and 7% to Site Restoration.

# COMPARATIVE ANAYLSIS

TLG completed a decommissioning cost analysis for Turkey Point in 2015. The analysis provided the Florida Power & Light Company (FPL), the owner and operator of the nuclear units, with the projected costs (in 2015 dollars) to completely decontaminate and dismantle the station following the normal cessation of plant operations. For purposes of this comparison, this analysis is referred to as the 2015 estimate or previous analysis.

In 2020, Energy*Solutions* performed a new cost analysis for FPL. The current analysis uses the physical plant inventory, and information provided by FPL to complete the current analysis. This data was reviewed, along with the assumptions from the previous anaylsis and other site-specific considerations. Based on experience from previous and on-going decomissioning projects and previous proposal efforts, the Turkey Point cost analysis has been revised. In 2015, the estimate to promptly decommission Turkey Point (DECON alternative) was estimated at approximately $1,779.6 million (in 2015 dollars). The comparable cost in 2020 is $1,361.2 million (in 2020 dollars). This represents a 23.5% decrease in the overall cost.

The decommissioning scope of the current cost estimate has not significantly changed from that evaluated presented in 2015. To compare the estimates, the costs have been broken down into 15 separate cost elements as shown in the Table 2 below. A brief description of the change and primary contributing factor(s) to the change is detailed within the following narrative. As a general note to the below cost element comparisons: Energy*Solutions* has attempted to group the elements similarly to the 2010-2015 Comparison Report; however, it is unclear if all cost elements contain similar information/costs.

**Table 2 – Cost Element Comparison Between 2015 and 2020 Estimates**

| Cost Element | 2015 ($1,000s) | 2020 ($1,000s) | Delta ($1,000s) | Percent Change | Annual Change |
|---|---|---|---|---|---|
| Characterization/Surveys | 37,306 | 20,151 | (17,155) | -46.0% | -11.6% |
| Cooperate Support (Fixed Overhead) | 29,643 | 32,405 | 2,762 | 9.3% | 1.8% |
| Decontamination & Removal | 205,071 | 244,732 | 39,661 | 19.3% | 3.6% |
| Energy | 40,588 | 9,792 | (30,796) | -75.9% | -24.8% |
| Florida LLRW Inspection Fee | 1,074 | 5,455 | 4,380 | 407.7% | 38.4% |
| INPO, NEI Fees* | 7,619 | - | (7,619) | -100.0% | -100.0% |
| Insurance & Regulatory Fees | 46,349 | 75,299 | 28,950 | 62.5% | 10.2% |
| Misc. Equip/Site Services | 14,679 | 9,620 | (5,059) | -34.5% | -8.1% |
| Program Management | 572,181 | 415,943 | (156,238) | -27.3% | -6.2% |
| Property Taxes | 2,589 | 694 | (1,895) | -73.2% | -23.1% |
| Security | 231,286 | 105,783 | (125,503) | -54.3% | -14.5% |
| Spent Fuel Management | 289,358 | 95,600 | (193,758) | -67.0% | -19.9% |
| Spent Fuel Pool Isolation | 21,250 | 24,049 | 2,799 | 13.2% | 2.5% |
| Waste Packaging, Transportation & Disposal - Class A, B, C | 248,128 | 283,825 | 35,697 | 14.4% | 2.7% |
| Waste Packaging, Transportation & Disposal - GTCC | 32,428 | 37,845 | 5,417 | 16.7% | 3.1% |
| **Total** | **1,779,550** | **1,361,192** | **(418,358)** | **-23.5%** | **-5.2%** |
| *** Items assumed to not be required post shutdown** | | | | | |

Characterization / Surveys – 46.0% decrease over the five years or approximately 11.6% decrease annually. The primary driver of this decrease is due to the methodology change. While additional costs associated with the debris waste generated from this methodology these costs are offset by the reduction in labor cost from avoiding extensive decontamination and survey efforts in structures. The 2020 estimate is based on previous experience for Site Characterizations, baseline surveys, and Final Status Surveys.

Corporate Support (Fixed Overhead) – Annual site costs provided decreased from $3.6 million in 2015 to $3.3 million in 2020, based on the information provided by FPL. However, the 2020 DCE accounts for a reduced staff and reduced site costs accordingly. These costs are applied across the Periods 1-4 in the DCE estimate.

Decontamination & Removal – 19.3% increase over the five years or approximately 3.6% increase annually. This increase is potentially due to the movement of equipment into this element as opposed to the Misc. Equipment / Site Services cost element. In addition, escalation is a contributor to this increase. The increase is minimized due to a change in methodology of decommissioning between TLG and Energy*Solutions*.

Energy – 75.9% reduction over the five-year or approximately a 24.8% reduction annually. Based on discussions with FPL, the 2015 DCE utilized the heavy oil energy usage cost. The 2020 DCE utilizes the Gas energy usage cost provided. For comparison the cost per kilowatt hour in the 2015 DCE was $0.158 and the cost in the 2020 DCE is $0.0338 per kilowatt hour.

Florida LLRW Inspection Fee – 407.7% increase over the five year period or approximately a 38.4% increase annually. The change in methodology drove this increase. Due to additional waste being generated, additional inspection fees will be required.

INPO, NEI Fees – It is assumed that these are no longer required once the plant has permanently shut down.

Insurance & Regulatory Fees – 62.5% increase over the five-year period. The primary driver of this increase is that the insurance cost is carried out until the spent fuel is removed from the site, this is for Periods 1-5. A portion of this reduction is due to the 20-year license extension in which the costs would be carried under the plants operating budget. The 2015 TLG comparison report states that the Nuclear Property Insurance Premiums were significantly reduced after plant shutdown; however, in the 2020 DCE this rate was reduced at multiple decommissioning milestones. See Table 3 below for rates at shutdown. The reduction of insurance premiums is based on current and previous experience from other projects in the industry. In addition, Emergency Planning Fees (County & FEMA fees in the 2020 DCE) cease once all spent fuel is removed from the spent fuel pool. Also, a portion of this reduction is due to the 20-year license extension in which the costs would be carried under the plants operating budget.

The 2020 rates shown below in Table 3 do not contain contingency.

**Table 3 - Insurance and Regulatory Comparison Between 2015 and 2020 Estimates**

| Annual Cost | 2015 | 2020 |
|---|---|---|
| Nuclear Liability Insurance Premium (per unit)* | $1,183,342 | $1,389,009 |
| Nuclear Property Insurance Premium (site)** | $4,134,000 | $2,511,320 |
| NRC License Fee (per unit) | $237,000 | $172,000 |
| Emergency Planning Fee (County & FEMA)*** | $917,488 | $1,131,076 |
| | | |
| NRC Hourly Rate | $268 | $278 |

* 2020 rate assumes rate provide by FPL will be 50% at time of shutdown. Rate further reduced upon other decommissioning milestones.
** 2020 rate shown is once plants are shutdown. Rate further reduced upon other decommissioning milestones
*** assumed no fee required once spent fuel is removed from the spent fuel pool

Misc. Equipment / Site Services – 34.5% decrease over the five-year period or 8.1% decrease annually. Majority of the difference is due to the major construction equipment has been included in the decontamination and removal portion of the DCE. It is unclear in the 2015 DCE where the construction equipment is included.

Program Management – 27.3% decrease over the five years or 6.2% decrease annually. Reduction is due to difference in staffing plan models from the 2015 to 2020 DCEs. In addition, to the staffing differences, the reduction of 20 years of staffing required during ISFSI only operations is a major contributor to the decrease.

Property Taxes – 73.2% decrease over the five-year period or 23.1% decrease annually. The 2020 DCE assumes land only taxes will be paid post shutdown of both Unit 3 and Unit 4. This cost is carried until the ISFSI demolition is complete. The 20-year reduction in time between shutdown and ISFSI demolition is a contributor to this difference. It is unclear how property taxes were calculated in the 2015 TLG DCE.

Security – 54.3% decrease over the five-year period or 14.5% decrease annually. The main contributor to this decrease is due to the 20-year reduction of the ISFSI operation due to the operating license extension. The difference in security staffing is another key contributor to this decrease.

Spent Fuel Management – 67.0% decrease over the five years or 19.9% decrease annually. The current analysis assumes that the DOE will begin the process of removing spent fuel from the Turkey Point site in 2031 (based upon a 2030 industry-wide start date), however, the DCE only includes spent fuel transferred after the units have permanently shut down. The process is expected to be completed by the year 2073. The schedule is slightly changed from 2015 DCE (Table 5).

A portion of this difference is due to the anticipated savings by FPL of 25% for the container material and equipment due to bulk purchasing. It is unclear if the comparison is comparing like items due to the major difference, although it is known that one major contributor is the 20-year reduction of the ISFSI Operating Period post shutdown of Unit 4. The 2020 DCE costs include the ISFSI maintenance, spent fuel

maintenance, all spent fuel transfer (both to DOE and ISFSI), and demolition of the ISFSI pad. Table 4 identifies a few of the major items included in the Spent Fuel Management comparison. The 2020 DCE assumes that no ISFSI expansion is required. Table 5 identifies key dates and quantities of the shipping campaigns.

**Table 4 – Spent Fuel Management Comparison Between 2015 and 2020 Estimates**

| Unit Costs (each) | 2015 | 2020 |
|---|---|---|
| Dry Storage Canister / Horizontal Storage Module | $1,254,928 | $1,015,163 |
| Loading / Transfer Cost | $392,600 | $480,000 |
| Pool to DOE Campaign Cost (Unit 3) | $3,280,100 | $3,374,000 |
| Pool to DOE Campaign Cost (Unit 4)* | - | $2,261,000 |
| Pool to ISFSI Cost** | $3,280,100 | - |
| ISFSI Unloading Cost | $196,300 | $115,000 |
| ISFSI Campaign Cost | $820,025 | |
| * Cost for Pool to DOE for Unit 4. Assumes 33% savings on equipment.<br>** No fixed cost in 2020 DCE as the DCE assumes loading and transfer equipment for pool to DOE will be utilized for pool to ISFSI. Also, assumes a continuous operation, therefore no additional mobilization and demobilization will be required. | | |

**Table 5 - Spent Fuel Activity Comparison Between 2015 and 2020**

| Activity | 2015 | 2020 |
|---|---|---|
| DOE Repository Opening | 2030 | 2030 |
| DOE Begin Transfer from Site | 2031 | 2031 |
| Spent Fuel Transfer - Pool to DOE | 24 canisters | 25 canisters |
| Spent Fuel Transfer - Pool to ISFSI | 60 canisters | 34 canisters |
| Spent Fuel Transfer - ISFSI to DOE | 120 canisters | 90 canisters |
| Final Year of DOE Pickup | 2072 | 2073 |
| ISFSI Operating Period (post unit 4 shutdown) (years) | 40 years | 20 years |
| | | |
| GTCC Canisters | 10 canisters | 8 canisters |

Spent Fuel Pool Isolation – 13.2% increase over the five years or 2.5% increase annually. Difference is primarily due to escalation between the years 2015 through 2020.

Waste Packaging, Transportation & Disposal (Class A, B, & C) – 14.4% increase over the five-year period or 2.7% increase annually. Increase is primarily due to the additional debris and soil due to methodology change. As shown in Table 6 the LLRW burial volume increased significantly due to the methodology change. In addition, the soil price increase based on the updated life of plant agreement between Energy*Solutions* and FPL. TLG noted that disposal costs were discounted due to soil volume. Energy*Solutions* also discounted this rate by approximately 40%.

Waste Packaging, transportation, & Disposal (GTCC) – 16.7% increase over the five-year period or 3.1% increase annually. Included in the 2020 DCE is 8 containers versus the 10 included in the 2015 DCE. The cost for disposal is approximately $7,272 per cubic foot (including contingency) in the 2015 DCE as compared to approximately $5,805 per cubic foot (including contingency) in the 2020 DCE. The primary

delta in the disposal is due the 2015 cost study includes transportation, while the 2020 study includes transportation as a separate cost. The transportation costs of the GTCC material in the 2020 DCE is approximately $3.1M (including contingency). In addition, the packaging cost for GTCC between the 2015 DCE and 2020 DCE is significantly different. The 2015 DCE appears to include approximately $2.0M (excluding contingency) where the 2020 DCE includes approximately $9.4M (excluding contingency). The difference can be attributed to associated packaging cost captured in the other areas of the 2015 DCE (assumed to be included in the Reactor Vessel Internals packaging costs, but we are unable to verify the assumption).

**Table 6 - Waste Comparison Between 2015 and 2020 Estimates**

| | | | | Waste Volume (CF) | |
|---|---|---|---|---|---|
| **Waste Class** | **Waste Form** | **Cost Basis** | **Class** | **2015** | **2020*** |
| Low Level Radioactive Waste | Debris / Storm Drain ** | Energy*Solutions* | A | 327,035 | 1,773,112 |
| | Soil*** | EnergySolutions | A | 162,654 | 657,554 |
| | Debris | WCS | BC | 4,149 | 4,150 |
| Greater than Class C (GTCC) | Modified Dry Storage Containers (DSCs) | Spent Fuel Equivalent | GTCC | 4,123 | 4,122 |
| **Total Disposal Volume** | | | | **497,961** | **2,438,938** |
| | | | | | |
| Processed / Conditioned **** | Debris | Recycling Vendors | A | 252,292 | - |

* 2020 volume is burial volume.
** Delta in Debris / Storm Drain due to differing Decommissioning methodology between TLG and Energy*Solutions*.
*** Soil delta due to assumed cross contamination during the decommissioning and demolition process.
**** Delta due to differing methodology between TLG and Energy*Solutions*.

# CONCLUSION

The total cost to decommission the Turkey Point nuclear units decreased 23.5% over the five-year period between estimates or approximately 5.2% decrease annually.

As shown in Table 1, License Termination costs (or the cost associated with "decommissioning" as defined by the NRC in its financial assurance regulations) decreased 15.5 % over the five-year period (for an average annual decrease of 3.3% annually). The primary change is the methodology in which decommissioning and demolition is being performed. While this change results in additional waste (additional concrete and soil), to increase cost, it is offset by the reduced staffing and labor required. Also, the difference in staffing (utility, security, and DGC) between the 2015 and 2020 DCEs plays a significant role in this cost difference. Also, the Reactor Buildings, Auxiliary Building, Fuel Handling Buildings, and Radwaste Building were moved from the Site Restoration subcategory to the License Termination subcategory.

The Spent Fuel Management subcategory contains costs associated with the interim storage of fuel at the Turkey Point site until such time that the DOE is able to take possession. The costs estimated for this activity decreased 41.0% from 2015. The primary contributor to this reduction is the 20-year reduction of the ISFSI Operating Period post shutdown of Unit 4. This 20-year reduction, reduces staff, security, and all other allocated costs. Another key contributor is the quantity of spent fuel canisters required to be purchased. The 2015 DCE required 60 canisters, where the 2020 DCE required 34 canisters. Also, of note the 2020 DCE canisters are assumed to include a 25% discount for "bulk" purchasing. In addition, it is unclear if the TLG 2015 estimate included the spent fuel transfer to the DOE from the Spent Fuel Pool prior to shut down. This cost is excluded in the 2020 Energy*Solutions* DCE.

Site restoration (used to capture costs associated with the dismantling and demolition of buildings and facilities demonstrated to be free from contamination) showed a decrease of 36.5% over the five years. The primary contributor to this reduction is the movement of the costs for the Reactor Buildings, Auxiliary Building, Fuel Handling Buildings, and the Radwaste Building from the Site Restoration subcategory to the License Termination subcategory.