

FLORIDA PUBLIC SERVICE COMMISSION

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MEMORANDUM

August 17, 1989

TO: DIRECTOR OF RECORDS AND REPORTING

FROM: DIVISION OF AUDITING AND FINANCIAL ANALYSIS (WILKERSON, LEE, MAUREY, SALAK) *new* *PSH* *ALM*
DIVISION OF ELECTRIC AND GAS (BALLINGER) *TB*
DIVISION OF LEGAL SERVICES (CHRIST) *MLC*
OFFICE OF ECONOMIC REGULATIONS STANDARDS CONTROL (HOPPE) *One JS* *JDJ*

RE: DOCKET NO. 870098-EI - PETITION FOR APPROVAL OF AND INCREASE IN THE ACCRUAL OF NUCLEAR DECOMMISSIONING COST BY FLORIDA POWER CORPORATION AND FLORIDA POWER AND LIGHT COMPANY

AGENDA: AUGUST 29, 1989

PANEL: FULL COMMISSION - CONTROVERSIAL - PARTIES MAY NOT PARTICIPATE

CRITICAL DATES: NONE

DOCUMENT NUMBER-DATE

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FPSC-RECORDS/REPORTING

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ISSUE AND RECOMMENDATION SUMMARY

ISSUE 1: Are there components and facilities now at the nuclear production units which could be retained to generate electricity with another steam source after the removal of the current nuclear steam generation components?

RECOMMENDATION: Yes, there are portions of the nuclear electric generating units which could be retained and used for future generation of electricity. The question does remain, however, as to whether or not it will be cost justified to retain these assets versus dismantling them upon decommissioning, at the same time the contaminated assets are removed (See Issue 3). (Wilkerson/Lee).

ISSUE 2: Should the dismantlement of non-contaminated plant components be included in the funding for "Nuclear Decommissioning", or recovered separately through the use of lives and costs specifically related to those non-contaminated reusable components?

RECOMMENDATION: The dismantlement of non-contaminated plant components available for continued use after the decommissioning of the current nuclear steam source should be recovered separately through the use of lives and costs specifically related to those components. However, based on the current studies filed in this proceeding, there is no way to distinguish between the costs of dismantling contaminated assets and potentially reusable non-contaminated assets at the time of decommissioning (See Issue 3). (Wilkerson/Lee).

ISSUE 3: Should a decommissioning cost study be required from each company addressing the exclusion of non-contaminated components and facilities which can be used for generation of power subsequent to decommissioning of the present nuclear components? If so, in what time-frame should they be required?

RECOMMENDATION: Yes, FPL and FPC should file a site-specific economic cost study for each of their nuclear generating plants to determine if it is cost justified to retain the non-contaminated portion of the nuclear plant assets for use with a new generating station. These feasibility studies should be submitted no later than two years from the date of the final order in this proceeding. (Wilkerson/Lee).

*ISSUE 4: What methodology should Florida Power Corporation and Florida Power & Light utilize to decommission their units?

RECOMMENDATION: The methodology that FPC and FPL should utilize to decommission their nuclear units is as follows:

Turkey Point Unit No. 3: Integrated Prompt Removal/
Dismantling

Turkey Point Unit No. 4: Integrated Prompt Removal/
Dismantling

St. Lucie Unit 1: Mothball/Prompt Integrated
Dismantling

St Lucie Unit 2: Integrated Prompt Removal/
Dismantling

Crystal River Unit 3: Prompt Removal/Dismantling

(Lee).

ISSUE 5: Should there be a contingency allowance applied to the total cost at this time, and if so, what should the percentage be?

RECOMMENDATION: Yes. The overall contingency allowance of 25% for both FPL and FPC is reasonable at this time. Staff does, however, have reason to believe that this amount may change through time. (Ballinger).

*ISSUE 6: What is the estimated appropriate cost in current (January 1, 1989) dollars to decommission each of the nuclear units?

RECOMMENDATION: The estimated cost in current (January 1, 1989) dollars to decommission each of the nuclear units are:

Turkey Point Unit No. 3	\$162,072,000
Turkey Point Unit No. 4	190,494,000
St. Lucie Unit No. 1	205,249,321
St. Lucie Unit No. 2	202,975,000
Crystal River Unit No. 3	189,123,000

(Maurey).

*ISSUE 7: What is the appropriate methodology and escalation rate to use in converting the current estimated decommissioning cost to the future estimated decommissioning cost?

RECOMMENDATION: The appropriate escalation rates to use in converting the current decommissioning cost to the future decommissioning cost for each nuclear unit are:

Turkey Point Unit No. 3	5.80%
Turkey Point Unit No. 4	5.80%
St. Lucie Unit No. 1	6.02%
St. Lucie Unit No. 2	5.91%
Crystal River Unit No. 3	6.08%

The methodology used by FPL and FPC in their escalation rate analyses is reasonable for determining the appropriate rate. The disparity between Staff's escalation rates and the companies' escalation rates results from differences in the time frame and specific inflation measures. (Maurey).

*ISSUE 8: What is the total estimated cost of decommissioning each unit in future dollars based upon present operating license termination date?

RECOMMENDATION: The estimated total cost of decommissioning each nuclear unit in future dollars based upon present operating license termination dates are:

Turkey Point Unit No. 3	\$ 542,426,010
Turkey Point Unit No. 4	673,190,276
St. Lucie Unit No. 1	1,622,545,122
St. Lucie Unit No. 2	1,757,460,731
Crystal River Unit No. 3	1,201,528,228

(Maurey).

*ISSUE 9: As presently planned, in which years will the funds accumulated in the Nuclear Decommissioning Trust Fund be expended, by unit?

RECOMMENDATION: As presently planned, the funds accumulated in the Nuclear Decommissioning Trust Funds will be expended in the following years:

<u>Unit</u>	<u>Year(s) of Fund Expenditures</u>
Turkey Point Unit 3	2005-2013
Turkey Point Unit 4	2005-2014
St. Lucie Unit 1	2014-2028
St. Lucie Unit 2	2021-2028
Crystal River Unit 3	2015-2023

(Lee).

***ISSUE 10:** What is the estimated future cost of decommissioning, by unit, in each year in which decommissioning funds will be expended?

RECOMMENDATION: The estimated future costs of decommissioning, by unit, in each year in which decommissioning funds will be expended are:

Turkey Point Plant

Year of Decommissioning	Estimated Future Cost	
	Unit No. 3	Unit No. 4
2005	\$ 1,181,262	\$ 647,762
2006	5,059,912	2,833,826
2007	32,477,023	23,542,894
2008	101,657,092	35,271,774
2009	136,034,524	118,657,270
2010	143,924,526	158,697,622
2011	73,426,868	167,902,084
2012	35,977,100	94,608,426
2013	12,687,703	56,171,797
2014		14,856,822
Totals	<u>\$542,426,010</u> =====	<u>\$673,190,276</u> =====

St. Lucie Plant

Year of Decommissioning	Estimated Future Cost	
	Unit No. 1	Unit No. 2
2014	\$ 2,091,581	
2015	8,282,026	
2016	89,815,291	
2017	32,466,450	
2018	14,603,465	
2019	15,482,594	
2020	16,414,646	
2021	17,402,808	\$ 1,489,148
2022	89,887,187	6,251,434
2023	309,804,347	72,772,279
2024	340,793,776	322,663,298
2025	361,309,561	420,371,172
2026	161,315,779	445,215,109
2027	149,653,381	279,496,214
2028	13,222,231	209,202,077
Totals	<u>\$1,622,545,122</u> =====	<u>\$1,757,460,731</u> =====

Crystal River Plant

<u>Year of Decommissioning</u>	<u>Estimated Future Cost Unit No. 3</u>
2015	\$ 29,609,186
2016	31,409,425
2017	33,319,118
2018	264,177,471
2019	280,239,461
2020	297,278,021
2021	126,848,472
2022	67,279,726
2023	71,367,348
Total	<u>\$1,201,528,228</u> =====

The above amounts may not add due to rounding. (Maurey).

*ISSUE 11: What is the projected date that each nuclear unit will no longer be included in rate base for ratemaking purposes?

RECOMMENDATION: The projected date that each nuclear unit will no longer be included in rate base for ratemaking purposes is predicated on each unit's license expiration date.

Turkey Point Unit 3:	April 27, 2007
Turkey Point Unit 4:	April 27, 2007
St. Lucie Unit 1:	March 1, 2016
St. Lucie Unit 2:	April 6, 2023
Crystal River Unit 3:	December 3, 2016

(Lee).

ISSUE 12: Do FPL and FPC comply with NRC requirements as they pertain to control of the decommissioning funds?

RECOMMENDATION: Yes, FPL and FPC comply with Nuclear Regulatory Commission (NRC) requirements as they pertain to control of the decommissioning funds. (Maurey).

ISSUE 13: Do FPL and FPC comply with NRC requirements as they pertain to the management of the investments of the decommissioning trust funds?

RECOMMENDATION: At this time, it appears that FPL and FPC are in compliance with the NRC requirements as they pertain to the management of the investments of the decommissioning trust funds. (Maurey).

ISSUE 14: Do FPL and FPC comply with IRS requirements as they pertain to control of the decommissioning funds?

RECOMMENDATION: Yes, FPL and FPC comply with Internal Revenue Service (IRS) requirements as they pertain to control of the decommissioning funds. (Salak).

ISSUE 15: Do FPL and FPC comply with IRS requirements as they pertain to the management of the investments of the decommissioning trust funds?

RECOMMENDATION: Yes, FPL and FPC comply with the IRS requirements as they pertain to the management of the investments of the decommissioning trust funds. (Salak).

ISSUE 16: What are the fee structures associated with the administration and management of the decommissioning trust funds for FPL and FPC and are these appropriate?

RECOMMENDATION: The fee structures are detailed in the respective company positions. Despite the differences between FPL's and FPC's arrangements for the assessment of fees associated with the administration and management of their respective decommissioning trust funds, it appears that both companies have reasonable fee structures. (Maurey).

ISSUE 17: Are the parties owning an interest in the nuclear units of Florida Power & Light and Florida Power Corporation providing their share of the total decommissioning costs?

RECOMMENDATION: Yes, it appears that each company has made necessary arrangements to ensure that the parties owning an interest in each of the nuclear units are providing for their fair share of the total decommissioning costs. (Lee).

ISSUE 18: What is an appropriate investment strategy for a nuclear decommissioning trust fund?

RECOMMENDATION: An appropriate investment strategy for a nuclear decommissioning trust fund should ensure that each dollar contributed to the fund is available at the time of decommissioning and that the fund's assets earn a consistent positive real return over a market cycle. (Maurey).

ISSUE 19: Should a minimum fund earnings rate be imposed and, if so, how should that rate be determined?

RECOMMENDATION: The companies should be required to ensure that the funds maintain the purchasing power of the contributions by earning at least the rate of inflation as measured by the Consumer Price Index (CPI) over each five year review period. This should be the minimum fund earnings rate imposed by the Commission. (Maurey).

*ISSUE 20: What is the assumed appropriate fund earnings rate, net of tax, for a nuclear decommissioning trust fund?

RECOMMENDATION: The appropriate fund earnings rate, net of tax, for a nuclear decommissioning trust fund should be equal to or greater than the rate of inflation as measured by the Consumer Price Index (CPI). DRI forecasts a long-term average CPI over the next 25 years of 5.27%. Therefore, the appropriate fund earnings rate, net of taxes and all other administrative costs charged to the trust fund, should be 5.27%. (Maurey).

*ISSUE 21: How often should contributions be made to the company's decommissioning fund?

RECOMMENDATION: Contributions should be made to the decommissioning funds on a monthly basis. (Salak).

ISSUE 22: What are the tax and revenue requirements implications of having a qualified fund versus a non-qualified fund?

RECOMMENDATION: If income tax rates remain constant and inflation rates and earnings on investments are assumed to be the same for both funding methods, the revenue requirements would be the same for both funding methods. (Salak).

ISSUE 23: Was it appropriate for Florida Power & Light and Florida Power Corporation to qualify the nuclear decommissioning funds under Section 468A of the Internal Revenue Code for 1984 through 1987?

RECOMMENDATION: Yes, it was appropriate for FPL and FPC to qualify their decommissioning funds under Internal Revenue Code Section 468A for tax years 1984 through 1987. (Salak).

ISSUE 24: Was it appropriate for Florida Power & Light to not qualify the nuclear decommissioning funds under Section 468A of the Internal Revenue Code for 1988?

RECOMMENDATION: Staff believes that the nuclear decommissioning trust funds should be qualified in all years when that option is available. However, there is no evidence in the record to indicate that FPL's decision was inappropriate for 1988. (Salak).

ISSUE 25: Should utility companies, prospectively, be required to qualify nuclear decommissioning trust funds pursuant to Section 468A of the Internal Revenue Code?

RECOMMENDATION: No, however, their decisions concerning their tax elections in regard to nuclear decommissioning should be closely examined in future proceedings. Qualifying the funds is the most conservative way to guarantee that the necessary funds will be available at the time of decommissioning. (Salak).

***ISSUE 26:** What is the appropriate annual accrual in equal dollar amounts necessary to recover future decommissioning costs over the remaining life of each nuclear power plant for Florida Power Corporation and Florida Power & Light?

RECOMMENDATION: The appropriate jurisdictional annual accruals necessary to recover future decommissioning costs over the remaining life of each nuclear power plant are:

<u>FPL:</u>	<u>Recommended Annual Accrual</u>
Turkey Point Unit 3:	\$10,439,196
Turkey Point Unit 4:	13,590,449
St. Lucie Unit 1:	10,910,879
St. Lucie Unit 2:	<u>8,824,810</u>
Total	<u>\$43,765,334</u>

FPC:

Crystal River Unit 3:	<u>\$ 8,599,412</u>
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(Hoppe/Maurey).

***ISSUE 27:** In which years are decommissioning costs projected to be included in the company's cost of service, and what are the projected amounts that will be included each year?

RECOMMENDATION: Decommissioning expenses or accrual amounts will be included in each company's cost of providing service each year until each unit's operating license expiration date. The accrual amount will be that which the Commission approves in Issue 26. This amount will be subject to subsequent review at least once every five years and should be reflected in expenses for surveillance and tax savings reporting purposes. (Lee).

ISSUE 28: What should be the effective date for adjusting the annual accrual amount?

RECOMMENDATION: The effective date for adjusting the annual accrual amounts for FPL should be January 1, 1989. The effective date for adjusting the annual accrual amount approved for FPC in Order No. 18627 in Docket No. 870220-EI should be made effective January 1, 1990. (Hoppe).

ISSUE 29: What are the jurisdictional revenue requirements needed to recover the costs associated with the decommissioning of each nuclear unit?

RECOMMENDATION: The jurisdictional revenue requirements needed to recover the decommissioning costs of each nuclear unit are as follows:

	<u>Previous Revenue Requirement</u>	<u>Increase/Decrease</u>	<u>Total Recommended Annual Revenue Req.</u>
<u>FPL:</u>			
Turkey Point Unit 3:	\$ 5,459,105	\$ 5,152,547	\$10,611,652
Turkey Point Unit 4:	3,989,885	9,825,078	13,814,963
St. Lucie Unit 1:	4,978,857	6,112,270	11,091,127
St. Lucie Unit 2:	<u>4,756,925</u>	<u>4,213,671</u>	<u>8,970,596</u>
Total	<u>\$19,184,772</u>	<u>\$25,303,566</u>	<u>\$44,488,338</u>
<u>FPC:</u>			
Crystal River Unit 3:	<u>\$ 9,400,000</u>	<u>\$ (658,526)</u>	<u>\$ 8,741,474</u>

(Hoppe/Maurey).

ISSUE 30: Should base rates be revised in this docket to reflect any change in revenue requirements?

RECOMMENDATION: No, base rates should not be revised in this docket to reflect any change in revenue requirements. (Hoppe).

EXECUTIVE SUMMARY

The attached staff recommendation addresses estimated decommissioning costs in current (January 1, 1989) dollars as well as future dollars, annual accrual amounts necessary to recover those costs over the remaining life of each nuclear unit and the associated revenue requirements for each nuclear plant in the State. For the purposes of this recommendation, Florida Power & Light Company and Florida Power Corporation are designated as FPL and FPC, respectively.

Specific Commission rulings on Issues marked with an asterisk are required by the Internal Revenue Service. These are Issues 4,6,7-11,20, 21, 26, and 27.

Order No. 10987 in Docket No. 810100-EU(CI) required the establishment of a funded reserve, apart from the reserve for depreciation, for the accumulation of the estimated costs of decommissioning each nuclear unit of FPL and FPC. Prior to this time, this cost had been considered a component part (cost of removal) of the depreciation rate design for these nuclear plants. Docket No. 810100-EU(CI) provided the Commission, for the first time, cost estimates to decommission nuclear facilities as well as a look at the type of decommissioning methodologies available. Due to the amounts of monies being estimated to decommission or remove these facilities, the Commission decided that rather than continuing to include this as the cost of removal component in the depreciation rate design, a fund should be established to assure that the monies necessary for decommissioning would be available at the time of expiration of the nuclear facility's operating license. It was recognized that through time, these costs might have to be

revised; this is why the companies are required to file updated decommissioning cost studies no less often than every five years. The purpose of these studies should be to recognize developments and changes impacting such costs, to consider such factors as additional information, improvements in technology and regulatory changes as well as to re-evaluate methodology alternatives and consider updated inflation rate forecasts used to determine future decommissioning dollars and the annual accrual needed to recover those costs. An important thing to remember is that this is a learning process and as more is learned, questions and concerns will be raised that should be investigated.

Since Docket No. 810100-EU(CI), the National Regulatory Commission as well as this Commission have come to recognize the desirability of performing site specific cost studies since such studies account for factors specifically unique to the individual nuclear unit. In this proceeding, the decommissioning cost studies submitted by FPL and FPC are site specific. Issues 1-3 of the attached staff recommendation addresses the concern of whether or not the non-contaminated or non-radioactive assets of the nuclear facilities should necessarily be assumed to have to be dismantled and removed at the time decommissioning of the radioactive assets are estimated to take place. Staff's recommendation is basically that this issue warrants further investigation and therefore FPL and FPC should be required to submit site specific economic cost studies for each nuclear plant to determine whether or not it will be cost justified to retain the non-contaminated assets for future electric generation use.

The determination of future decommissioning costs, the appropriate

annual accruals, and associated revenue requirements directly result from the recommendation of Issue 5, contingency allowance, and Issue 7, appropriate escalation rates. Decisions on these two Issues will affect the resultant calculations made in Issues 6, 8, 10, 26, and 29.

The key elements of the attached recommendation are as follows:

1. A contingency allowance of 25% should be applied to the total estimated decommissioning costs to account for unforeseen circumstances such as bad weather, labor strikes or equipment failures. This is not to say, however, that this level of contingency will be considered to be appropriate in the future as technical and/or regulatory changes could affect the amount of contingency considered to be appropriate.

2. Escalation rates used in converting current estimated decommissioning costs to future costs should be based on similar inflation measures for the same components of each decommissioning activity.

3. The companies should be required to ensure the funds maintain the purchasing power of the contributions by earning at least the rate of inflation as measured by the Consumer Price Index over each five year review period. This is the minimum fund earnings rate that the Commission should impose. Staff recommends an assumed fund earnings rate, net of taxes and all other administrative costs charged to the trust fund of 5.27% to be used in this proceeding to calculate the annual decommissioning accrual amounts. This rate is the DRI long-term average forecast for the Consumer Price Index over the next 25 years.

4. Based on Staff's recommended contingency allowance and escalation rates, the estimated cost as of January 1, 1989 to decommission the nuclear

units of FPL is \$760,790,321; the cost to decommission the nuclear unit of FPC is \$189,123,000. These costs, escalated to the operating license termination date for each unit, are \$4,595,622,139 and \$1,201,528,228 for FPL and FPC, respectively. The appropriate jurisdictional annual accruals necessary to recover future decommissioning costs over the remaining life of each nuclear power plant for FPL is \$43,765,334; for FPC the jurisdictional annual accruals are \$8,599,412. These annual accruals should be included in each company's cost of service and should also be reflected in expenses for surveillance and tax reporting purposes. The associated revenue requirements for FPL are \$44,488,338, or an increase of \$25,303,566 as compared to current revenue requirements of \$19,184,772. For FPC, the associated revenue requirements are \$8,741,474, or a decrease of \$658,526 as compared to current revenue requirements of \$9,400,000. Base rates should not be revised in this proceeding to reflect these changes in revenue requirements.

5. The effective date for adjusting the annual accrual amounts for FPL should be January 1, 1989; the effective date for FPC should be January 1, 1990.

6. FPL and FPC should be required to file a site-specific economic cost study for each of their nuclear generating plants to determine if it will be cost justified to retain the non-contaminated portion of the nuclear plant assets for use with a new generating station. These feasibility studies should be submitted no later than two years from the date of the final order in this proceeding.

7. It appears that FPL and FPC comply with Nuclear Regulatory Commission and Internal Revenue Service requirements as they apply to the

control and management of the investments of the decommissioning funds.

8. The revenue requirements of a qualified or non-qualified fund are the same if the inflation and earnings rates are assumed to be the same and it is assumed that the tax rate remains constant. The major tax difference between the two funding methods is the timing of the tax deduction.

9. The Commission should not require the companies, prospectively, to qualify the nuclear decommissioning trust funds. However, each company's decision concerning its tax elections should be closely examined in future proceedings. Each company should be able to justify its chosen tax treatment by explaining the benefits the ratepayers have received and will receive from that treatment. Qualifying the funds is the most conservative way to guarantee that the necessary funds will be available at the time of decommissioning.

CASE BACKGROUND

By Order No. 10987, issued July 13, 1982, in Docket No. 810100-EU(CI), this Commission required the establishment of a separate funded reserve, apart from the reserve for depreciation, for the accumulation of the estimated costs of decommissioning each nuclear unit operating in Florida. In particular, the Commission found that decommissioning cost estimates "should be reviewed and, if necessary, changed no less often than every five years." Pursuant thereto, on January 26, 1987, Florida Power Corporation (FPC) filed an updated nuclear decommissioning study for its Crystal River Unit 3 nuclear plant, accompanied by a petition seeking approval of a revised annual accrual to its nuclear decommissioning reserve, based on the cost estimates and funding assumptions developed in the study. Similarly, on April 20, 1988, Florida Power & Light Company (FPL) filed nuclear decommissioning studies for its St. Lucie Nuclear Units 1 and 2, accompanied by a petition seeking approval of revised annual accruals to its nuclear decommissioning reserve. On June 29, 1988, FPL filed nuclear decommissioning studies for its Turkey Point Nuclear Units 3 and 4 and revisions to its studies on the St. Lucie Units 1 and 2. Also, on June 29, 1988, FPL filed a petition seeking approval of these revised annual accruals to its nuclear decommissioning reserve for the Turkey Point Nuclear Units and the amended revised accruals for its St. Lucie Nuclear Units.

On May 5, 1987, the Commission initiated a full revenue requirements rate proceeding with respect to FPC (Docket No. 870220-EI) and included the pending issue of FPC's nuclear decommissioning costs for consideration in the proceeding. As a result of a settlement subsequently approved by the

Commission in that docket (Order No. 18627), FPC's annual accrual to its decommissioning reserve was increased by \$4.3 million effective January 1, 1989, together with a corresponding increase in base rates.

Pursuant to notice, a Prehearing Conference was held in this Docket on May 4, 1989, establishing the issues to be addressed. Hearings were held on May 25, 1989.

DISCUSSION OF ISSUES

ISSUE 1: Are there components and facilities now at the nuclear production units which could be retained to generate electricity with another steam source after the removal of the current nuclear steam generation components?

RECOMMENDATION: Yes, there are portions of the nuclear electric generating units which could be retained and used for future generation of electricity. The question does remain, however, as to whether or not it will be cost justified to retain these assets versus dismantling them upon decommissioning, at the same time the contaminated assets are removed (See Issue 3). (Wilkerson/Lee).

POSITION OF PARTIES

FPL: It is unknown at this time. Components with potential for reuse after decommissioning would be limited to nuclear non-contaminated components. These would primarily include portions of the turbine-generator power block, cooling system and electrical grid interconnecting facilities. The usability of these components however, will depend on the wear-and-tear status at the time reuse is commenced, the economic viability of such reuse and the conformance to future regulatory standards.

FPC: While it is possible that, after approximately 40 years of use, certain components and facilities at CR3 could have the physical capability for additional use with a new, non-nuclear steam source, it is unlikely that such use would be economically feasible. The mere fact that these facilities could be used should not serve as the premise for funding future decommissioning costs.

STAFF ANALYSIS: Land suitably located for a power generation site will continue to be at a premium in the State. Witness Dennis of FPL testified: "I think both sites--and we all recognize the load centers which exist in the State of Florida--that both the St. Lucie facility and the Turkey Point site, the land mass itself, the cooling systems and the switch yard transmission systems, are highly valuable assets in the future regardless of what type of power source exists there." (TR 275). The decommissioning plans under review provide that, "The station grounds will be planted with vegetable matter for erosion control and will have a final contour suitable for agricultural, range or timber uses." (Exhibit 27 p.C-5). However, the locations of these nuclear generating stations will, most surely, be logical sites for generation of electricity after the present nuclear steam source is replaced. As witness Dennis testified: "These sites are already developed with regards to cooling systems and transmission facilities. The sites are in near proximity to load centers providing for generation and load balance objectives which add to system reliability. Availability of new generation sites in the load areas surrounding these existing sites is questionable." (TR 264). The question relates to the non-contaminated assets at those sites and their availability for use by whatever steam source is subsequently put into service at those sites.

The concept in the above position of FPC that these assets under discussion will be being considered for reuse "after approximately 40 years of use" must be addressed. It is true that some structural items will have had 40 years of use--and possibly could be good for at least 40 more. However, the non-contaminated assets consist of items which are maintained in first class

operating condition (as is necessary for all components of a generating plant) and many of which are regularly replaced by new or rebuilt items; these replacements being the "interim retirements" included in developing an average service life in a depreciation study. (Exhibit 22). As Staff witness Woerner testified, "Some of the assets at a generating unit, i.e., structures, pedestals, some piping systems, and station equipment, might be expected to have a life potentially greater than the nuclear operating license. Many other assets of a type which might be useful for future generation will have been replaced through the process of interim retirement a short time prior to final plant shut down." (TR 336).

The concern mentioned in the position of FPL that a power source to replace the generation of the nuclear unit will be needed immediately upon decommissioning may, of course, be true. However, that fact does not relate to the question of reuse of non-contaminated assets at the nuclear site. The generation capacity needed immediately upon decommissioning of the nuclear unit would have to come from a unit with a physical location at least somewhat different from that of the decommissioned nuclear unit. The question of reuse of the non-contaminated assets relates to a subsequent unit at the site of the present nuclear unit. The argument for such a subsequent unit would be the continued desirability of the site for generation such as access to water, existing ownership (as in Dennis, cited above), and the continued increasing requirement for electrical energy.

The question of projecting future technologies and governmental requirements, raised by FPL in their position, is certainly a valid one. All parties appear to be in agreement that, within two to four decades, there may

be changes relating to these factors. In the opinion of Staff, such changes could lengthen or shorten the life of the present nuclear operation, and could decrease or increase the likelihood of continued use of any portion of the present assets; these factors cannot be projected or used as determinants at this time.

Changes which have taken place since this Commission's original 1982 action on decommissioning costs, and those which are likely to take place in the future, are the reason for periodic reassessment of these costs and their related factors. Commissioner Easley and Chairman Wilson express concern (TR 224-227), that the level of the fund, and not its structure, is the matter under question in this docket. This discussion between Commissioners Easley, Gunter and Wilson (TR 227-229) continues and introduces the fact that though we started off by addressing the estimated costs of decommissioning the whole plant as a separate funding, rather than continued treatment within the depreciation rate, in the original Docket No. 810100-EU, there may be developments or a learning process as time goes on. The opinion of Staff is that the question presently under discussion relates to a collection of funds, the amount of which is under determination--and the necessity for defining which funds should be collected as a part of the mechanism, which is input to the determination of the amount to be recovered by that mechanism.

Mr. LaGuardia makes the point (TR 92-93) that the difference in thermodynamic cycles of the nuclear units versus current design boilers would result in a very inefficient system and would not be cost effective. On the other hand, when subsequently asked as to the potential of some useful life left, quite a bit of it, in non-contaminated plant, he responds, "There is a

possibility that that is the case. The technology of that is still evolving and there is no regulatory guidance yet established." (TR 97). On the same subject, Staff witness Woerner testified that there were two cases to date that he knew of, Midland and Fort St. Vrain, where non-contaminated assets at nuclear plants have been converted to subsequent fossil fuel use. (TR 349-350).

ISSUE 2: Should the dismantlement of non-contaminated plant components be included in the funding for "Nuclear Decommissioning", or recovered separately through the use of lives and costs specifically related to those non-contaminated reusable components?

RECOMMENDATION: The dismantlement of non-contaminated plant components available for continued use after the decommissioning of the current nuclear steam source should be recovered separately through the use of lives and costs specifically related to those components. However, based on the current studies filed in this proceeding, there is no way to distinguish between the costs of dismantling contaminated assets and potentially reusable non-contaminated assets at the time of decommissioning. (See Issue 3). (Wilkerson/Lee).

POSITION OF PARTIES

FPL: At this time, the dismantlement of the nuclear non-contaminated plant components is and should be included in the funding for nuclear decommissioning. If the nuclear non-contaminated portion of the unit is retired at the same time as the nuclear contaminated portion, there would be no significant difference in total costs since such costs have not been considered in current depreciation studies and the removal of such costs from the decommissioning study would cause an offsetting deficiency in depreciation reserves. However, if at a future time the nuclear non-contaminated portion is determined to have a useful life beyond the nuclear contaminated portion, it may be preferable to recover the related removal costs as a component of depreciation to more closely match these costs with each unit's period of generation.

FPC: Unless there is some sound basis to conclude that the non-contaminated plant components will be used after decommissioning, it would make little difference whether the cost of their dismantlement is included in decommissioning costs or depreciation expense, since they would be recovered over the same period in either event. Absent such a basis, FPC believes it is preferable at the present time to continue to include these components in the funding of decommissioning costs.

STAFF ANALYSIS: All parties seem to be in agreement that, if a given number of dollars is spread over a given number of years, the annual expense will be the same--assuming similar treatment as to funding. Accepting that, however, if some portion of the assets will continue to serve the public after the decommissioning of the nuclear components, the period of expensing the costs of removal/dismantlement should be spread over the related expected average remaining life, as Staff witness Woerner testified. (TR 341).

As pointed out in FPL's position, the prospective recognition of a difference in the timing of the dismantlement of contaminated and non-contaminated assets can occur at some unspecified point in the future "to more closely match these costs with each unit's period of generation." This matching of costs, to the extent possible, should be at the core of any depreciation-related decisions, and is the concern of Staff at this time. If we couple this concern of matching with the statement that "removal of such costs from the decommissioning study would cause an offsetting deficiency in depreciation reserves" we see that any mismatch or misalignment in the pattern (surplus or deficit), can grow consistently worse with the passage of time. Any necessary corrective action will become more consequential.

The turning points of this issue are quite basic: The identification of the non-contaminated assets which are subject to reuse, and the economics of the reuse question. (See Issue 3).

ISSUE 3: Should a decommissioning cost study be required from each company addressing the exclusion of non-contaminated components and facilities which can be used for generation of power subsequent to decommissioning of the present nuclear components? If so, in what time-frame should they be required?

RECOMMENDATION: Yes, FPL and FPC should file a site-specific economic cost study for each of their nuclear generating plants to determine if it is cost justified to retain the non-contaminated portion of the nuclear plant assets for use with a new generating station. These feasibility studies should be submitted no later than two years from the date of the final order in this proceeding. (Wilkerson/Lee).

POSITION OF PARTIES

FPL: It does not appear that there is any basis to conclude that nuclear non-contaminated components will have any significant value upon decommissioning. If it can later be established that the nuclear non-contaminated components and facilities have a useful life beyond the nuclear contaminated facilities, a cost study should be required and the removal cost of the nuclear non-contaminated portion should be spread over the extended period the unit would provide generation. Since decommissioning studies are filed no less frequent than every five years, any change to exclude non-contaminated components and facilities should be incorporated in the Company's next studies.

FPC: Future decommissioning studies should be based on those assumptions considered most likely to occur, not on alternatives that are only a possibility. Before a decision is made to conduct a costly, full-scale decommissioning study that excludes non-contaminated components, an evaluation

should be performed to determine the engineering and economic feasibility of using these components with another steam supply after the nuclear components have been decommissioned. If the Commission determines that further use of the non-contaminated components is a viable alternative, a cost study differentiating between contaminated and non-contaminated components could be conducted for the next five-year review.

STAFF ANALYSIS: There is nothing magical about the five-year cycle; it was set as a pattern to encompass prospective changes in projected costs of decommissioning. The words in Order No. 10987 read "the estimate of the cost of decommissioning should be reviewed and, if necessary, changed no less often than every five years." The door is left open for reaction to substantial changes which may occur in the meantime. The question is whether or not we are facing a possible substantial change in this case. Staff agrees with FPC that "an evaluation should be performed to determine the engineering and economic feasibility of using these components with another steam supply after the nuclear components have been decommissioned." Then, depending on the outcome of that study, the incorporation of its findings into the general pattern of nuclear and fossil fuel decommissioning/dismantlement studies could be determined. To accomplish this as efficiently as practicable, the Staff recommends that feasibility studies be conducted within two years from the date of the final order in this proceeding.

***ISSUE 4:** What methodology should Florida Power Corporation and Florida Power & Light utilize to decommission their units?

RECOMMENDATION: The methodology that FPC and FPL should utilize to decommission their nuclear units is as follows:

Turkey Point Unit No. 3: Integrated Prompt Removal/
Dismantling

Turkey Point Unit No. 4: Integrated Prompt Removal/
Dismantling

St. Lucie Unit 1: Mothball/Prompt Integrated
Dismantling

St Lucie Unit 2: Integrated Prompt Removal/
Dismantling

Crystal River Unit 3: Prompt Removal/Dismantling

(Lee).

POSITION OF PARTIES

FPL: The appropriate methodology for decommissioning Turkey Point Unit Nos. 3 and 4 is an Integrated Prompt Removal/Dismantling approach. The Integrated Prompt Removal/Dismantling for Turkey Point is presently the lowest cost method and was chosen, among other reasons, because it utilizes those individuals familiar with the nuclear facility to support the dismantling effort and is the method recommended by the Nuclear Regulatory Commission (NRC).

The appropriate methodology for decommissioning St. Lucie Unit Nos. 1 and 2 is a Mothball/Prompt Integrated Dismantling approach. The Mothball/Prompt Integrated Dismantling approach is the lowest cost method and,

due to the difference in license expiration dates, allows for a one time mobilization of contractor personnel and equipment by mothballing Unit No. 1 until the expiration of Unit No. 2's license.

FPC: The appropriate decommissioning methodology for CR3 is the Prompt Removal/Dismantlement approach.

STAFF ANALYSIS: There is no disagreement among the parties regarding this issue. The decommissioning methodology recommended for each nuclear unit is the result of the TLG studies (Exhibits 1, 2, 3, 4, 8) sponsored by Witness LaGuardia. These studies show the detail cost analysis of three basic decommissioning alternatives identified by the NRC as being acceptable. These studies were made on a site-specific basis and are in line with federal recommendations that decommissioning be accomplished in the shortest practical time following termination of operations. (TR 19, 46, 47). As Witness LaGuardia testified, the three decommissioning alternatives considered in each of the company's studies were DECON (prompt removal/dismantling), SAFSTOR (safe storage mothballing with delayed dismantling), and under special circumstances, ENTOMB (entombment). (TR 23, 47).

Witness Hoffman testified that based on the TLG studies performed and the recommendation of Witness LaGuardia, FPL has selected to decommission its facilities in a prompt and integrated manner. This methodology is the least expensive of the three acceptable alternatives. Besides cost, the Company considered such factors as logistics, health, safety, security and the future regulatory environment. (TR 114). In addition, the NRC has recommended prompt dismantlement absent any clear showing of why a nuclear plant should be decommissioned on a delayed basis. (TR 115).

Witness LaGuardia testified, that based on his analysis, his recommended decommissioning methodology for each nuclear plant of FPL was to mothball (SAFSTOR) St. Lucie Unit 1 for a period of approximately 5 years at which time decommissioning activities could begin in conjunction with Unit 2; decommission the two Turkey Point nuclear units upon final shutdown (integrated DECON). These methodologies provide the most reasonable means for terminating the license for each site in the shortest possible time, and relieving the Company of its regulatory obligations at the site. (TR 25, 26).

Witness LaGuardia's recommended decommissioning methodology for FPC's nuclear plant Crystal River 3 is the prompt removal/dismantling (DECON). (TR 51). His analysis (Composite Exhibit 8) shows this methodology to be the most cost effective and most reasonable means for terminating the license for the site in the shortest possible time, and consequently relieves FPC of its regulatory obligations at the site.

Based on the cost studies sponsored by Witness LaGuardia (Exhibits 1, 2, 3, 4, 8), Staff finds his recommended decommissioning methodology treatment for each of the FPL and FPC nuclear plants reasonable.

ISSUE 5: Should there be a contingency allowance applied to the total cost at this time, and if so, what should the percentage be?

RECOMMENDATION: Yes. The overall contingency allowance of 25% for both FPL and FPC is reasonable at this time. Staff does, however, have reason to believe that this amount may change through time. (Ballinger).

POSITION OF PARTIES

FPL: Yes. The contingency percentage is 25%. This percentage provides for the costs of high probability program problems where the occurrence, duration, and severity cannot be accurately predicted and have not been included in the basic estimate. The contingency provides for site specific problems that may arise and does not represent a provision for inaccurate cost estimates. If cost estimates were to be made at the time of commencement of decommissioning activities they would also include a contingency allowance of 25%. Contingency items that could occur include changes in the regulatory requirements, the effects of craft labor strikes, bad weather halting or slowing down waste shipments to the burial grounds, equipment/tool breakage, changes in the anticipated plant shutdown conditions, etc. Summation of the categories examined, yielded an average contingency of approximately 25%.

FPC: Yes, a contingency allowance of 25% should be included in the decommissioning cost estimates. Mr. LaGuardia's uncontroverted testimony clearly explained the reasons why a contingency allowance is needed in order to recognize the costs associated with certain high probability field problems that arise during performance of decommissioning activities. Problems of this kind include such things as weather-related delays, equipment breakdowns, unanticipated regulatory requirements, craft labor disputes, and the like.

These problems are not included in developing the basic cost estimate because their specific occurrence, duration, and severity cannot be accurately predicted. Instead, individual contingency factors ranging from 10% to 75% are determined for each major activity area, based on the degree of difficulty and complexity involved. Applying these individual factors to the appropriate components of the cost estimate results in an average of approximately 25%.

Mr. LaGuardia's explanation of what the contingency allowance represents and how it is developed dispels the misconception that it constitutes a "cushion" against the uncertainties of estimating costs well into the future. To the contrary, his estimates have nothing at all to do with future costs; they are based on the current costs that would be required if the plants were to be decommissioned now. Thus, the opportunity to "zero in" on the actual costs of decommissioning in the future review proceedings will not lessen the need for a contingency allowance, since the problem-related costs it provides for cannot be known until the project is actually underway.

Failure to fund these contingency costs would be contrary to the Commission's primary goal of assuring that adequate funds are available when the costs of decommissioning the plants are incurred. The result would be a significant burden placed on future ratepayers and a windfall to the ratepayers before them who received the benefit of the plants' generation.

STAFF ANALYSIS: Webster's dictionary defines a contingency as "an event that is of possible but uncertain occurrence." In a cost estimation, a contingency factor is used to account for such things as bad weather, labor strikes, equipment failures and a variety of unforeseen circumstances. The amount of

contingency to be used is an art in itself and should be based on experience, not just speculation.

Witness LaGuardia testified that an overall contingency factor of 25% is a reasonable amount given the complexity of nuclear decommissioning activities. (TR 21). Mr. LaGuardia also has extensive experience in the area of nuclear decommissioning and other demolition activities. (TR 11-14). His explanation as to how he arrived at the contingency factors he used and their purpose seemed reasonable. Therefore, the record supports the use of a 25% overall contingency factor.

Staff does have one concern with the size of a contingency factor used in an evolving activity such as nuclear decommissioning. Witness LaGuardia stated that some contingencies were allowed to account for equipment failures and regulatory changes. Staff is concerned that the approval of a 25% contingency factor now will send the message that this level of contingency will always be appropriate. We do not believe that this should be the case because technical and/or regulatory changes could affect the amount of contingency to be applied to the overall cost of decommissioning. (TR 89).

***ISSUE 6:** What is the estimated appropriate cost in current (January 1, 1989) dollars to decommission each of the nuclear units?

RECOMMENDATION: The estimated cost in current (January 1, 1989) dollars to decommission each of the nuclear units are:

Turkey Point Unit No. 3	\$162,072,000
Turkey Point Unit No. 4	190,494,000
St. Lucie Unit No. 1	205,249,321
St. Lucie Unit No. 2	202,975,000
Crystal River Unit No. 3	189,123,000

(Maurey).

POSITION OF PARTIES

FPL:

<u>UNIT</u>	<u>Estimated Future Costs at January 1, 1989</u>
Turkey Point Unit No. 3	\$162,771,355
Turkey Point Unit No. 4	191,133,750
St. Lucie Unit No. 1	206,262,473
St. Lucie Unit No. 2	203,421,665

The above was based on the Company's May 1989 Inflation Rate Forecast.

FPC: The appropriate estimated total cost in current dollars (as of January 1, 1989) to decommission CR3 is \$195,133,000.

STAFF ANALYSIS: The site-specific studies conducted by TLG estimated the cost to decommission the four FPL nuclear units in 1987 dollars and the one FPC

nuclear unit in 1985 dollars. These amounts were escalated to January 1, 1989 dollars using the inflation indices and methodology outlined in Issue 7. The actual rates of change for the inflation indices provided by Data Resources, Inc. (DRI) for the period 1985 - 1988 for FPC and 1987 - 1988 for FPL were used.

The disparity between Staff's cost estimates and the companies' cost estimates results from differences in the specific inflation measures used by each party in the escalation calculation. The methodology and specific inflation indices used are described in detail in Issue 7.

*ISSUE 7: What is the appropriate methodology and escalation rate to use in converting the current estimated decommissioning cost to the future estimated decommissioning cost?

RECOMMENDATION: The appropriate escalation rates to use in converting the current decommissioning cost to the future decommissioning cost for each nuclear unit are:

Turkey Point Unit No. 3	5.80%
Turkey Point Unit No. 4	5.80
St. Lucie Unit No. 1	6.02
St. Lucie Unit No. 2	5.91
Crystal River Unit No. 3	6.08

The methodology used by FPL and FPC in their escalation rate analyses is reasonable for determining the appropriate rate. The disparity between Staff's escalation rates and the companies' escalation rates results from differences in the time frame and specific inflation measures used by each party.

(Maurey).

POSITION OF PARTIES

FPL: An escalation rate methodology which considers the potential for escalation rate differences between the decommissioning activities of decontamination, removal, packaging, shipping, burial, staff, and other is used. These activities are separated further into labor, material, and other. Costs identified were inflated by use of the Company's Inflation Rate

Forecast and/or Average Hourly Earnings Index in addition to Producer Price Indices and GNP Deflator when appropriate.

The escalated costs for each of the different decommissioning activities were determined for each year of the study. Summing the escalated costs of all activities for a particular year and comparing this cost relative to the previous year's cost provided the annual escalation rate for the total decommissioning process from one year to the next. This process was repeated for each of the four nuclear units over the applicable analytical horizon.

An overall effective rate, equivalent to the year by year rates, was determined for each unit and are shown below:

<u>UNIT</u>	<u>OVERALL ESCALATION RATE</u>
Turkey Point Unit No. 3	5.0%
Turkey Point Unit No. 4	4.9%
St. Lucie Unit No. 1	5.0%
St. Lucie Unit No. 2	5.0%

The above was based on the Company's May 1989 Inflation Rate Forecast.

FPC: The methodology used by FPC in its Decommissioning Study is appropriate for converting the current estimate of decommissioning costs to future costs. The appropriate escalation rate to use in converting CR3's current estimated decommissioning costs (in January 1, 1989 dollars) to future costs is 6.66%.

STAFF ANALYSIS: Both companies use the same methodology to determine the appropriate escalation rate for converting the current estimated decommissioning cost to the future estimated decommissioning cost. The disparity among these numbers results from differences in the time frame and specific inflation measures used by each party.

The decommissioning process consists of seven stages or activities. These are decontamination, removal, packaging, shipping, burial, staff, and other. Each of these activities are separated into three components. These are labor, materials, and other.

TLG has provided both companies with estimates of the costs for each activity. These cost estimates were determined through site-specific studies and include a contingency allowance of 25%. The base level costs are in 1987 dollars in the FPL studies and 1985 dollars in the FPC study. These estimates are escalated from these base levels to the respective license termination date for each unit using separate inflation forecasts for labor, materials, and other component costs.

Although the site-specific studies identified unique costs associated with each unit, the homogeneous nature of the labor involved and the materials used in the decommissioning process leads Staff to recommend that the same inflation indices be used to determine the appropriate escalation rate of each unit. The cost characteristics unique to each unit are still recognized because the methodology uses the base costs provided by TLG. However, by using the same inflation indices to escalate labor and material costs, Staff recognizes that the labor and materials costs for these activities should increase at the same rate regardless of whether the unit is owned by FPL or FPC.

FPL uses inflation forecasts developed in-house as of May 1989. The company escalates labor costs with the Average Hourly Earnings Index, material costs with the PPI-Capital Equipment Index, and other costs with the GNP Deflator Index. (TR 119).

FPC uses inflation forecasts published by Data Resources, Inc. (DRI) as of December 1988. The company escalates labor costs with the Compensation Per Hour Index, material costs with the PPI - Intermediate Materials and Supplies Index, and other costs with the GNP Deflator - Transportation Index. (TR 294).

Both witnesses, Mr. Hoffman for FPL (TR 149-152) and Ms. Czura for FPC (TR 294-296), offered testimony at the hearing defending each company's respective inflation rate forecast. At the hearing, Mr. Hoffman gave a strong argument for using the Average Hourly Earnings Index instead of the Compensation Per Hour Index to escalate labor costs.

Q. Where you discuss the average hourly earnings, isn't that just the pay to the employees? It doesn't include other type of compensation, would it?

A. Theoretically, no, but I think you have to look at the numbers a little bit themselves, and think about what your - what you're going to use that index for.

The average hourly earnings index would be just the wages paid, whether you are coming from a base number and you're escalating it, and that base number includes benefits already, so you're picking up some of the benefits.

Now, the compensation per hour index which we didn't use, theoretically, includes escalated costs for benefits as well as wages. And when we looked at that - when we look at that and when we look at the DRI forecast of that index compensation per hour, we see that it far outpaces the increase in the CPI. DRI is expecting that compensation per hour is going to increase at a rate as much as 7%, I think, in the later years, many of the later years. And that raises that index quite high. And I think it's a matter of, or an

interesting question, whether benefits can actually increase that fast when the Consumer Price Index stays at a more moderate level. And if you consider that wages are maybe not expected to increase as quickly even as the CPI, that means that benefits would just have to be increasing at an extraordinary pace to reach the level that's in that DRI forecast.

So we didn't feel that it was appropriate to use. We didn't think that piece of the DRI index was possibly constructed properly by DRI. And we still believe that the average hourly earnings index represents a reasonable estimation of what benefits - what wages are going to increase at, and because benefits are already embedded in the beginning amount, that it picks up increases in that cost also. (TR 150-152).

Staff also questioned both Mr. Hoffman and Ms. Czura regarding the most appropriate inflation index to use to escalate materials costs. First, Mr. Hoffman argued that the PPI-Capital Equipment Index should be used because of the capital intensive nature of the decommissioning process.

Q. All right. On the materials you used capital as opposed to intermediate. Doesn't the duration of the decommissioning relate itself more to the intermediate type of leasing equipment than going out and spending a lot of money on capital investments?

A. I don't know specifically the mix of the leasing type of activities, or for the goods that are used in these activities, but from everything that I could understand, just from listening to Mr. LaGuardia, reading the testimony that he prepared, I came to the conclusion that the - it's very capital intensive, that you're buying a lot of tools, you're buying cranes, you're investing in a lot of things that are, to me, more like finished goods. And I thought that was more like - that it would be more appropriate to use the producer price index for capital goods. But, you know, I really can't - I'm certainly not an expert or can say that I know for sure which is the appropriate index there. (TR 152).

Later in the hearing, Ms. Czura made a stronger argument that the PPI-Intermediate Materials and Supplies Index was more appropriate because it includes many of the material cost components which will be used during the

decommissioning process.

Q. Why were each of these inflation measures used in each category?

A. ...For materials, we chose to use the intermediate materials and supplies index from the producer price index. Intermediate materials and supplies is an index within PPI that is at the intermediate stage of processing.

The stage of processing indices are considered to be more useful than commodity grouping indices. This is because commodity grouping indices sometimes produce exaggerated or misleading signals of price changes by reflecting changes that take place at each stage. In other words, you would have multiple counting of price increases at the raw materials stage, the intermediate stage and the finished goods level. Therefore, we decided to go with the stage of the processing index.

There are three indices available for stage of processing. There is raw materials, intermediate supplies and finished goods. The PPI index at the intermediate materials and supplies stage is considered to be a reasonable one for escalating material costs for nuclear decommissioning. It includes many of the material cost components which would be used during the decommissioning process. For example, it includes energy, machinery and equipment, chemicals, metals and metal products, concrete, lumber and transportation equipment.

I spoke with a representative from DRI at length about this index and he provided me with the categories within the intermediate materials and supplies index and the relative percentages, the weights of those components within that index.

After reviewing the descriptions of the work to be performed in Section 3 of Tom LaGuardia's engineering study for Crystal River 3, it appears that the PPI index that the intermediate materials and supplies stage of processing is the appropriate one to use for the escalation of material costs. (TR 294-295).

Staff feels Mr. Hoffman made a stronger argument in support of the Average Hourly Earnings Index than Ms. Czura made for the Compensation Per Hour Index. On the other hand, Staff feels Ms. Czura made a better case for using the PPI-Intermediate Materials and Supplies Index than Mr. Hoffman raised for the PPI-Capital Equipment Index. Based on this evidence, Staff has chosen to escalate labor costs with the Average Hourly Earnings Index and

material costs with the PPI-Intermediate Materials and Supplies Index.

The point can be argued that the inflation indices should also be the same for the two companies when escalating the other category of component costs. However, because of the difference in the treatment of the other category between the FPL and FPC studies, Staff has elected to escalate other costs with the specific measure cited by each company. In the FPL studies, the other category includes all costs associated with the burial, shipping, and other activities. The other category includes only shipping costs in the FPC study. Mr. LaGuardia of TLG testified that he could not recall the basis for this difference between the studies. (TR 103). However, he did conclude that he had no reason to suspect that any of the estimates in the 1985 study were incorrect. (TR 104). Therefore, Staff used the more general GNP Deflator Index to escalate other costs in the FPL escalation rate analysis and the more specific GNP Deflator - Transportation Index in the FPC escalation rate analysis.

Staff does not produce its own inflation forecasts. Therefore, Staff relied on the DRI Long-term Review as of December 1988 for the forecasts of the inflation indices just described. DRI is a respected source for a wide variety of forecasted statistics. This is not to imply that FPL's forecast is not reliable. It's just that DRI is a common source of forecasted data that is generally recognized throughout the financial community. DRI is the forecast service used by the Revenue and Economic Analysis Unit of the Office of Planning and Budgeting in the Governor's Office.

Using these inflation rate forecasts and the base costs provided by TLG, an annual compound escalation rate was calculated for each nuclear unit.

The escalation rate analysis for each nuclear unit is outlined on Schedule 1, pages 115-124. These escalation rates will have a significant impact on costs discussed in Issues 6, 8, 10, 26, and 29.

*ISSUE 8: What is the total estimated cost of decommissioning each unit in future dollars based upon present operating license termination date?

RECOMMENDATION: The estimated total cost of decommissioning each nuclear unit in future dollars based upon present operating license termination dates are:

Turkey Point Unit No. 3	\$ 542,426,010
Turkey Point Unit No. 4	673,190,276
St. Lucie Unit No. 1	1,622,545,122
St. Lucie Unit No. 2	1,757,460,731
Crystal River Unit No. 3	1,201,528,228

(Maurey).

POSITION OF PARTIES

FPL:

<u>UNIT</u>	<u>LICENSE EXPIRATION</u>	<u>FUTURE COST</u>
Turkey Point Unit No. 3	April 27, 2007	\$ 462,822,891
Turkey Point Unit No. 4	April 27, 2007	557,567,350
St. Lucie Unit No. 1	March 01, 2016	1,156,040,449
St. Lucie Unit No. 2	April 06, 2023	1,272,855,821

The above was based on the Company's May 1989 Inflation Rate Forecast.

FPC: The total estimated cost of decommissioning CR3 in future dollars, based upon its present operating license termination date of December 3, 2016, is \$1,471,378,780.

STAFF ANALYSIS: The total estimated cost of decommissioning each unit in future dollars is the sum of the year-by-year expenditures determined in Issue 10. The calculations are described in detail in Issue 10 and are outlined on Schedule 2, pages 125-129.

***ISSUE 9:** As presently planned, in which years will the funds accumulated in the Nuclear Decommissioning Trust Fund be expended, by unit?

RECOMMENDATION: As presently planned, the funds accumulated in the Nuclear Decommissioning Trust Funds will be expended in the following years:

<u>Unit</u>	<u>Year(s) of Fund Expenditures</u>
Turkey Point Unit 3	2005-2013
Turkey Point Unit 4	2005-2014
St. Lucie Unit 1	2014-2028
St. Lucie Unit 2	2021-2028
Crystal River Unit 3	2015-2023

(Lee).

POSITION OF PARTIES

FPL:

<u>Unit</u>	<u>Year(s) of Fund Expenditure</u>
Turkey Point Unit No. 3	2005-2013
Turkey Point Unit No. 4	2005-2014
St. Lucie Unit No. 1	2014-2028
St. Lucie Unit No. 2	2021-2028

FPC: As presently planned, funds accumulated for decommissioning CR3 will be expended in the years 2015 through 2023.

STAFF ANALYSIS: All parties agree to the years in which the funds accumulated in the Nuclear Decommissioning Trust Funds are presently planned to be expended. FPL Witness Hoffman and FPC Witness Czura presented testimony

regarding this issue. (TR 121, 288). The timing of the fund expenditures are in line with Witness LaGuardia's Engineering Cost Studies (Exhibits 1, 2, 3, 4) time estimates for the various stages of decommissioning.

Actual decommissioning is expected to begin approximately two years prior to final shutdown when engineering and planning would begin on the preparation of the Decommissioning Engineering Plan and Environmental Assessment which will be submitted to the NRC and other regulatory agencies for review and approval, and authorization to proceed. (TR 26, 27). There are basically three stages of decommissioning. The first stage is expected to take one year to accomplish. It would begin upon shutdown of the plant, and would involve site preparations to initiate decommissioning. The second stage will take about three years to complete. (TR 30). This is when decommissioning operations will begin upon receipt of the dismantling order from the NRC. This stage involves the removal of radioactivity from the site and termination of the license. (TR 28). The third stage is expected to take about two years to complete. This will involve the demolition of all remaining structures to a depth of three feet below grade, and grading the site. (TR 30).

As Witness Hoffman testified, the greater number of years for St. Lucie Unit 1 over Unit 2 is attributable to the difference in the operating license expiration date for the units. Fund expenditures are made for activities which enable St. Lucie Unit 1 to remain dormant until the license expiration of St. Lucie Unit 2. (TR 121, 122).

With no evidence to the contrary, Staff is of the opinion that these dates estimated for fund expenditures are reasonable.

***ISSUE 10:** What is the estimated future cost of decommissioning, by unit, in each year in which decommissioning funds will be expended?

RECOMMENDATION: The estimated future costs of decommissioning in each year in which decommissioning funds will be expended are:

Turkey Point Plant

Year of Decommissioning	Estimated Future Cost	
	Unit No. 3	Unit No. 4
2005	\$ 1,181,262	\$ 647,762
2006	5,059,912	2,833,826
2007	32,477,023	23,542,894
2008	101,657,092	35,271,774
2009	136,034,524	118,657,270
2010	143,924,526	158,697,622
2011	73,426,868	167,902,084
2012	35,977,100	94,608,426
2013	12,687,703	56,171,797
2014		14,856,822
Totals	\$542,426,010	\$673,190,276
	=====	=====

St. Lucie Plant

Year of Decommissioning	Estimated Future Cost	
	Unit No. 1	Unit No. 2
2014	\$ 2,091,581	
2015	8,282,026	
2016	89,815,291	
2017	32,466,450	
2018	14,603,465	
2019	15,482,594	
2020	16,414,646	
2021	17,402,808	\$ 1,489,148
2022	89,887,187	6,251,434
2023	309,804,347	72,772,279
2024	340,793,776	322,663,298
2025	361,309,561	420,371,172
2026	161,315,779	445,215,109
2027	149,653,381	279,496,214
2028	13,222,231	209,202,077
Totals	\$1,622,545,122	\$1,757,460,731
	=====	=====

Crystal River Plant

<u>Year of Decommissioning</u>	<u>Estimated Future Cost Unit No. 3</u>
2015	\$ 29,609,186
2016	31,409,425
2017	33,319,118
2018	264,177,471
2019	280,239,461
2020	297,278,021
2021	126,848,472
2022	67,279,726
2023	71,367,348
Total	<u>\$1,201,528,228</u> =====

The above amounts may not add due to rounding. (Maurey).

POSITION OF PARTIES

FPL:

Turkey Point Plant:

Integrated Prompt Removal/Dismantling

<u>Year of Decommissioning</u>	<u>Estimated Future Cost Unit No. 3</u>	<u>Unit No. 4</u>
2005	\$ 1,043,067	\$ 562,625
2006	4,432,678	2,437,959
2007	28,236,950	20,082,623
2008	87,716,291	29,831,671
2009	116,491,727	99,502,966
2010	122,316,313	131,947,742
2011	61,930,931	138,413,181
2012	30,114,852	77,328,929
2013	10,540,081	45,521,897
2014		11,937,757
Totals	<u>\$462,822,891</u> =====	<u>\$557,567,350</u> =====

St. Lucie Plant:

Mothball/Prompt - Integrated Dismantling

<u>Year of Decommissioning</u>	<u>Estimated Future Cost</u>	
	<u>Unit No. 1</u>	<u>Unit No. 2</u>
2014	\$ 1,634,646	
2015	6,411,176	
2016	68,854,515	
2017	24,649,790	
2018	10,980,815	
2019	11,529,856	
2020	12,106,349	
2021	12,711,666	\$ 1,122,585
2022	65,026,359	4,672,311
2023	221,961,640	53,920,525
2024	241,815,795	237,021,222
2025	253,906,585	306,142,509
2026	112,271,649	321,449,635
2027	103,153,326	200,065,343
2028	9,026,282	148,461,690
Totals	<u>\$1,156,040,449</u>	<u>\$1,272,855,821</u>

FPC: As presently planned, total costs for decommissioning CR3 will be incurred in the following future dollar amounts:

<u>Year of Decommissioning</u>	<u>Estimated Future Cost</u>	
	<u>Unit No. 3</u>	
2015	\$ 35,395,715	
2016	37,753,070	
2017	40,267,425	
2018	321,014,171	
2019	342,393,714	
2020	365,197,136	
2021	156,681,553	
2022	83,557,399	
2023	<u>89,118,597</u>	
Total	<u>\$1,471,378,780</u>	

STAFF ANALYSIS: TLG provided both companies with spending curves for the various decommissioning activities. The spending curves revealed the percentage of the total decommissioning cost that will be incurred in each year in which the decommissioning funds will be expended. The site-specific percentages were applied to the current cost to decommission each nuclear unit determined in Issue 6 and the result was then escalated to future dollars using the appropriate escalation rate determined in Issue 7. The calculation of these cost estimates is outlined on Schedule 2, pages 125-129.

*ISSUE 11: What is the projected date that each nuclear unit will no longer be included in rate base for ratemaking purposes?

RECOMMENDATION: The projected date that each nuclear unit will no longer be included in rate base for ratemaking purposes is predicated on each unit's license expiration date.

Turkey Point Unit 3:	April 27, 2007
Turkey Point Unit 4:	April 27, 2007
St. Lucie Unit 1:	March 1, 2016
St. Lucie Unit 2:	April 6, 2023
Crystal River Unit 3:	December 3, 2016

(Lee).

POSITION OF PARTIES

EPL: For purposes of the present decommissioning filing, the Company projected that the nuclear units would be retired and removed from rate base for ratemaking purposes as follows:

Turkey Point Unit No. 3	April 27, 2007
Turkey Point Unit No. 4	April 27, 2007
St. Lucie Unit No. 1	March 1, 2016
St. Lucie Unit No. 2	April 6, 2023

EPC: The projected date that CR3 will be removed from rate base is December 3, 2016, the date its operating license is scheduled to terminate.

STAFF ANALYSIS: There is no disagreement among the parties regarding this issue. The projected dates that each nuclear unit will no longer be included in rate base for ratemaking purposes coincides with the estimated retirement dates (existing operating license expiration date) of each unit as testified

to by FPL Witness Kuberek and FPC Witness Czura. (TR 200, 287). Staff agrees that each unit will no longer be included in rate base for ratemaking purposes upon its retirement and that retirement date is predicated on the existing operating license termination date.

ISSUE 12: Do FPL and FPC comply with NRC requirements as they pertain to control of the decommissioning funds?

RECOMMENDATION: Yes, FPL and FPC comply with Nuclear Regulatory Commission (NRC) requirements as they pertain to control of the decommissioning funds. (Maurey).

POSITION OF PARTIES

FPL: The final rule set forth by the Nuclear Regulatory Commission (NRC) requires that the Company submit a report to the NRC by July 27, 1990, indicating how reasonable financial assurance will be provided that funds will be available for decommissioning. Financial assurance is to be provided by either prepayment prior to the start of operation, external sinking fund or a surety method, insurance or other guarantee method. The external sinking fund method as defined in the final rule is "a fund established and maintained by setting funds aside periodically in an account segregated from licensee assets and outside the licensee's administrative control in which the total amount of funds would be sufficient to pay decommissioning costs at the time termination of the operation is expected. An external sinking fund may be in the form of a trust, escrow account, government fund, certificate of deposit or deposit of government securities." 10 C.F.R. Section 50.75(e)(1)(ii). The Company provides for financial assurance through monthly contributions to its Nuclear Decommissioning Funds. These nuclear decommissioning funds are in the form of a trust with State Street Bank and Trust Company as trustee for each trust. Based on the Company's interpretation of the NRC final rule, the Company believes its method would constitute an external sinking fund which complies with the final rule and that reasonable financial assurance will be provided

that funds will be available for decommissioning. After the Company submits its report to the NRC, should the NRC impose any additional requirements pertaining to the control of the decommissioning funds, the Company will comply with such requirements.

FPC: NRC regulations (10 C.F.R. Section 50.75) require each electric utility licensee to certify that "financial assurance" for decommissioning will be provided by one of three enumerated methods. One such method is an "external sinking fund," defined in the regulations as "an account segregated from licensee assets and outside licensee's administrative control," which "may be in the form of a trust," FPC's establishment of an external trust fund under the administrative control of an independent trustee complies with this requirement.

STAFF ANALYSIS: The NRC's final rule, 10 C.F.R. Section 50.75, specifies three methods acceptable to the NRC for electric utilities to use to demonstrate reasonable financial assurance that funds will be available for decommissioning. The rule permits the use of an external sinking fund and defines this as "a fund established and maintained by setting funds aside periodically in an account segregated from licensee assets and outside the licensee's administrative control in which the total amount of funds would be sufficient to pay decommissioning costs at the time termination of operation is expected." The rule elaborates by stating that an external sinking fund "may be in the form of a trust, escrow account, government fund, certificate of deposit, or deposit of government securities." (Exhibit 25). Mr. Hoffman testified that FPL's decommissioning funds are in the form of a trust with State Street Bank and Trust Company of Boston, Massachusetts as trustee.

(TR 163). Mr. McDonald testified that FPC's decommissioning funds are in the form of a trust with Southeast Bank of Miami, Florida as trustee. (TR 317). Therefore, it appears that both companies are in compliance with NRC requirements as they pertain to control of decommissioning funds.

ISSUE 13: Do FPL and FPC comply with NRC requirements as they pertain to the management of the investments of the decommissioning trust funds?

RECOMMENDATION: At this time, it appears that FPL and FPC are in compliance with the NRC requirements as they pertain to the management of the investments of the decommissioning trust funds. (Maurey).

POSITION OF PARTIES

FPL: The management of the investment of the fund assets is currently performed by Staff within the Finance Department of FPL.

The final rule set forth by the Nuclear Regulatory Commission (NRC) requires that the Company submit a report to the NRC by July 27, 1990, indicating that reasonable financial assurance will be provided that funds will be available for decommissioning. As described in Issue 12, the Company's decommissioning funds are in the form of an external sinking fund pursuant to the final rule. There is no requirement in the final rule or in any other regulations promulgated by the NRC that mandate the use of an external investment manager for nuclear decommissioning funds. The final rule does require that a licensee utilizing an external sinking fund set aside monies composing the external sinking fund "in an account segregated from licensee's assets and outside licensee's administrative control." 10 C.F.R. Section 50.75(e)(1)(ii). Because of potential differences in interpretations of the foregoing language, the Company's outside counsel contacted the NRC for clarification. The NRC has indicated they will construe this language to require only that the trustee of the decommissioning fund must be unrelated to the licensee. Based on the Company's interpretation of the final rule and NRC clarification, the Company believes its current method of investment

management of the nuclear decommissioning fund investments complies with the NRC requirements and that should the NRC require external management of the decommissioning fund investments, the Company will comply with such requirements.

FPC: FPC is not aware of any NRC requirement pertaining to the management of the investments of its decommissioning trust fund. If NRC regulations are subsequently deemed by it to be applicable to investment management, FPC will comply with any such requirements to the extent it is not already in compliance.

STAFF ANALYSIS: The NRC requires that electric utilities provide reasonable financial assurance that funds will be available to decommission nuclear units at the time termination of operation is expected. The final rule issued June 27, 1988 requires all companies to submit a report by July 27, 1990, indicating how financial assurance will be provided. (Exhibit 25).

As discussed in Issue 12, it appears that both companies are in compliance with NRC requirements as they pertain to control of the decommissioning funds. However, unlike the issue of control of decommissioning funds which is defined in the final rule, there is no specific wording which addresses NRC requirements pertaining to the management of investments of the decommissioning trust funds. Furthermore, a draft regulatory guide issued by the NRC in May 1989, after the hearing for this docket was held, also neglected to address the specific issue of investment management.

Mr. Hoffman testified that the investment management for FPL's decommissioning funds is conducted by the Finance Department at

FPL. (TR 174). Mr. McDonald testified that the investment management for FPC's decommissioning fund is conducted by Progress Investment Management, Inc., an affiliate of FPC. (TR 318). In their legal briefs, both companies state they are confident they are in compliance with NRC requirements, but will be willing to seek independent investment managers for their funds if the NRC deems their present arrangements unsuitable.

Staff contacted Mr. Frank Cardile of the NRC after the hearing. Mr. Cardile is the primary author of the draft regulatory guide issued by the NRC in May 1989. He said that the NRC is concerned with financial assurance that funds will be available for decommissioning and that the NRC has not specifically addressed the issue of investment management of trust funds maintained by independent trustees. Mr. Cardile also said that the NRC will review all of the reports due by July 27, 1990, and will contact those companies which the NRC has concerns regarding reasonable financial assurance. At that time the NRC will determine if FPL and FPC are in compliance with any implied NRC requirements pertaining to the management of the investments of the decommissioning trust funds. As for now, it appears that FPL and FPC are in compliance with the NRC requirements regarding decommissioning trust funds.

ISSUE 14: Do FPL and FPC comply with IRS requirements as they pertain to control of the decommissioning funds?

RECOMMENDATION: Yes, FPL and FPC comply with Internal Revenue Service (IRS) requirements as they pertain to control of the decommissioning funds. (Salak).

POSITION OF PARTIES

FPL: Yes. For a qualified nuclear decommissioning fund, Treasury Regulation Section 1.468A-5(a) requires that "a nuclear decommissioning fund must be established and maintained at all times in the United States pursuant to an arrangement that qualifies as a trust under State law. Such trust must be established for the exclusive purpose of providing funds for decommissioning of one or more nuclear power plants, but a single trust agreement may establish multiple funds for such purpose." The Company established and maintains its decommissioning funds in a trust with State Street Bank and Trust Company as trustee of each trust. This arrangement complies with the IRS requirements.

The Internal Revenue Code and Treasury Department Regulations do not prescribe requirements for a non-qualified nuclear decommissioning fund.

FPC: In order for contributions to a nuclear decommissioning fund to qualify for a current income tax deduction under IRS regulations (Section 1.468A-5), the fund "must be established and maintained ... pursuant to an arrangement that qualifies as a trust under State law." FPC's establishment of an external decommissioning trust fund under the control of an independent trustee complies with this requirement.

STAFF ANALYSIS: The IRS has few requirements pertaining to the control of the nuclear decommissioning funds. Specifically, the IRS Regulations for Internal

Revenue Code Section 468A state, "a nuclear decommissioning fund must be established and maintained at all times in the United States pursuant to an arrangement that qualifies as a trust under State law. Such trusts must be established for the exclusive purpose of providing funds for decommissioning of one or more nuclear power plants, but a single trust agreement may establish multiple funds for such purpose". (Exhibit 25).

FPL maintains its nuclear decommissioning funds in a trust with State Street Bank and Trust Company. (TR 213). FPL has one trust agreement which establishes a fund for each of its nuclear units. FPC maintains its nuclear decommissioning funds with Southeast Bank, N.A. (TR 307). FPL witness Kuberek and FPC witness McDonald each testified that their respective utility's trust qualified under Florida law. (TR 241, 327). It appears that the requirements mandated by the IRS Regulations for a fund qualified under Internal Revenue Code Section 468A have been met. If the fund has not been qualified under Internal Revenue Code 468A, the IRS does not have any requirements concerning the control of the nuclear decommissioning funds.

ISSUE 15: Do FPL and FPC comply with IRS requirements as they pertain to the management of the investments of the decommissioning trust funds?

RECOMMENDATION: Yes, FPL and FPC comply with the IRS requirements as they pertain to the management of the investments of the decommissioning trust funds. (Salak).

POSITION OF PARTIES

FPL: Internal Revenue Code Section 468A and the Treasury regulations applicable to Section 468A do not require external management of nuclear decommissioning funds. They do require that the funds only be invested in public securities of the United States, obligations of state and local government or time and demand deposits in a Bank or insured Credit Union.

The management of the funds' assets is presently performed by Staff within the Finance Department of Florida Power & Light Company. Investment criteria established for the qualified fund is limited to those required under the Internal Revenue Code.

The Internal Revenue Code and Treasury Department Regulations do not prescribe requirements for a non-qualified nuclear decommissioning fund.

FPC: IRS regulations (Section 1.468A-5) require the assets of a qualified decommissioning fund to be invested in (1) public debt securities of the United States, (2) obligations of a State or local government not in default, or (3) time or demand deposits in a bank or credit union. The investment management of FPC's decommissioning trust fund complies with these requirements.

STAFF ANALYSIS: The IRS Regulations are silent as to how funds qualified under the Internal Revenue Code Section 468A are to be managed. (TR 213). The Regulations limit the permissible investments of a qualified nuclear decommissioning trust fund. The investments are limited to public securities of the United States, obligations of state and local government or time and demand deposits in a bank or insured credit union. (Exhibit 6, p. 2). Both FPL and FPC have limited the qualified fund investments to these options. It appears that both companies are in compliance with the requirements of the IRS Regulations.

ISSUE 16: What are the fee structures associated with the administration and management of the decommissioning trust funds for FPL and FPC and are these appropriate?

RECOMMENDATION: The fee structures are detailed in the respective company positions. Despite the differences between FPL's and FPC's arrangements for the assessment of fees associated with the administration and management of their respective decommissioning trust funds, it appears that both companies have reasonable fee structures. (Maurey).

POSITION OF PARTIES

FPL: The fee structures for FPL are appropriate. Administration fees payable to the trustee, State Street, are assessed on a sliding scale based on the market value of the securities. The current fee structure is as follows:

First \$5 million	1/5th of 1%
Next \$10 million	1/10th of 1%
Next \$15 million	1/20th of 1%
Next \$20 million	1/30th of 1%
Over \$50 million	1/50th of 1%

In addition, nominal transaction and accounting fees are charged.

The management of the Fund's assets is presently performed by Staff within the Finance Department, therefore there is no fee structure associated with management of the decommissioning trust fund.

FPC: FPC's fee structure for the administration and management of its decommissioning trust fund is appropriate and consists of the following annual fees: Trustee fees of 2/100 of 1% of the market value of the trust fund; Investment manager fees of 29/100 of 1% of the market value of the trust fund, reduced to 25/100 of 1% when the market value reaches \$100 million; and investment performance evaluation consulting fees of \$1,438 for each of four quarterly performance evaluations (\$5,752 annually). In 1988, FPC's trustee fees totaled \$4,115 and its investment manager fees totaled \$78,480.

STAFF ANALYSIS: The fee structures associated with the administration and management of the decommissioning trust funds are specified in the respective positions of FPL and FPC. While all of the trusts were established for the same purpose and have the same stated objective, the financial arrangements for the trusts differ between the two companies.

Both companies use independent trustees to handle the administrative duties for the respective trusts. FPC pays Southeast Bank of Miami, Florida a flat fee of 2/100 of 1% of the market value of the trust fund. FPC paid Southeast Bank \$4,115 for trustee fees in 1988. (TR 318).

FPL pays State Street Bank and Trust Company of Boston, Massachusetts a sliding fee that ranges from 1/5 of 1% of the market value of the trust fund for the first \$5 million to 1/50 of 1% for everything over \$50 million. FPL paid State Street Bank and Trust Company \$74,000 for trustee fees in 1988. (TR 170).

FPC employs an affiliate, Progress Investment Management, Inc., to manage the investments in its trust fund. Progress Investment Management receives 29/100 of 1% of the market value of the trust fund for the first \$100 million and 25/100 of 1% for everything above \$100 million. FPC paid Progress Investment Management \$78,480 for management fees in 1988. (TR 310). In addition, FPC employs Callan Associates, Inc. as an independent investment consultant to provide on-going quarterly evaluations of the trust fund investment manager's performance. (TR 320). Callan was paid \$5,750 for these performance evaluations in 1988. (TR 321).

In his direct testimony, Mr. McDonald of FPC cited two surveys which had been conducted on the topic of investment manager fees. Staff reviewed the study published in the March 7, 1988 issue of Pensions and Investment Age which reported the results of a survey of banks, insurance companies, and

independent investment advisors. The survey showed that the median annual fee for a fixed income manager with a fund about the size of FPC's decommissioning trust fund was 34/100 of 1% of the market value of the fund. Mr. McDonald also stated that Callan Associates conducted a similar survey in November 1988. He claims the results of this study showed that the median fixed income manager annual fee for a fund the size of FPC's decommissioning trust fund was 41/100 of 1% of the market value of the fund. (TR 310-311).

The investment manager duties are performed internally by the Finance Department for the FPL trust fund. While there is no set fee structure for this service, after the hearing Staff received information from the company that estimated the cost of this service at approximately \$37,198 for 1988.

In total, FPC incurred costs of \$88,347 for the administration and management of its trust fund in 1988. Its fund was valued at approximately \$27 million at the end of 1988. In total, FPL incurred costs of \$111,763 for the administration and management of its trust fund in 1988. Its fund was valued at approximately \$100 million at the end of 1988. While it appears that FPL paid significantly more than FPC for trustee services (\$74,000 vs. \$4,115) and that FPC paid significantly more than FPL for management services (\$84,230 vs. \$37,198), neither company used fee structures that were unreasonable. Both FPL's trustee fees and FPC's investment management fees are within reasonable ranges for such services. A case can be made that FPC has a very low trustee fee and FPL, by making the investment decisions in-house, has a much lower than average investment management fee. Therefore, while it appears that FPL has a much less expensive arrangement as a percentage of the total value of the fund, neither company has financial arrangements which are unreasonable.

ISSUE 17: Are the parties owning an interest in the nuclear units of Florida Power & Light and Florida Power Corporation providing their share of the total decommissioning costs?

RECOMMENDATION: Yes, it appears that each company has made necessary arrangements to ensure that the parties owning an interest in each of the nuclear units are providing for their fair share of the total decommissioning costs. (Lee).

POSITION OF PARTIES

FPL: The participation agreements are associated with St. Lucie Unit No. 2 and are between the Company and Florida Municipal Power Agency and Orlando Utilities Commission, respectively. These agreements state that the participants shall make funds "available for payment of decommissioning (and disposal) costs on the same bases and with the priority as (those) provided by the Company."

In September 1983, the Company notified each participant of their required annual contribution to their decommissioning fund. To verify that each participant is making the required contribution the Company requires copies of each participant's audited financial statements. The notes to these statements indicate that the participants have the required funds deposited in separate restricted accounts.

FPC: Yes. The 10% co-owners of CR3 are contractually obligated to provide their pro rata share of the plant's decommissioning costs.

STAFF ANALYSIS: FPL Witness Kuberek and FPC Witness McDonald presented testimony regarding this issue. This issue is primarily informational for the Commission to be assured that each company has made the necessary arrangements

to ensure that all parties owning an interest in the nuclear units are providing their proportionate share of the associated decommissioning costs.

For FPL, St. Lucie Unit No. 2 is the only nuclear plant of which other parties own a portion. Those parties are Florida Municipal Power Agency (FMPA) and Orlando Utilities Commission (OUC). Participation agreements have been established to ensure that each participant contributes their proportionate share of the associated decommissioning costs. (Exhibit 5). The agreements provide that each participant either contribute to the trust fund already established for St Lucie Unit No. 2 or establish a separate fund to collect its ownership percentage of decommissioning costs.

For FPC, contracts are in place for the 10% co-owners of CR3 to provide their proportionate share of the plant's decommissioning costs.

ISSUE 18: What is an appropriate investment strategy for a nuclear decommissioning trust fund?

RECOMMENDATION: An appropriate investment strategy for a nuclear decommissioning trust fund should ensure that each dollar contributed to the fund is available at the time of decommissioning and that the fund's assets earn a consistent positive real return over a market cycle. (Maurey).

POSITION OF PARTIES

EPL: Our investment strategy is an appropriate one in that it meets the primary objective of the fund which is to provide the capital necessary for the decommissioning of the Company's nuclear power plants at the end of their respective licensing periods. To accomplish this, the strategy is to maximize the earnings growth of the portfolio while maintaining a high degree of safety so as to minimize future customer contributions. Since establishing the fund in 1983, the Company has pursued a strategy of using tax-advantaged fixed income instruments, namely, municipal bonds and preferred stock.

FPC: An appropriate investment strategy for a decommissioning trust fund is one which attempts to maintain the purchasing power of contributed funds without undue risk. This strategy will ensure that the funds required at the time of decommissioning are available. FPC's current strategy is consistent with the investment guidelines for a qualified trust fund under Section 468A of the Internal Revenue Code.

STAFF ANALYSIS: The primary objective of a decommissioning trust fund is to have enough money on hand at the time of decommissioning to meet all required expenses at the lowest possible cost for utility rate payers. (Exhibit 25). Given all of the fundamental uncertainties involved, however, no set of

investment policies will meet this goal with certainty. Therefore, investment managers must decide upon an investment strategy which ensures that not only will all contributions be available at the time termination of operation is expected but that the purchasing power of these contributions will remain intact as well.

The investment manager has three primary decisions to make in structuring the decommissioning trust fund. They have to decide:

- 1) what type of securities to purchase: U.S. Treasuries, municipals, time deposits, etc;
- 2) the maturity composition of the portfolio; and
- 3) the credit quality of the portfolio.

Given the tax treatment of the qualified funds and the after-tax yield advantage of municipals, most trust assets will be invested in the municipal bond market. From time to time, however, when tax-exempt yields fall to unusually low levels relative to yields on taxable securities, U.S. Treasury securities might be preferable. (TR 130-132).

Investment decisions with respect to credit quality will probably change over the life of the trust. In the early stages, the size of the portfolio will be small. This might not allow for much diversification of credit risk. Also, any loss of principal during the early years would be very costly in terms of foregone interest income over the life of the trust. For both these reasons, most fund managers will choose very high credit quality investments, those rated with a strong A-rating or better, during the early years. Later, when a greater diversification of credit risk is feasible, a lower average credit quality might be acceptable. (TR 167).

The choice of investment maturities always involves a fundamental trade-off. Longer term investments are attractive because, in most market environments, the yield is greater than the return offered on short-term securities. However, buying a long-term bond locks the investor into the yield that is currently available in the market. If interest rates subsequently rise substantially, the investor who purchased long-term bonds will be worse off than the investor who accepted a lower short-term yield initially. When the short-term investments mature, principal can be reinvested at the new, higher rates. This fundamental trade-off affects all investors, but the difference between short- and long-term investments becomes particularly crucial for those, such as decommissioning trust funds, which must fund long-term inflation-sensitive liabilities. Increases in inflation increase the ultimate (nominal) cost of decommissioning a nuclear unit. Also, higher inflation is usually associated with higher interest rates, although the relationship is not perfect. Thus, investors who purchase long-term investments during periods when interest rates are low to moderate will be at a severe disadvantage if interest rates later increase significantly because the amount of money required will have increased but the yield on investments is fixed. Based on this analysis, a portfolio comprised of investments with maturities ranging from 6 months to 7 years would be appropriate.

This discussion has focused primarily on the investment strategy for monies in a qualified nuclear decommissioning trust. However, the same principles should also be applied to the investment decisions for the non-qualified portion of the trust. While this portion is not constrained by the same investment restrictions as the qualified portion, the utility will

still be held liable for any shortfall that occurs due to losses on investments for either type of fund. In the case of funding for decommissioning, the risk of inadequate financial resources at the time of decommissioning outweighs the return that might be available on less-conservative, non-qualified investments. Therefore, due to this risk/return tradeoff, it would be reasonable for the companies to follow similar investment strategies for both the qualified and non-qualified portions of the trust funds. (TR 146, 186).

The fundamental objective of a decommissioning trust fund is to ensure the availability of adequate financial resources to pay for decommissioning at the lowest cost to utility rate payers. The management of the fund, therefore, must be concerned with not only the preservation of contributions, but with the purchasing power of those contributions as well. Therefore, the appropriate investment strategy for a nuclear decommissioning trust fund should ensure that each dollar contributed to the fund is available at the time of decommissioning and that the fund's assets earn a consistent positive real return over a market cycle.

ISSUE 19: Should a minimum fund earnings rate be imposed and, if so, how should that rate be determined?

RECOMMENDATION: The companies should be required to ensure that the funds maintain the purchasing power of the contributions by earning at least the rate of inflation as measured by the Consumer Price Index (CPI) over each five year review period. This should be the minimum fund earnings rate imposed by the Commission. (Maurey).

POSITION OF PARTIES

EPL: No, the Commission should not establish a minimum earnings rate for the actual earnings performance of the funds. Our investment strategy of maximizing the earnings growth of the portfolio while maintaining a high degree of safety is compatible with the goal of providing the capital needed for the decommissioning of the Company's nuclear plants. High volatility in interest rates makes it unrealistic to assume that a minimum earnings rate can be consistently achieved for the overall fund on a total return basis. For computational purposes, however, it is reasonable to use the inflation rate as a proxy for the long-term expected earnings rate as demonstrated in our analysis of historical returns for Municipal instruments.

FPC: The Commission should not impose a mandatory minimum fund earnings rate. As an overall objective, FPC believes it would be reasonable to expect that fund earnings will equal or exceed the CPI, as the Commission recognized when it adopted the current funding procedure in Order No. 10987, Docket No. 810100-EU(CI). This would enable the value of the fund to increase with the rate of inflation, and thereby maintain its ultimate purchasing power. However, even if this objective is met over the long run, there will

undoubtedly be some periods when, due to sharp increases in inflation or decreases in interest rates, fund earnings fall short of the CPI. In instances such as these, it would be inequitable to hold utilities accountable for the effects of economic conditions over which they have no control. This is especially true with the particular funds involved here, since the utilities do not have the prerogative to guard against the risk of a penalty by investing in high-yield, high-risk securities. The overriding importance of protecting the funds' integrity requires investment in low-risk securities, which necessarily provide lower relative yields.

In the event the Commission decides that a minimum earnings rate should be established, the method by which it is applied should be sufficiently flexible to accommodate the effects of circumstances and events beyond the utilities' control. In such event, FPC would suggest that a minimum earnings rate be set for each five-year review period equal to the rate of inflation, as measured by the CPI, and that the utilities be given an opportunity at the review hearings to justify any earnings deficiency their funds may have experienced over the preceding five-year period.

STAFF ANALYSIS: The objective of a decommissioning trust fund is to have enough money on hand at the time of decommissioning to meet all required expenses at the lowest cost to utility rate payers. (Exhibit 25). Given all of the fundamental uncertainties involved, this can best be accomplished through the investment strategy described in Issue 18. However, while such an investment strategy may produce adequate financial assurance that sufficient funds will be available for decommissioning, it cannot estimate with any accuracy what the fund earnings rate would or should be.

Both companies have raised logical arguments against the use of a minimum fund earnings rate. However, both companies have also conceded that it would be reasonable to charge them with the responsibility for maintaining the purchasing power of the contributions collected. (TR 138, 324).

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

*ISSUE 20: What is the assumed appropriate fund earnings rate, net of tax, for a nuclear decommissioning trust fund?

RECOMMENDATION: The appropriate fund earnings rate, net of tax, for a nuclear decommissioning trust fund should be equal to or greater than the rate of inflation as measured by the Consumer Price Index (CPI). DRI forecasts a long-term average CPI over the next 25 years of 5.27%. Therefore, the appropriate fund earnings rate, net of taxes and all other administrative costs charged to the trust fund, should be 5.27%. (Maurey).

POSITION OF PARTIES

FPL: Because of the inability to determine with complete certainty the future level of inflation or investment premiums, an appropriate fund earnings rate cannot be determined. Since inflation will play such an important role in determining the future obligation of a decommissioning fund, the Company hopes to achieve a return on the fund greater than the rate of inflation. The Company's most recent analysis indicates that based on long-term historical relationships it is reasonable to expect an average fund earnings rate (net of tax) of 5.5% or .21% over forecasted CPI. Since the assumed earnings rate is tied to the Company's forecast of the CPI, this rate will be subject to change from time to time.

FPC: The long-term expected earnings rate, net of taxes, for FPC's decommissioning trust fund should be equal to or greater than the rate of inflation, measured by the CPI.

STAFF ANALYSIS: Given that inflation will play such an important role in determining the future liability of a decommissioning trust fund, it is reasonable to charge the companies with the responsibility for ensuring that

the contributions made to the fund earn at least the rate of inflation. (TR 311). This will ensure that the fund does not lose any of the purchasing power of the dollars contributed. As explained in Issue 19, it would not be reasonable to set a prospective

nd earnings rate above the rate of inflation that may or may not be reasonable under future economic conditions. (TR 168). Rather, it would be reasonable to collect the monies the Commission estimates will be necessary to adequately fund the decommissioning liability and require the companies to invest those monies in such a way that the purchasing power as well as the actual contributions remain intact. DRI forecasts a long-term average CPI over the next 25 years of 5.27%. Therefore, the appropriate fund earnings rate, net of taxes and all other administrative costs charged to the trust fund, should be 5.27%. (TR 324).

*ISSUE 21: How often should contributions be made to the company's decommissioning fund?

RECOMMENDATION: Contributions should be made to the decommissioning funds on a monthly basis. (Salak).

POSITION OF PARTIES

FPL: In that the costs are recovered by the Company on a monthly basis, monthly contributions to the fund are considered to be most appropriate.

FPC: Since decommissioning costs are recovered through rates on a monthly basis, contributions to the fund should be made monthly.

STAFF ANALYSIS: All parties agree that contributions should be made to the nuclear decommissioning trust funds on a monthly basis. FPL witness Hoffman states that the customers are billed monthly and the costs are recovered monthly. Therefore, it is most appropriate to make the contributions on a monthly basis. (TR 136). FPC witness McDonald further argues that it would be difficult to properly account for contributions made more frequently than once a month and that the new funds would not be provided "with the full benefits of investment management." (TR 312). Contributing on a monthly basis is the current practice approved by the Commission. Staff recommends that the contributions continue to be made on a monthly basis.

ISSUE 22: What are the tax and revenue requirements implications of having a qualified fund versus a non-qualified fund?

RECOMMENDATION: If income tax rates remain constant and inflation rates and earnings on investments are assumed to be the same for both funding methods, the revenue requirements would be the same for both funding methods. (Salak).

POSITION OF PARTIES

FPL: Tax Implications - The qualified fund allows the Company to take a current tax deduction for contributions to a qualified nuclear decommissioning fund. Contributions to a non-qualified decommissioning fund are not deductible currently. The tax deduction is deferred until the year decommissioning costs are incurred. Therefore, Federal and State income taxes are paid currently on revenues collected for decommissioning and recorded as prepaid taxes.

The non-exempt earnings of both the qualified and non-qualified nuclear decommissioning funds are currently taxable.

Revenue Implications - The revenue requirements for a qualified or a non-qualified fund are the same assuming the inflation rate, tax rate and earnings rates are the same for both funding methods.

FPC: Assuming that tax rates remain constant, the overall revenue requirements of a qualified and non-qualified fund would be approximately the same. However, a qualified fund will minimize any inter-generational differences in revenue requirements which could occur under a non-qualified fund due to either changes in the tax rate, or the inability to fully utilize tax deductions because of insufficient earnings at the time decommissioning

costs are incurred. On the other hand, a non-qualified fund provides the option to invest in higher risk securities, with the opportunity to earn higher rates of return. This option may also become available to qualified funds if pending legislation to remove "black lung" investment restrictions is enacted.

STAFF ANALYSIS: The main difference between a qualified and non-qualified fund is the timing of the tax deduction. If a fund is qualified, the contributions to the fund are currently deductible. If the fund is not qualified, the deduction is allowed when decommissioning actually occurs. The revenue that is collected from the ratepayers for the cost of nuclear decommissioning is considered revenue for tax purposes in the year it is received whether the fund is qualified or non-qualified.

To "qualify" a nuclear decommissioning fund, an annual election must be made under the Internal Revenue Code Section 468A. Once the election is made for a given year, a current tax deduction is allowed for the amount contributed to the qualified fund. The contributions to the qualified fund are limited to the lesser of the amount included in cost of service for regulatory purposes or the "ruling amount" established by the IRS. Distributions from the fund are taxable to the utility unless the distributions are to cover expenses of the fund.

If an election is not made under the Internal Revenue Code Section 468A, a tax deduction for nuclear decommissioning is allowed in the years in which decommissioning actually occurs. As a result, income taxes are paid currently on the revenues collected for decommissioning and the tax benefits of the corresponding deduction is not recognized currently. Debit

deferred income taxes are recorded representing the prepayment of taxes.

As shown in Exhibit 25, the revenue requirements of a qualified or non-qualified fund are the same if the inflation and earnings rates are assumed to be the same and it is assumed that the tax rate remains constant. It is probable that the inflation rates will be the same for both, but it is possible that the earnings rate could vary between a qualified and a non-qualified fund. The investments of a qualified fund are limited to low risk investments while a non-qualified fund has no investment limitations. Historically, the achieved earnings from a qualified versus a non-qualified fund have not varied significantly. However, it is conceivable that the earnings could vary significantly in the future.

If there was a change in the tax law, revenue requirements might change. The changed law could be more or less restrictive in regard to nuclear decommissioning. Changes in the law that ease investment strategy limitations could allow the utilities to earn larger returns on their funds. Greater earnings capacity would be reflected in lower revenue requirements. Changes in the law that affect tax rates applicable to the fund and its earnings could significantly increase or decrease revenue requirements. Changes in the tax law might affect the current deductibility of decommissioning expenses. In that way, revenue requirements might be affected if, at the time of decommissioning, the utility was not able to use the tax deductions. Absent these types of changes, the revenue requirements from either a qualified or non-qualified fund would be very nearly equal.

ISSUE 23: Was it appropriate for Florida Power & Light and Florida Power Corporation to qualify the nuclear decommissioning funds under Section 468A of the Internal Revenue Code for 1984 through 1987?

RECOMMENDATION: Yes, it was appropriate for FPL and FPC to qualify their decommissioning funds under Internal Revenue Code Section 468A for tax years 1984 through 1987. (Salak).

POSITION OF PARTIES

FPL: Yes. After considering the reduction in the corporate federal income tax rate from 46% to 34%, effective July 1, 1987, the Company believed the advantages of the qualified fund outweighed the disadvantages for those years. The annual revenue requirements requested under the petition as filed would have been higher had the Company not made these elections.

FPC: Yes. By qualifying its decommissioning fund under Section 468A, FPC was able to claim an income tax refund of \$10.2 million for the benefit of the fund.

STAFF ANALYSIS: FPL and FPC qualified their nuclear decommissioning funds for 1984 through 1987. For a discussion of qualified versus non-qualified funds, see the staff discussion in Issues 22 and 25.

In 1986 Temporary Regulations were issued for Internal Revenue Code Section 468A. Under the Temporary Regulations, nuclear decommissioning trust funds could be qualified for 1984 through 1986. In those years, the corporate income tax rate was 46%. When the Tax Reform Act of 1986 was passed, the corporate income tax rate was reduced to 34% effective July 1, 1987. In order to receive the benefit of a tax deduction in years when the tax rate was high, both FPL and FPC elected to qualify their decommissioning funds for 1984

through 1986. The bulk of the investments that had been made by the utilities were compatible with the restrictions placed on the investments of a qualified fund. Therefore, the earnings potential of the funds was not unduly affected.

The time within which the utilities could qualify their funds was limited. In order to take advantage of the benefits the utilities perceived to exist under a qualified fund, they had to act. Due to their quick action, the IRS time limitations were met.

The blended corporate income tax rate for calendar year 1987 was 39.95%. Again, FPL and FPC elected to qualify their funds to take advantage of the tax deductions at a higher tax rate.

Because the rates were higher in those years and based on the discussion in Issue 25, staff believes that it was appropriate for FPL and FPC to qualify their funds for 1984 through 1987.

ISSUE 24: Was it appropriate for Florida Power & Light to not qualify the nuclear decommissioning funds under Section 468A of the Internal Revenue Code for 1988?

RECOMMENDATION: Staff believes that the nuclear decommissioning trust funds should be qualified in all years when that option is available. However, there is no evidence in the record to indicate that FPL's decision was inappropriate for 1988. (Salak).

POSITION OF PARTIES

FPL: Yes, Florida Power & Light Company believes that it is in the customers' best interest not to qualify the nuclear decommissioning funds when the federal income tax rate is extremely low as in 1988. If the federal income tax rate is higher in the year of decommissioning the customer will benefit by the reduced revenue requirements associated with the tax rate differential. Also, the customer may benefit from greater fund earnings since the investments in the non-qualified fund are not restricted as in the qualified funds.

FPC: No position.

STAFF ANALYSIS: FPC qualified their fund for 1988 in order to protect its principle and to avoid inter-generational inequities created by potential future changes in the tax rate. (TR 325).

FPL did not qualify its fund for 1988. FPL believes that in years when the tax rate is low, the ratepayers are benefited more by the non-qualified funds.

Because the tax rate for 1988 was lower than it had been in recent years and based on the staff analysis in Issue 25, Staff recommends that no

adjustment be made.

There is no evidence to suggest that FPL's tax treatment is inappropriate. There is only evidence that suggests its tax treatment is not conservative. FPL's ratepayers could be affected by the elected tax treatment. Given a 34% tax rate for 1988, it is not likely that the ratepayers would suffer but it is a possibility.

ISSUE 25: Should utility companies, prospectively, be required to qualify nuclear decommissioning trust funds pursuant to Section 468A of the Internal Revenue Code?

RECOMMENDATION: No, however, their decisions concerning their tax elections in regard to nuclear decommissioning should be closely examined in future proceedings. Qualifying the funds is the most conservative way to guarantee that the necessary funds will be available at the time of decommissioning. (Salak).

POSITION OF PARTIES

FPL: No. The Company must be able to determine whether to make contributions to either the qualified or non-qualified nuclear decommissioning fund based on current facts and circumstances applicable to the Company. If the Commission were to require the Company to elect and make contributions to the qualified funds, it would take away the Company's ability to adapt to changes in circumstances that might produce lower revenue requirements for our customers.

FPC: FPC believes its decision to elect qualified fund status under Section 468A for tax year 1988 is justified by the benefits associated with such qualification, and currently anticipates renewing its election for tax year 1989. However, FPC also believes that the decision to elect qualification for each individual tax year in the future should remain with the utility, based on its assessment of conditions then existing and subject to the burden of justifying the reasonableness of its decision.

STAFF ANALYSIS: The major consideration of any decommissioning study is the assurance that the necessary funds will be available when they are required.

Another consideration is the allocation of the costs associated with that assurance between the customers of the utility.

Both FPL and FPC have pointed out that benefits and problems exist with either method of funding. A non-qualified fund does not allow for a current tax deduction but places no limitations on the investments that can be made by the fund. The utility receives a current tax deduction for contributions to a qualified fund but the fund is limited in its investment opportunities.

An item that can have a major impact on whether qualifying or not qualifying the fund is beneficial to the ratepayers is the corporate income tax rate. It is desirable to have tax deductions in the years when the tax rate is high. If a fund is qualified, the tax deduction is taken in the current year and a change in tax rates will not affect the funds available for decommissioning. If a fund is not qualified, the tax rate can have a profound impact. If a high rate exists in the year of decommissioning, the ratepayers will benefit with more funds being available for decommissioning. The reverse is true if the tax rate goes down. There is a certain risk associated with the non-qualified fund. The qualified fund is the most conservative approach and would ensure that adequate funds would be available at the time of decommissioning. Mr. McDonald expressed this in his testimony:

We felt like that the prospective advantages of a qualified fund, which include the protection of the principal due to the low-risk investments under 468A of the Code, and what the safeguarding of the inter-generational equity by avoiding the potential of either current or future customers paying a disproportionate share of the total decommissioning costs, depending upon whether or not the tax rate were higher or lower at the time of decommissioning, it was more appropriate to qualify the fund. (TR 325).

The existence of problems with either method has led Staff to the conclusion that the most conservative approach to assurance is use of a qualified fund when that option is available. However, this Commission does not mandate what a utility files on its tax return leaving it to the utility management as its prerogative. Staff does not believe that the Commission should now begin to mandate the tax treatment of the utilities. However, in future proceedings, the prudence of the utilities' decisions should be carefully scrutinized. The utilities should be able to justify their chosen tax treatment by explaining the benefits the ratepayers have received and will receive from that treatment.

***ISSUE 26:** What is the appropriate annual accrual in equal dollar amounts necessary to recover future decommissioning costs over the remaining life of each nuclear power plant for Florida Power Corporation and Florida Power & Light?

RECOMMENDATION: The appropriate jurisdictional annual accruals necessary to recover future decommissioning costs over the remaining life of each nuclear power plant are as follows:

<u>FPL:</u>	<u>Recommended Annual Accrual</u>
Turkey Point Unit 3	\$10,439,196
Turkey Point Unit 4	13,590,449
St. Lucie Unit 1	10,910,879
St. Lucie Unit 2	8,824,810
Total	<u>\$43,765,334</u>

FPC:

Crystal River Unit 3	<u>\$ 8,599,412</u>
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(Hoppe/Maurey).

POSITION OF PARTIES

FPL:

<u>Unit</u>	<u>Jurisdictional Annual Accrual</u>	<u>Annual Revenue Requirements</u>
Turkey Point Unit No. 3	\$ 8,611,724	\$ 8,777,675
Turkey Point Unit No. 4	11,424,866	11,645,027
St. Lucie Unit No. 1	8,325,464	8,485,898
St. Lucie Unit No. 2	7,113,878	7,250,965
Totals	<u>\$35,475,932</u>	<u>\$36,159,565</u>

The revenue requirements exceed the annual accrual due to the need to provide for Regulatory Assessment Fees, Gross Receipts Tax and Uncollectable Accounts.

FPC: By Order No. 18627 in Docket No. 870220-EI, the Commission increased the retail portion of FPC's levelized annual decommissioning accrual to \$9,251,000. This accrual was derived from FPC's Decommissioning Study initially filed in this docket and remains the appropriate accrual based on recent updates to the Study.

STAFF ANALYSIS: The annual decommissioning accrual amount is based on staff positions in issues previously discussed. Once the dollar costs of decommissioning are determined (Issue 6), they are escalated into future dollars (Issue 7, and 8). This issue (26) then resembles an annuity equation. The question becomes, how many dollars need to be collected from ratepayers in equal payments, on a monthly basis (Issue 21), earning at a given rate (Issue 20), to equal decommissioning costs in future dollars (Issue 8), at a future date (Issue 11).

The differences in the parties' and staff's positions on these issues has been detailed in staff analysis by issue. The following table "Summary of Factors Used in Determining the Annual Accrual for Nuclear Decommissioning" page 105, highlights the parties' and staff's position and the resulting annual accrual.

Based on Staff's position in previous issues, the recommended annual accruals associated with nuclear decommissioning for each nuclear power plant

are:

FPL:

Recommended

Annual Accrual

Turkey Point Unit 3	\$10,439,196
Turkey Point Unit 4	13,590,449
St. Lucie Unit 1	10,910,879
St. Lucie Unit 2	<u>8,824,810</u>
Total	<u>\$43,765,334</u>

FPC:

Crystal River Unit 3	<u>\$ 8,599,412</u>
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SUMMARY OF FACTORS USED IN
DETERMINING THE ANNUAL ACCRUAL
FOR NUCLEAR DECOMMISSIONING
DOCKET NO. 870098-EI
ISSUE NO. 26

DOCKET NO. 870098-EI
(8696F) AUGUST 17, 1989

ISSUE NO.	DESCRIPTION	POSITIONS FOR FPL		POSITIONS FOR FPC	
		FPL	STAFF	FPC	STAFF
6	THE COST OF DECOMMISSIONING IN JANUARY 1, 1989 DOLLARS	TURKEY POINT NO.3	\$162,771,355	\$162,072,000	CR3 \$195,133,000 \$189,123,000
		TURKEY POINT NO.4	\$191,133,750	\$190,494,000	
		ST. LUCIE NO.1	\$206,262,473	\$205,249,321	
		ST. LUCIE NO.2	\$203,421,665	\$202,975,000	
7	THE APPROPRIATE ESCALATION RATE	TURKEY POINT NO.3	5.0%	5.8%	CR3 6.66% 6.08%
		TURKEY POINT NO.4	4.9%	5.8%	
		ST. LUCIE NO.1	5.0%	6.02%	
		ST. LUCIE NO.2	5.0%	5.91%	
8	THE FUTURE COST OF DECOMMISSIONING	TURKEY POINT NO.3	\$ 462,822,891	\$ 542,426,010	CR3 \$1,471,378,780 \$1,201,528,228
		TURKEY POINT NO.4	\$ 557,567,350	\$ 673,190,276	
		ST. LUCIE NO.1	\$1,156,040,449	\$1,622,545,122	
		ST. LUCIE NO.2	\$1,272,855,821	\$1,757,460,731	
11	DATE NUCLEAR UNIT WILL BE REMOVED FROM RATE BASE (LICENSE EXPIRATION)	TURKEY POINT NO.3	APRIL 27, 2007	APRIL 27, 2007	CR3 DECEMBER 3, 2016 DECEMBER 3, 2016
		TURKEY POINT NO.4	APRIL 27, 2007	APRIL 27, 2007	
		ST. LUCIE NO.1	MARCH 1, 2016	MARCH 1, 2016	
		ST. LUCIE NO.2	APRIL 6, 2023	APRIL 6, 2023	
20	THE FUND EARNINGS RATE		5.5%	5.27%	> OR = CPI 5.27%
21	FREQUENCY OF FUND CONTRIBUTIONS		MONTHLY	MONTHLY	MONTHLY MONTHLY
26	THE APPROPRIATE ANNUAL ACCRUAL (JURISDICTIONAL)	TURKEY POINT NO.3	\$ 8,611,724	\$10,439,196	CR3 \$9,251,000 \$8,599,412
		TURKEY POINT NO.4	\$11,424,866	\$13,590,449	
		ST. LUCIE NO.1	\$ 8,325,464	\$10,910,879	
		ST. LUCIE NO.2	\$ 7,113,878	\$ 8,824,810	
	TOTAL		\$35,475,932 =====	\$43,765,334 =====	TOTAL \$9,251,000 \$8,599,412 =====

*ISSUE 27: In which years are decommissioning costs projected to be included in the company's cost of service, and what are the projected amounts that will be included each year?

RECOMMENDATION: Decommissioning expenses or accrual amounts will be included in each company's cost of providing service each year until each unit's operating license expiration date. The accrual amount will be that which the Commission approves as being appropriate in Issue 26. This amount will be subject to subsequent review at least once every five years and should be reflected in expenses for surveillance and tax savings reporting purposes. (Lee).

POSITION OF PARTIES

FPL: Decommissioning accrual amounts will be included in the Company's cost of service each year until each unit's license expiration date. The accrual amounts Florida Power & Light Company is requesting are as follows:

	<u>Total Company</u>	<u>Jurisdictional</u>
Turkey Point Unit No. 3	\$ 8,766,809	\$ 8,611,724
Turkey Point Unit No. 4	11,630,612	11,424,866
St. Lucie Unit No. 1	8,475,393	8,325,464
St. Lucie Unit No. 2	7,241,989	7,113,878

FPC: Decommissioning accrual amounts, as periodically reviewed and approved by the Commission, will be included in FPC's cost of service each year until the expiration date of CR3's operating license. The jurisdictional amount that should be included each year until the Commission's next review is \$9,251,000.

STAFF ANALYSIS: There is no disagreement among the parties that decommissioning accrual amounts will be included in each company's cost of service each year until each unit's license expiration date. FPL Witness Kuberek and FPC Witness Czura both testified to this. (TR 199, 200, 289). Those accrual amounts should be those that the Commission approves as appropriate in Issue 26.

ISSUE 28: What should be the effective date for adjusting the annual accrual amount?

RECOMMENDATION: The effective date for adjusting the annual accrual amounts for FPL should be January 1, 1989. The effective date for adjusting the annual accrual amount approved for FPC in Order No. 18627 in Docket No. 870220-EI should be made effective January 1, 1990. (Hoppe).

POSITION OF PARTIES

FPL: Effective date for adjusting the annual accrual amount should be January 1, 1989.

FPC: FPC's annual accrual was adjusted effective January 1, 1989 by Order No. 18627 in Docket No. 870220-EI. Any adjustment to that annual accrual should be made effective January 1, 1990.

STAFF ANALYSIS: FPL requested that the effective date for adjusting their annual accrual be retroactive to January 1, 1989. In adjusting their accrual retroactively to January 1, 1989, and funding it accordingly, the Company will have booked decommissioning expenses of \$43,765,334 for calendar year 1989. By booking the expenses for the entire year, they may potentially keep open their option of qualifying (for IRS purposes) the maximum amount of the annual accrual for 1989. In addition, the reserve will have been funded at a higher level for 1989.

FPC had its annual accrual adjusted effective January 1, 1989, by Order No. 18627 in Docket No. 870220-EI. Staff believes that any adjustment to this previously stipulated annual accrual amount should be effective January 1, 1990, so as to not affect the stipulation between parties for 1989.

Therefore, staff recommends any adjustments to FPL's annual decommissioning accrual be effective January 1, 1989, and any adjustment to FPC's annual decommissioning accrual be effective January 1, 1990.

ISSUE 29: What are the jurisdictional revenue requirements needed to recover the costs associated with the decommissioning of each nuclear unit?

RECOMMENDATION: The jurisdictional revenue requirements needed to recover the decommissioning costs of each nuclear unit are as follows:

	<u>Previous Revenue Requirement</u>	<u>Increase/Decrease</u>	<u>Total Recommended Annual Revenue Req.</u>
FPL:			
Turkey Point Unit 3	\$ 5,459,105	\$ 5,152,547	\$10,611,652
Turkey Point Unit 4	3,989,885	9,825,078	13,814,963
St. Lucie Unit 1	4,978,857	6,112,270	11,091,127
St. Lucie Unit 2	<u>4,756,925</u>	<u>4,213,671</u>	<u>8,970,596</u>
Total	<u>\$19,184,772</u>	<u>\$25,303,566</u>	<u>\$44,488,338</u>

FPC:

Crystal River Unit 3	<u>\$ 9,400,000</u>	<u>\$ (658,526)</u>	<u>\$ 8,741,474</u>
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(Hoppe/Maurey).

POSITION OF PARTIES

FPL: The jurisdictional revenue requirements were based on FPL's estimates of 1988 decommissioning costs using the methodologies referenced in ISSUE 4. The decommissioning costs are assumed to be collected equally over the remaining operating life of each unit, beginning January 1, 1989. The jurisdictional revenue requirements for each of the units are:

	<u>Previously Authorized By the Commission</u>	<u>Increase Based on Current Studies</u>	<u>Total Annual Revenue Requirements</u>
Turkey Point Unit No. 3	\$ 5,459,109	\$ 3,318,570	\$ 8,777,675
Turkey Point Unit No. 4	3,989,885	7,655,142	11,645,027
St. Lucie Unit No. 1	4,978,857	3,507,041	8,485,898
St. Lucie Unit No. 2	<u>4,756,925</u>	<u>2,494,040</u>	<u>7,250,965</u>
Totals	<u>\$19,184,772</u>	<u>\$16,974,793</u>	<u>\$36,159,565</u>

FPC: No additional jurisdictional annual revenue requirements are needed to recover the costs associated with the decommissioning of CR3. The additional revenue requirements approved by the Commission in Order No. 20632, Docket No. 870220-EI, are as follows:

<u>Amount Previously Approved</u>	<u>Additional Amount Approved Effective January 1, 1989</u>	<u>Total Approved Amount as of January 1, 1989</u>
\$5,031,000	\$4,369,000	\$9,400,000

STAFF ANALYSIS: The total annual revenue requirements are based on the annual decommissioning accruals recommended in Issue 26, expanded for Revenue Taxes (1.5%) and Regulatory Assessment Fee (.125%). The resulting expansion factor is 1.01652. This is consistent with the revenue expansion factor used in Docket No. 890001-EI, Fuel and Purchased Power Cost Recovery Clauses. Based on this, the total annual recommended revenue requirement associated with nuclear decommissioning expenses for FPL is \$44,488,338 and for FPC is \$8,741,474. This is detailed by plant in the above recommendation section.

ISSUE 30: Should base rates be revised in this docket to reflect any change in revenue requirements?

RECOMMENDATION: No, base rates should not be revised in this docket to reflect any change in revenue requirements. (Hoppe).

POSITION OF PARTIES

FPL: Florida Power & Light Company is not requesting that its base rates be adjusted at this time; however, the increased costs of nuclear decommissioning should be authorized to be included in cost of service effective January 1, 1989.

FPC: FPC's rates have already been revised in Docket No. 870220-EI to reflect the revenue requirements associated with the annual accrual derived from its initial and updated Decommissioning Study. Accordingly, FPC has not requested that its rates be revised in this proceeding.

STAFF ANALYSIS: The Commission in Docket No. 810100-EU chose to address nuclear decommissioning costs apart from depreciation represervation because of the financial, environmental, and safety concerns attached to nuclear decommissioning. The need for this concern was supported by subsequent action of the NRC, IRS and FERC in establishing various nuclear decommissioning requirements.

In addition, the Commission chose to affect rates as soon as possible, because no funding mechanism was in place at that time. With both companies simultaneously in for rate proceedings, a decommissioning factor was developed for the fuel proceeding and then rolled into base rates at the conclusion of each company's rate case. However, decommissioning expenses are removal costs and, from an accounting perspective, are considered to be a

component of a depreciation rate. The Commission has historically handled the rate effects of a depreciation represcription in rate case proceedings.

FPL will have a staff recommended increase in its annual revenue requirement associated with decommissioning of \$25,303,566 (see Recommendation in Issue 29) for 1989. This is due to Staff's recommendation to book the accrual retroactively to January 1, 1989, in effect including the total recommended amount of the accrual in their cost of service for the calendar year by allowing the total expense for tax savings purposes. When asked about the concerns of the companies' ability to fund this amount for all of 1989 and on a going forward basis without affecting rates, Witness Kuberek stated: "We would fund it and agree that if it caused us to not have adequate funds, we would come back in and address it" (TR 248). Therefore, staff believes no base rate adjustment is necessary for FPL.

FPC will have a \$658,526 decrease in revenue requirements due to the previously stipulated amount of \$9,400,000 (Docket 870220-EI), being higher than the amount of \$8,741,474 recommended by staff in this docket. Staff believes that the continuing surveillance report requirements of the FPSC will presage any overearnings by the Company and therefore staff believes that no adjustment to base rates is necessary for FPC.

In addition, both companies will be required to comply with Section 366.06(3), F.S., which will require both companies to come in for Commission review of base rates within the next 18 months. The Commission has already opened Docket No. 890922-EI, Minimum Filing Requirements of Florida Power and Light Company in compliance with Section 366.06(3), F.S.

In conclusion, based on: (1) the nature of decommissioning expense as a component of depreciation; (2) FPL's assurance that they are capable of funding the reserve at a higher level; (3) the ability of continuing surveillance report requirements to identify any overearnings of FPC; and (4) the new statutory requirements for periodic base rate review, staff believes that base rates should not be changed in this docket.

YEAR	INFLATION INDICES			DECONTAMINATION				REMOVAL				PACKAGING				SHIPPING			
	LABOR	MATERIAL	OTHER	LABOR	MATERIAL	OTHER	TOTAL	LABOR	MATERIAL	OTHER	TOTAL	LABOR	MATERIAL	OTHER	TOTAL	LABOR	MATERIAL	OTHER	TOTAL
1987	BASE	BASE	BASE	3,955	2,083	0	6,038	26,139	11,965	0	38,104	151	2,010	0	2,161	0	0	2,738	2,738
1988	3.3%	5.3%	3.4%	4,086	2,198	0	6,283	27,002	12,623	0	39,625	156	2,121	0	2,277	0	0	2,832	2,832
1989	4.1%	5.3%	4.0%	4,253	2,318	0	6,571	28,109	13,317	0	41,426	162	2,257	0	2,400	0	0	2,945	2,945
1990	4.0%	5.3%	4.0%	4,449	2,441	0	6,890	29,402	14,023	0	43,425	170	2,356	0	2,526	0	0	3,083	3,083
1991	5.1%	5.4%	4.4%	4,676	2,573	0	7,249	30,901	14,780	0	45,682	179	2,483	0	2,661	0	0	3,197	3,197
1992	5.0%	5.2%	5.1%	4,937	2,707	0	7,644	32,632	15,549	0	48,181	189	2,612	0	2,801	0	0	3,361	3,361
1993	5.0%	4.7%	5.0%	5,214	2,835	0	8,049	34,459	16,284	0	50,743	199	2,736	0	2,935	0	0	3,529	3,529
1994	5.0%	5.0%	5.0%	5,516	2,977	0	8,493	36,458	17,099	0	53,556	211	2,872	0	3,083	0	0	3,705	3,705
1995	6.0%	5.0%	5.1%	5,847	3,143	0	8,991	38,645	18,056	0	56,701	223	3,033	0	3,257	0	0	3,894	3,894
1996	6.1%	5.0%	5.3%	6,204	3,326	0	9,530	41,002	19,103	0	60,106	237	3,209	0	3,446	0	0	4,100	4,100
1997	6.2%	5.9%	5.3%	6,589	3,522	0	10,111	43,545	20,251	0	63,775	252	3,399	0	3,650	0	0	4,322	4,322
1998	6.3%	5.9%	5.3%	7,004	3,730	0	10,733	46,288	21,424	0	67,712	267	3,599	0	3,866	0	0	4,559	4,559
1999	6.4%	6.1%	5.6%	7,452	3,957	0	11,409	49,250	22,731	0	71,981	285	3,819	0	4,103	0	0	4,815	4,815
2000	6.4%	6.0%	5.6%	7,929	4,187	0	12,116	52,402	24,049	0	76,452	303	4,040	0	4,343	0	0	5,084	5,084
2001	6.5%	5.7%	5.5%	8,444	4,425	0	12,870	55,808	25,420	0	81,229	322	4,270	0	4,593	0	0	5,364	5,364
2002	6.5%	5.7%	5.5%	8,993	4,678	0	13,671	59,436	26,869	0	86,305	343	4,514	0	4,857	0	0	5,659	5,659
2003	6.5%	5.5%	5.4%	9,578	4,935	0	14,513	63,299	28,347	0	91,646	366	4,762	0	5,128	0	0	5,965	5,965
2004	6.6%	5.2%	5.3%	10,210	5,192	0	15,401	67,477	29,821	0	97,298	390	5,010	0	5,399	0	0	6,281	6,281
2005	6.6%	5.0%	5.3%	10,884	5,451	0	16,335	71,931	31,312	0	103,243	416	5,260	0	5,676	0	0	6,614	6,614
2006	6.6%	5.0%	5.2%	11,602	5,724	0	17,326	76,678	32,881	0	109,559	443	5,524	0	5,967	0	0	6,958	6,958
2007	6.6%	5.0%	5.2%	12,368	6,011	0	18,379	81,739	34,528	0	116,267	472	5,800	0	6,273	0	0	7,319	7,319
2008	6.6%	4.8%	5.2%	13,184	6,300	0	19,483	87,133	36,186	0	123,319	503	6,079	0	6,582	0	0	7,700	7,700
2009	6.6%	4.7%	5.2%	14,054	6,596	0	20,650	92,884	37,886	0	130,771	537	6,365	0	6,901	0	0	8,100	8,100
2010	6.6%	4.6%	5.2%	14,982	6,899	0	21,881	99,015	39,629	0	138,644	572	6,657	0	7,229	0	0	8,522	8,522
2011	6.6%	4.6%	5.2%	15,970	7,216	0	23,187	105,550	41,452	0	147,002	610	6,964	0	7,573	0	0	8,965	8,965
2012	6.6%	4.7%	5.2%	17,024	7,556	0	24,580	112,516	43,400	0	155,916	650	7,291	0	7,941	0	0	9,431	9,431
2013	6.7%	4.8%	5.3%	18,165	7,918	0	26,083	120,054	45,483	0	165,538	694	7,641	0	8,334	0	0	9,931	9,931
2014	6.7%	4.8%	5.3%	19,382	8,298	0	27,680	128,098	47,667	0	175,765	740	8,008	0	8,748	0	0	10,457	10,457
2015	6.7%	4.8%	5.3%	20,681	8,697	0	29,377	136,681	49,955	0	186,635	790	8,392	0	9,181	0	0	11,011	11,011
2016	6.7%	4.8%	5.3%	22,066	9,114	0	31,180	145,838	52,352	0	198,191	842	8,795	0	9,637	0	0	11,595	11,595
2017	6.7%	4.8%	5.3%	23,545	9,552	0	33,096	155,609	54,865	0	210,475	899	9,217	0	10,116	0	0	12,209	12,209
2018	6.7%	4.8%	5.3%	25,122	10,010	0	35,132	166,035	57,499	0	223,534	959	9,659	0	10,618	0	0	12,856	12,856
2019	6.7%	4.8%	5.3%	26,805	10,491	0	37,296	177,160	60,259	0	237,419	1,023	10,123	0	11,146	0	0	13,538	13,538
2020	6.7%	4.8%	5.3%	28,601	10,994	0	39,595	189,029	63,151	0	252,181	1,092	10,609	0	11,701	0	0	14,255	14,255
2021	6.7%	4.8%	5.3%	30,518	11,522	0	42,039	201,694	66,183	0	267,877	1,165	11,118	0	12,283	0	0	15,011	15,011
2022	6.7%	4.8%	5.3%	32,562	12,075	0	44,637	215,208	69,359	0	284,567	1,243	11,652	0	12,895	0	0	15,806	15,806
2023	6.7%	4.8%	5.3%	34,744	12,654	0	47,398	229,627	72,689	0	302,315	1,327	12,211	0	13,537	0	0	16,644	16,644
2024	6.7%	4.8%	5.3%	37,072	13,262	0	50,334	245,012	76,178	0	321,189	1,415	12,797	0	14,212	0	0	17,526	17,526
2025	6.7%	4.8%	5.3%	39,556	13,898	0	53,454	261,428	79,834	0	341,262	1,510	13,411	0	14,922	0	0	18,455	18,455
2026	6.7%	4.8%	5.3%	42,206	14,566	0	56,771	278,943	83,666	0	362,609	1,611	14,055	0	15,666	0	0	19,433	19,433
2027	6.7%	4.8%	5.3%	45,034	15,265	0	60,298	297,632	87,682	0	385,315	1,719	14,730	0	16,449	0	0	20,463	20,463
2028	6.7%	4.8%	5.3%	48,051	15,997	0	64,048	317,574	91,891	0	409,465	1,835	15,437	0	17,271	0	0	21,548	21,548
TOTALS:							64,048				409,465				17,271				21,548

INFLATION INDICES SOURCE: DATA RESOURCES, INC. 12/88
LABOR: AVERAGE HOURLY EARNINGS
MATERIAL: PPI-INTERMEDIATE MATERIALS & SUPPLIES
OTHER: GNP DEFLATOR

DOLLARS IN THOUSANDS

FPL ST. LUCIE UNIT #1
ESCALATION RATE ANALYSIS

Schedule 1
Docket No. 870098-EI

BURIAL				DECOMMISSIONING STAFFS				OTHER				TOTAL CURRENT DOLLARS BEFORE	TOTAL CURRENT DOLLARS AFTER
LABOR	MATERIAL	OTHER	TOTAL	LABOR	MATERIAL	OTHER	TOTAL	LABOR	MATERIAL	OTHER	TOTAL	CONTINGENCY	CONTINGENCY
0	0	20,737	20,737	78,008	0	0	78,008	0	0	13,791	13,791	161,577	201,971
0	0	21,446	21,446	80,582	0	0	80,582	0	0	14,263	14,263	167,307	209,134
0	0	22,304	22,304	83,086	0	0	83,086	0	0	14,833	14,833	174,365	217,957
0	0	23,196	23,196	85,886	0	0	85,886	0	0	15,426	15,426	182,271	227,638
0	0	24,217	24,217	87,745	0	0	87,745	0	0	16,105	16,105	191,331	239,164
0	0	25,452	25,452	92,220	0	0	92,220	0	0	16,927	16,927	201,749	252,186
0	0	25,452	25,452	97,384	0	0	97,384	0	0	17,773	17,773	212,591	265,738
0	0	26,725	26,725	102,838	0	0	102,838	0	0	18,662	18,662	224,362	280,452
0	0	28,061	28,061	108,802	0	0	108,802	0	0	19,613	19,613	237,278	296,997
0	0	29,492	29,492	115,330	0	0	115,330	0	0	20,653	20,653	251,253	314,069
0	0	31,055	31,055	122,366	0	0	122,366	0	0	21,768	21,768	266,310	332,887
0	0	32,732	32,732	129,952	0	0	129,952	0	0	22,965	22,965	282,508	353,135
0	0	34,532	34,532	138,139	0	0	138,139	0	0	24,251	24,251	300,006	375,007
0	0	36,466	36,466	146,980	0	0	146,980	0	0	25,609	25,609	318,499	398,124
0	0	38,508	38,508	156,387	0	0	156,387	0	0	27,018	27,018	339,251	422,814
0	0	40,626	40,626	166,552	0	0	166,552	0	0	28,504	28,504	359,234	449,043
0	0	42,860	42,860	177,378	0	0	177,378	0	0	30,043	30,043	381,377	476,721
0	0	45,175	45,175	188,908	0	0	188,908	0	0	31,635	31,635	404,960	506,200
0	0	47,569	47,569	201,375	0	0	201,375	0	0	33,312	33,312	429,935	537,419
0	0	50,090	50,090	214,666	0	0	214,666	0	0	35,044	35,044	456,383	570,478
0	0	52,695	52,695	228,834	0	0	228,834	0	0	36,867	36,867	484,477	605,596
0	0	55,435	55,435	243,937	0	0	243,937	0	0	38,784	38,784	514,223	642,779
0	0	58,318	58,318	260,037	0	0	260,037	0	0	40,801	40,801	545,772	682,215
0	0	61,350	61,350	277,199	0	0	277,199	0	0	42,922	42,922	579,232	724,061
0	0	64,540	64,540	295,495	0	0	295,495	0	0	45,154	45,154	614,774	768,468
0	0	67,897	67,897	314,997	0	0	314,997	0	0	47,502	47,502	652,584	815,730
0	0	71,427	71,427	335,787	0	0	335,787	0	0	50,020	50,020	693,404	866,755
0	0	75,213	75,213	358,285	0	0	358,285	0	0	52,671	52,671	736,810	921,012
0	0	79,199	79,199	382,290	0	0	382,290	0	0	55,462	55,462	782,968	978,710
0	0	83,397	83,397	407,903	0	0	407,903	0	0	58,402	58,402	832,055	1,040,068
0	0	87,817	87,817	435,233	0	0	435,233	0	0	61,497	61,497	884,258	1,105,322
0	0	92,471	92,471	464,394	0	0	464,394	0	0	64,757	64,757	939,778	1,174,722
0	0	97,372	97,372	495,508	0	0	495,508	0	0	68,189	68,189	990,827	1,248,533
0	0	102,533	102,533	528,707	0	0	528,707	0	0	71,803	71,803	1,061,632	1,327,040
0	0	107,967	107,967	564,130	0	0	564,130	0	0	75,608	75,608	1,128,435	1,410,543
0	0	113,689	113,689	601,927	0	0	601,927	0	0	79,615	79,615	1,199,492	1,499,365
0	0	119,715	119,715	642,256	0	0	642,256	0	0	83,835	83,835	1,275,077	1,593,846
0	0	126,059	126,059	685,287	0	0	685,287	0	0	88,278	88,278	1,355,482	1,694,353
0	0	132,741	132,741	731,202	0	0	731,202	0	0	92,957	92,957	1,441,017	1,801,272
0	0	139,776	139,776	780,192	0	0	780,192	0	0	97,884	97,884	1,532,013	1,915,017
0	0	147,184	147,184	832,465	0	0	832,465	0	0	103,072	103,072	1,628,822	2,036,027
0	0	154,985	154,985	888,240	0	0	888,240	0	0	108,534	108,534	1,731,818	2,164,772
0	0	163,199	163,199	947,752	0	0	947,752	0	0				
			163,199				947,752				108,534	1,731,818	2,164,772

ANNUAL COMPOUND ESCALATION RATE:

6.02%

FPL ST. LUCIE UNIT #2
ESCALATION RATE ANALYSIS

Schedule 1
Docket No. 87098-EI

YEAR	INFLATION INDICES			DECONTAMINATION				REMOVAL				PACKAGING				SHIPPING			
	LABOR	MATERIAL	OTHER	LABOR	MATERIAL	OTHER	TOTAL	LABOR	MATERIAL	OTHER	TOTAL	LABOR	MATERIAL	OTHER	TOTAL	LABOR	MATERIAL	OTHER	TOTAL
1987	BASE	BASE	BASE	5,228	2,146	0	7,374	37,039	13,430	0	50,669	196	3,017	0	3,213	0	0	3,838	3,838
1988	3.3%	5.3%	3.4%	5,401	2,264	0	7,665	38,261	14,380	0	52,641	202	3,183	0	3,385	0	0	3,969	3,969
1989	4.1%	5.3%	4.0%	5,622	2,389	0	8,010	39,830	15,171	0	55,001	211	3,358	0	3,569	0	0	4,128	4,128
1990	4.6%	5.3%	4.0%	5,881	2,515	0	8,396	41,662	15,975	0	57,637	220	3,536	0	3,756	0	0	4,293	4,293
1991	5.1%	5.4%	4.4%	6,180	2,651	0	8,831	43,787	16,837	0	60,624	232	3,727	0	3,959	0	0	4,482	4,482
1992	5.6%	5.2%	5.1%	6,527	2,789	0	9,315	46,239	17,713	0	63,952	245	3,921	0	4,165	0	0	4,711	4,711
1993	5.6%	4.7%	5.0%	6,892	2,921	0	9,813	48,828	18,551	0	67,379	258	4,106	0	4,365	0	0	4,946	4,946
1994	5.8%	5.0%	5.0%	7,292	3,067	0	10,359	51,660	19,478	0	71,139	273	4,311	0	4,585	0	0	5,193	5,193
1995	6.0%	5.6%	5.1%	7,729	3,238	0	10,968	54,760	20,569	0	75,329	290	4,553	0	4,843	0	0	5,458	5,458
1996	6.1%	5.8%	5.3%	8,201	3,426	0	11,627	58,100	21,762	0	79,862	307	4,817	0	5,124	0	0	5,748	5,748
1997	6.2%	5.9%	5.4%	8,709	3,628	0	12,338	61,703	23,046	0	84,748	327	5,101	0	5,428	0	0	6,058	6,058
1998	6.3%	5.9%	5.5%	9,258	3,843	0	13,100	65,590	24,405	0	89,995	347	5,402	0	5,749	0	0	6,391	6,391
1999	6.4%	6.1%	5.6%	9,850	4,077	0	13,927	69,788	25,894	0	95,682	369	5,732	0	6,101	0	0	6,749	6,749
2000	6.4%	5.8%	5.6%	10,481	4,313	0	14,794	74,254	27,396	0	101,650	393	6,064	0	6,457	0	0	7,127	7,127
2001	6.5%	5.7%	5.5%	11,162	4,559	0	15,721	79,081	28,958	0	108,038	418	6,410	0	6,828	0	0	7,519	7,519
2002	6.5%	5.7%	5.5%	11,888	4,819	0	16,707	84,221	30,608	0	114,829	446	6,775	0	7,221	0	0	7,933	7,933
2003	6.5%	5.5%	5.4%	12,660	5,084	0	17,745	89,695	32,292	0	121,987	475	7,148	0	7,622	0	0	8,361	8,361
2004	6.6%	5.2%	5.3%	13,496	5,349	0	18,845	95,615	33,971	0	129,586	506	7,519	0	8,025	0	0	8,804	8,804
2005	6.6%	5.0%	5.3%	14,387	5,616	0	20,003	101,926	35,669	0	137,595	539	7,895	0	8,435	0	0	9,271	9,271
2006	6.6%	5.0%	5.2%	15,336	5,897	0	21,234	108,653	37,456	0	146,109	575	8,291	0	8,866	0	0	9,753	9,753
2007	6.6%	5.0%	5.2%	16,348	6,193	0	22,541	115,824	39,333	0	155,157	613	8,706	0	9,319	0	0	10,260	10,260
2008	6.6%	4.8%	5.2%	17,427	6,490	0	23,917	123,468	41,221	0	164,689	653	9,124	0	9,778	0	0	10,793	10,793
2009	6.6%	4.7%	5.2%	18,578	6,795	0	25,373	131,617	43,158	0	174,776	696	9,553	0	10,250	0	0	11,355	11,355
2010	6.6%	4.6%	5.2%	19,804	7,108	0	26,911	140,304	45,144	0	185,448	742	9,993	0	10,735	0	0	11,945	11,945
2011	6.6%	4.6%	5.2%	21,111	7,435	0	28,545	149,564	47,220	0	196,784	791	10,452	0	11,244	0	0	12,566	12,566
2012	6.6%	4.7%	5.2%	22,504	7,784	0	30,288	159,435	49,440	0	208,875	844	10,943	0	11,787	0	0	13,220	13,220
2013	6.7%	4.8%	5.3%	24,012	8,158	0	32,170	170,117	51,813	0	221,930	900	11,469	0	12,369	0	0	13,920	13,920
2014	6.7%	4.8%	5.3%	25,621	8,549	0	34,170	181,515	54,300	0	235,815	961	12,019	0	12,980	0	0	14,658	14,658
2015	6.7%	4.8%	5.3%	27,337	8,960	0	36,297	193,677	56,906	0	250,583	1,025	12,596	0	13,621	0	0	15,435	15,435
2016	6.7%	4.8%	5.3%	29,169	9,390	0	38,559	206,653	59,638	0	266,291	1,094	13,201	0	14,294	0	0	16,253	16,253
2017	6.7%	4.8%	5.3%	31,123	9,840	0	40,964	220,499	62,500	0	282,999	1,167	13,834	0	15,001	0	0	17,115	17,115
2018	6.7%	4.8%	5.3%	33,208	10,313	0	43,521	235,272	65,500	0	300,772	1,245	14,498	0	15,743	0	0	18,022	18,022
2019	6.7%	4.8%	5.3%	35,433	10,808	0	46,241	251,035	68,644	0	319,680	1,328	15,194	0	16,523	0	0	18,977	18,977
2020	6.7%	4.8%	5.3%	37,807	11,327	0	49,134	267,855	71,939	0	339,794	1,417	15,924	0	17,341	0	0	19,982	19,982
2021	6.7%	4.8%	5.3%	40,340	11,870	0	52,211	285,801	75,392	0	361,193	1,512	16,688	0	18,200	0	0	21,042	21,042
2022	6.7%	4.8%	5.3%	43,043	12,440	0	55,483	304,950	79,011	0	383,961	1,614	17,489	0	19,103	0	0	22,157	22,157
2023	6.7%	4.8%	5.3%	45,927	13,037	0	58,964	325,381	82,804	0	408,185	1,722	18,329	0	20,050	0	0	23,331	23,331
2024	6.7%	4.8%	5.3%	49,004	13,663	0	62,667	347,182	86,778	0	433,960	1,837	19,208	0	21,046	0	0	24,568	24,568
2025	6.7%	4.8%	5.3%	52,288	14,319	0	66,606	370,443	90,944	0	461,387	1,960	20,130	0	22,091	0	0	25,870	25,870
2026	6.7%	4.8%	5.3%	55,791	15,006	0	70,797	395,263	95,309	0	490,572	2,092	21,097	0	23,188	0	0	27,241	27,241
2027	6.7%	4.8%	5.3%	59,529	15,726	0	75,255	421,745	99,884	0	521,629	2,232	22,109	0	24,341	0	0	28,685	28,685
2028	6.7%	4.8%	5.3%	63,517	16,481	0	79,998	450,002	104,678	0	554,681	2,381	23,170	0	25,552	0	0	30,205	30,205
TOTALS:							79,998		554,681						25,552			30,205	

INFLATION INDICES SOURCE: DATA RESOURCES, INC. 12/88
LABOR: AVERAGE HOURLY EARNINGS
MATERIAL: PPI-INTERMEDIATE MATERIALS & SUPPLIES
OTHER: GNP DEFLATOR

DOLLARS IN THOUSANDS

FPL 57. LUCIE UNIT 02
ENCALCATION DATE ANALYSIS

ANNUAL COMPOUND ESCALATION RATE: **5.91%**

FPL TURKEY POINT UNIT #3
ESCALATION RATE ANALYSIS

Schedule 1
Docket No. 870098-EI

YEAR	INFLATION INDICES			DECONTAMINATION				REMOVAL				PACKAGING				SHIPPING			
	LABOR	MATERIAL	OTHER	LABOR	MATERIAL	OTHER	TOTAL	LABOR	MATERIAL	OTHER	TOTAL	LABOR	MATERIAL	OTHER	TOTAL	LABOR	MATERIAL	OTHER	TOTAL
1987	BASE	BASE	BASE	2,363	1,790	0	4,153	17,460	6,925	0	24,385	131	2,091	0	2,222	0	0	3,931	3,931
1988	3.3%	5.5%	3.4%	2,441	1,888	0	4,329	18,036	7,306	0	25,342	135	2,206	0	2,341	0	0	4,065	4,065
1989	4.1%	5.5%	4.0%	2,541	1,992	0	4,533	18,776	7,708	0	26,483	141	2,327	0	2,468	0	0	4,228	4,228
1990	4.6%	5.3%	4.0%	2,658	2,098	0	4,756	19,639	8,116	0	27,756	147	2,451	0	2,598	0	0	4,397	4,397
1991	5.1%	5.4%	4.4%	2,794	2,211	0	5,005	20,641	8,554	0	29,195	155	2,583	0	2,738	0	0	4,591	4,591
1992	5.6%	5.2%	5.1%	2,950	2,326	0	5,276	21,797	8,999	0	30,796	164	2,717	0	2,881	0	0	4,825	4,825
1993	5.6%	4.7%	5.0%	3,115	2,436	0	5,551	23,017	9,425	0	32,442	173	2,846	0	3,019	0	0	5,066	5,066
1994	5.8%	5.0%	5.0%	3,296	2,558	0	5,854	24,332	9,896	0	34,249	183	2,988	0	3,171	0	0	5,319	5,319
1995	6.0%	5.6%	5.1%	3,494	2,701	0	6,195	25,814	10,450	0	36,264	194	3,155	0	3,349	0	0	5,591	5,591
1996	6.1%	5.8%	5.3%	3,707	2,858	0	6,565	27,388	11,057	0	38,445	205	3,339	0	3,544	0	0	5,887	5,887
1997	6.2%	5.9%	5.4%	3,936	3,027	0	6,963	29,086	11,709	0	40,795	218	3,535	0	3,754	0	0	6,205	6,205
1998	6.3%	5.9%	5.5%	4,184	3,205	0	7,390	30,919	12,400	0	43,318	232	3,744	0	3,976	0	0	6,546	6,546
1999	6.4%	6.1%	5.6%	4,452	3,401	0	7,853	32,898	13,156	0	46,054	247	3,972	0	4,219	0	0	6,913	6,913
2000	6.4%	5.8%	5.6%	4,737	3,598	0	8,335	35,003	13,919	0	48,922	263	4,203	0	4,465	0	0	7,300	7,300
2001	6.5%	5.7%	5.5%	5,045	3,803	0	8,848	37,278	14,713	0	51,991	280	4,442	0	4,722	0	0	7,701	7,701
2002	6.5%	5.7%	5.5%	5,373	4,020	0	9,393	39,701	15,551	0	55,252	298	4,696	0	4,994	0	0	8,125	8,125
2003	6.5%	5.5%	5.4%	5,722	4,241	0	9,963	42,282	16,406	0	58,688	317	4,954	0	5,271	0	0	8,564	8,564
2004	6.6%	5.2%	5.3%	6,100	4,461	0	10,561	45,072	17,260	0	62,332	338	5,212	0	5,550	0	0	9,017	9,017
2005	6.6%	5.0%	5.3%	6,503	4,684	0	11,187	48,047	18,123	0	66,170	360	5,472	0	5,833	0	0	9,495	9,495
2006	6.6%	5.0%	5.2%	6,932	4,919	0	11,851	51,218	19,031	0	70,249	384	5,746	0	6,131	0	0	9,989	9,989
2007	6.6%	5.0%	5.2%	7,389	5,166	0	12,555	54,599	19,984	0	74,583	410	6,034	0	6,444	0	0	10,509	10,509
2008	6.6%	4.8%	5.2%	7,877	5,413	0	13,290	58,202	20,943	0	79,145	437	6,324	0	6,760	0	0	11,055	11,055
2009	6.6%	4.7%	5.2%	8,397	5,668	0	14,065	62,044	21,928	0	83,971	466	6,621	0	7,087	0	0	11,630	11,630
2010	6.6%	4.6%	5.2%	8,951	5,929	0	14,880	66,139	22,936	0	89,075	496	6,926	0	7,422	0	0	12,235	12,235
2011	6.6%	4.6%	5.2%	9,542	6,201	0	15,743	70,504	23,991	0	94,495	529	7,244	0	7,773	0	0	12,871	12,871
2012	6.6%	4.7%	5.2%	10,172	6,493	0	16,664	75,157	25,119	0	100,276	564	7,585	0	8,149	0	0	13,540	13,540
2013	6.7%	4.8%	5.3%	10,853	6,804	0	17,658	80,192	26,325	0	106,517	602	7,949	0	8,550	0	0	14,258	14,258
TOTALS:							17,658				106,517				8,550				14,258

INFLATION INDICES SOURCE: DATA RESOURCES, INC. 12/88

LABOR: AVERAGE HOURLY EARNINGS
MATERIAL: PPI-INTERMEDIATE MATERIALS & SUPPLIES
OTHER: GNP DEFLATOR

DOLLARS IN THOUSANDS

ANNUAL COMPOUND ESCALATION RATE: 5.80%

Schedule 1
Docket NO. 870098-EI

FPL TURKEY POINT UNIT #4
EXOLUTION RATE ANALYSIS

YEAR	INFLATION INDICES			DECONTAMINATION			REMOVAL			PACKAGING			SHIPPING		
	LABOR	MATERIAL	OTHER	LABOR	MATERIAL	OTHER	LABOR	MATERIAL	OTHER	LABOR	MATERIAL	OTHER	LABOR	MATERIAL	OTHER
1987	2,658	2,157	0	4,815	29,454	0	39,447	185	2,799	185	2,984	0	4,179	0	4,179
1988	2,746	2,276	0	5,021	30,435	0	41,175	191	2,953	191	3,144	0	4,322	0	4,322
1989	2,858	2,401	0	5,259	31,891	0	43,011	199	3,115	199	3,314	0	4,495	0	4,495
1990	2,990	2,528	0	5,518	33,358	0	45,067	208	3,280	208	3,489	0	4,675	0	4,675
1991	3,142	2,665	0	5,807	35,059	0	47,401	219	3,458	219	3,676	0	4,860	0	4,860
1992	3,318	2,803	0	6,121	37,022	0	50,006	231	3,637	231	3,868	0	5,129	0	5,129
1993	3,504	2,958	0	6,449	39,095	0	52,693	244	3,809	244	4,053	0	5,386	0	5,386
1994	3,707	3,082	0	6,790	41,353	0	55,641	258	4,000	258	4,258	0	5,653	0	5,653
1995	3,950	3,253	0	7,165	43,815	0	58,922	274	4,224	274	4,497	0	5,943	0	5,943
1996	4,169	3,444	0	7,613	46,319	0	62,471	290	4,469	290	4,759	0	6,258	0	6,258
1997	4,428	3,647	0	8,075	49,403	0	66,296	308	4,733	308	5,041	0	6,596	0	6,596
1998	4,707	3,862	0	8,569	52,316	0	70,405	328	5,012	328	5,339	0	6,999	0	6,999
1999	5,008	4,098	0	9,106	55,877	0	74,808	349	5,318	349	5,666	0	7,349	0	7,349
2000	5,259	4,336	0	9,684	59,433	0	79,535	371	5,626	371	5,997	0	7,760	0	7,760
2001	5,675	4,583	0	10,258	63,317	0	84,544	395	5,947	395	6,342	0	8,187	0	8,187
2002	6,044	4,844	0	10,888	67,433	0	89,869	421	6,286	421	6,706	0	8,637	0	8,637
2003	6,437	5,110	0	11,547	71,816	0	95,407	448	6,631	448	7,079	0	9,104	0	9,104
2004	6,852	5,378	0	12,258	76,556	0	101,457	478	6,976	478	7,454	0	9,586	0	9,586
2005	7,277	5,643	0	12,999	81,409	0	107,755	509	7,325	509	7,834	0	10,094	0	10,094
2006	7,717	5,925	0	13,723	86,975	0	114,451	543	7,692	543	8,235	0	10,619	0	10,619
2007	8,140	6,203	0	14,436	92,737	0	121,568	579	8,077	579	8,656	0	11,171	0	11,171
2008	8,645	6,493	0	15,134	98,657	0	129,073	617	8,465	617	9,082	0	11,752	0	11,752
2009	9,145	6,793	0	15,813	104,731	0	137,018	657	8,863	657	9,520	0	12,364	0	12,364
2010	9,649	7,103	0	16,473	110,971	0	145,488	701	9,271	701	9,971	0	13,008	0	13,008
2011	10,159	7,423	0	17,113	117,421	0	154,485	746	9,697	746	10,444	0	13,683	0	13,683
2012	10,673	7,753	0	17,733	124,000	0	164,482	800	10,133	800	10,949	0	14,394	0	14,394
2013	11,191	8,083	0	18,348	130,728	0	174,877	850	10,640	850	11,490	0	15,137	0	15,137
2014	11,720	8,413	0	19,000	137,636	0	185,156	907	11,151	907	12,057	0	15,961	0	15,961
TOTALS:	13,108	8,593	0	21,619	143,354	0	185,156	185,156	11,151	185,156	12,057	0	15,961	0	15,961

INFLATION INDICES SOURCE: DATA RESOURCES, INC. 12/08
LABOR: AVERAGE HOURLY EARNINGS
MATERIAL: PPI-INTERMEDIATE MATERIALS & SUPPLIES
OTHER: CPI-DEFLATOR
DOLLARS IN THOUSANDS

Schedule 1
Docket No. 870098-EI

FPL TURKEY POINT UNIT #4
ESCALATION RATE ANALYSIS

SERIAL				DECOMMISSIONING STAFFS				OTHER			TOTAL		TOTAL		TOTAL		TOTAL	
LAGOR	MATERIAL	OTHER	TOTAL	LAGOR	MATERIAL	OTHER	TOTAL	LAGOR	MATERIAL	OTHER	TOTAL	LAGOR	MATERIAL	OTHER	TOTAL	LAGOR	MATERIAL	OTHER
0	0	28,048	28,048	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	25,007	25,007	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	24,166	24,166	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	31,374	31,374	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	32,715	32,715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	34,146	34,146	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	32,654	32,654	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	32,689	32,689	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	42,884	42,884	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	44,372	44,372	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	48,122	48,122	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	52,844	52,844	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	52,849	52,849	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	57,671	57,671	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	61,162	61,162	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	64,240	64,240	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	67,290	67,290	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	71,273	71,273	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	74,979	74,979	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	78,678	78,678	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	82,880	82,880	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	87,295	87,295	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	91,654	91,654	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	96,669	96,669	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	101,720	101,720	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	107,121	107,121	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
												272,790						
												272,790						

ANNUAL COMPOUND ESCALATION RATE: 5.80%

Schedule 1
Docket No. 870098-EI

FPC CRYSTAL RIVER UNIT 45
EXCULATION RATE ANALYSIS

YEAR	INFLATION INDICES			DECONTAMINATION			REPAIR			PACKAGING			SHIPPING		
	LABOR	MATERIAL	OTHER	LABOR	MATERIAL	OTHER	LABOR	MATERIAL	OTHER	LABOR	MATERIAL	OTHER	LABOR	MATERIAL	OTHER
1985	3,439	3,326	0	6,878	12,075	0	48,300	503	1,507	0	0	0	0	0	2,815
1986	3,497	3,405	0	6,902	11,977	0	48,517	512	1,457	0	0	0	0	0	2,970
1987	3,581	3,495	0	7,076	11,957	0	49,682	526	1,492	0	0	0	0	0	3,163
1988	3,700	3,593	0	7,292	12,014	0	51,986	541	1,576	0	0	0	0	0	3,326
1989	3,851	3,700	0	7,551	12,108	0	53,876	563	1,661	0	0	0	0	0	3,500
1990	4,028	3,891	0	7,919	12,434	0	56,447	589	1,749	0	0	0	0	0	3,696
1991	4,234	4,028	0	8,262	12,710	0	59,568	619	1,863	0	0	0	0	0	3,903
1992	4,471	4,234	0	8,705	13,038	0	62,684	654	1,999	0	0	0	0	0	4,114
1993	4,721	4,471	0	9,196	13,368	0	66,006	691	2,081	0	0	0	0	0	4,328
1994	4,995	4,721	0	9,716	13,698	0	69,794	731	2,133	0	0	0	0	0	4,566
1995	5,295	4,995	0	10,436	14,028	0	73,818	774	2,152	0	0	0	0	0	4,826
1996	5,618	5,295	0	11,035	14,358	0	78,287	822	2,153	0	0	0	0	0	5,102
1997	5,968	5,618	0	11,726	14,689	0	83,062	873	2,153	0	0	0	0	0	5,397
1998	6,342	5,968	0	12,440	15,019	0	88,214	927	2,153	0	0	0	0	0	5,721
1999	6,748	6,342	0	13,217	15,349	0	93,796	987	2,153	0	0	0	0	0	6,082
2000	7,180	6,748	0	14,026	15,679	0	99,662	1,050	2,153	0	0	0	0	0	6,471
2001	7,647	7,180	0	14,881	16,009	0	105,948	1,118	2,153	0	0	0	0	0	6,885
2002	8,144	7,647	0	15,791	16,339	0	112,631	1,191	2,153	0	0	0	0	0	7,317
2003	8,672	8,144	0	16,741	16,669	0	119,684	1,269	2,153	0	0	0	0	0	7,773
2004	9,233	8,672	0	17,733	17,000	0	127,187	1,352	2,153	0	0	0	0	0	8,247
2005	9,825	9,233	0	18,767	17,331	0	135,046	1,441	2,153	0	0	0	0	0	8,742
2006	10,450	9,825	0	19,846	17,662	0	143,523	1,537	2,153	0	0	0	0	0	9,266
2007	11,109	10,450	0	21,000	18,000	0	152,476	1,638	2,153	0	0	0	0	0	9,822
2008	11,800	11,109	0	22,259	18,331	0	161,916	1,746	2,153	0	0	0	0	0	10,402
2009	12,524	11,800	0	23,609	18,662	0	171,715	1,861	2,153	0	0	0	0	0	11,015
2010	13,282	12,524	0	25,059	19,000	0	182,246	1,984	2,153	0	0	0	0	0	11,654
2011	14,073	13,282	0	26,599	19,331	0	193,528	2,115	2,153	0	0	0	0	0	12,330
2012	14,900	14,073	0	28,239	19,662	0	205,728	2,255	2,153	0	0	0	0	0	13,058
2013	15,764	14,900	0	29,979	20,000	0	218,720	2,409	2,153	0	0	0	0	0	13,828
2014	16,669	15,764	0	31,817	20,331	0	232,514	2,579	2,153	0	0	0	0	0	14,644
2015	17,551	16,669	0	33,764	20,662	0	247,187	2,763	2,153	0	0	0	0	0	15,508
2016	18,527	17,551	0	35,846	21,000	0	262,797	2,963	2,153	0	0	0	0	0	16,422
2017	19,692	18,527	0	38,076	21,331	0	279,310	3,178	2,153	0	0	0	0	0	17,386
2018	21,321	19,692	0	40,561	21,662	0	297,089	3,407	2,153	0	0	0	0	0	18,418
2019	22,769	21,321	0	43,233	22,000	0	315,922	3,650	2,153	0	0	0	0	0	19,509
2020	25,900	22,769	0	48,873	22,331	0	335,926	3,908	2,153	0	0	0	0	0	20,663
2021	27,435	25,900	0	51,671	22,662	0	357,231	4,182	2,153	0	0	0	0	0	21,874
2022	29,486	27,435	0	54,727	23,000	0	379,999	4,473	2,153	0	0	0	0	0	23,146
2023	31,462	29,486	0	58,150	23,331	0	404,064	4,782	2,153	0	0	0	0	0	24,531
TOTALS:				52,150			404,064	4,782							24,531

INFLATION INDICES SOURCE: DATA RESOURCES, INC. 12/08
LABOR: AVERAGE HOURLY EARNINGS
MATERIAL: PPI-INTERMEDIATE MATERIALS & SUPPLIES
OTHER: CPI-DEFINITION-TRANSPORTATION

DOLLARS IN THOUSANDS

FPC CRYSTAL RIVER UNIT #5
ESCALATION RATE ANALYSIS

Schedule 1
Docket No. 870098-EI

BUREAU				DECOMMISSIONING STAFFS				OTHER				TOTAL CURRENT DOLLARS BEFORE CONTINGENCY	TOTAL CURRENT DOLLARS AFTER CONTINGENCY
LABOR	MATERIAL	OTHER	TOTAL	LABOR	MATERIAL	OTHER	TOTAL	LABOR	MATERIAL	OTHER	TOTAL		
15,786	5,262	0	21,048	38,597	4,288	0	42,885	12,993	4,331	0	17,324	141,260	176,575
16,054	5,088	0	21,143	39,253	4,144	0	43,400	13,214	4,188	0	17,402	142,243	177,804
16,440	5,210	0	21,650	40,195	4,246	0	44,441	13,531	4,289	0	17,820	143,758	182,198
16,982	5,497	0	22,479	41,522	4,480	0	46,001	13,978	4,524	0	18,502	151,299	189,123
17,678	5,799	0	23,478	43,224	4,726	0	47,950	14,351	4,773	0	19,124	157,994	197,492
18,492	6,107	0	24,598	45,212	4,976	0	50,189	15,220	5,026	0	20,246	165,535	206,919
19,435	6,437	0	25,871	47,518	5,245	0	52,763	15,996	5,298	0	21,294	174,103	217,629
20,523	6,771	0	27,294	50,179	5,518	0	55,697	16,892	5,573	0	22,465	183,694	229,617
21,672	7,091	0	28,764	52,989	5,779	0	58,768	17,838	5,837	0	23,675	193,618	242,023
22,929	7,446	0	30,375	56,063	6,068	0	62,130	18,872	6,129	0	25,001	204,502	255,628
24,305	7,863	0	32,168	59,426	6,408	0	65,834	20,005	6,472	0	26,477	216,584	270,730
25,788	8,319	0	34,107	63,051	6,779	0	69,831	21,225	6,847	0	28,072	229,637	287,047
27,387	8,810	0	36,197	66,961	7,179	0	74,140	22,541	7,251	0	29,792	243,708	304,635
29,112	9,330	0	38,442	71,179	7,603	0	78,782	23,961	7,679	0	31,640	258,838	323,548
30,975	9,899	0	40,874	75,735	8,067	0	83,801	25,495	8,147	0	33,642	275,234	344,042
32,957	10,473	0	43,430	80,582	8,534	0	89,116	27,126	8,620	0	35,746	292,500	365,625
35,100	11,070	0	46,170	85,819	9,021	0	94,840	28,890	9,111	0	38,001	311,014	388,768
37,381	11,701	0	49,082	91,398	9,535	0	100,933	30,767	9,631	0	40,398	330,696	413,370
39,811	12,344	0	52,155	97,338	10,059	0	107,398	32,767	10,160	0	42,928	351,482	439,353
42,439	12,986	0	55,425	103,763	10,583	0	114,345	34,950	10,689	0	45,619	373,626	467,033
45,259	13,636	0	58,895	110,611	11,112	0	121,723	37,233	11,223	0	48,458	397,016	496,270
48,225	14,319	0	62,544	117,911	11,668	0	129,580	39,693	11,785	0	51,478	421,893	527,367
51,408	15,036	0	66,444	125,694	12,253	0	137,947	42,313	12,376	0	54,688	448,346	560,432
54,801	15,758	0	70,559	133,989	12,841	0	146,831	45,105	12,970	0	58,075	476,278	595,348
58,418	16,499	0	74,917	142,833	13,445	0	156,277	48,082	13,100	0	61,662	505,882	632,352
62,274	17,258	0	79,531	152,260	14,063	0	166,323	51,256	14,204	0	65,460	537,244	671,555
66,384	18,051	0	84,435	162,309	14,710	0	177,019	54,638	14,858	0	69,496	570,582	713,227
70,765	18,900	0	89,665	173,021	15,401	0	188,423	58,265	15,554	0	73,820	606,140	757,675
75,506	19,807	0	95,313	184,614	16,141	0	200,754	62,167	16,303	0	78,449	644,538	805,672
80,565	20,758	0	101,323	196,983	16,915	0	213,898	66,311	17,085	0	83,396	685,401	856,751
85,963	21,754	0	107,717	210,181	17,727	0	227,908	70,754	17,905	0	88,659	728,890	911,112
91,722	22,798	0	114,521	224,263	18,578	0	242,841	75,494	18,765	0	94,259	775,174	968,967
97,868	23,893	0	121,760	239,288	19,470	0	258,758	80,552	19,665	0	100,217	824,435	1,030,544
104,425	25,039	0	129,464	255,321	20,405	0	275,725	85,949	20,609	0	106,558	876,867	1,096,084
111,421	26,241	0	137,663	272,427	21,384	0	293,811	91,708	21,598	0	113,306	932,676	1,165,845
118,887	27,501	0	146,388	290,680	22,410	0	313,090	97,852	22,635	0	120,487	992,081	1,240,102
126,852	28,821	0	155,673	310,155	23,486	0	333,641	104,408	23,722	0	128,130	1,055,317	1,319,146
135,351	30,204	0	165,556	330,956	24,614	0	355,549	111,404	24,860	0	136,264	1,122,632	1,403,290
144,420	31,654	0	176,074	353,108	25,795	0	378,903	118,868	26,054	0	144,921	1,194,293	1,492,866
176,074				378,903				144,921				1,194,293	1,492,866

ANNUAL COMPOUND ESCALATION RATE:

6.08%

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Schedule 2
Docket No. 870098-EI

FPL ST. LUCIE UNIT #1
ANNUAL ACCRUAL SCHEDULE

1988 COST: 205,249,321
EARNINGS RATE: 5.14%
ESCALATION RATE: 4.02%

YEAR	% OF 1988 COST TO BE SPENT	ESTIMATED COST IN 1988 \$	ESTIMATED COST IN YEAR INCURRED	FPL SHARE IN YEAR INCURRED	QUALIFIED PLAN AMOUNT	NONQUALIFIED PLAN AMOUNT	TAX SAVINGS	NET AMOUNT NONQUALIFIED FUND	AMOUNT QUALIFIED FUND	1988 NPV OF NONQUALIFIED FUND	1988 NPV OF QUALIFIED FUND	1988 NPV OF TAX SAVINGS
2014	0.2229%	457,501	2,091,581	2,054,580	1,584,903	469,677	176,739	292,938	1,584,903	64,076	346,673	38,659
2015	0.8325%	1,708,701	8,282,026	8,135,517	6,275,737	1,859,779	699,835	1,159,944	6,275,737	239,313	1,294,775	144,386
2016	8.5155%	17,478,006	89,815,291	88,226,458	68,057,890	20,168,568	7,589,432	12,579,136	68,057,890	2,447,893	13,244,028	1,476,899
2017	2.9034%	5,959,209	32,466,450	31,892,118	24,601,580	7,290,538	2,743,430	4,547,109	24,601,580	834,621	4,515,614	503,556
2018	1.2318%	2,528,261	14,603,465	14,345,130	11,065,833	3,279,297	1,233,999	2,045,297	11,065,833	354,097	1,915,800	213,639
2019	1.2318%	2,528,261	15,482,594	15,208,707	11,731,997	3,476,710	1,308,286	2,168,424	11,731,997	354,097	1,915,800	213,639
2020	1.2318%	2,528,261	16,414,646	16,124,271	12,438,263	3,686,008	1,387,045	2,298,963	12,438,263	354,097	1,915,800	213,639
2021	1.2318%	2,528,261	17,402,808	17,094,952	13,187,046	3,907,906	1,470,545	2,437,361	13,187,046	354,097	1,915,800	213,639
2022	6.0011%	12,317,217	89,887,187	88,297,083	68,112,370	20,184,713	7,595,508	12,589,206	68,112,370	1,725,095	9,333,420	1,040,810
2023	19.5089%	40,041,885	309,804,347	304,323,909	234,755,463	69,568,445	26,178,606	43,389,839	234,755,463	5,608,091	30,341,896	3,383,557
2024	20.2418%	41,546,157	340,793,776	334,765,134	258,237,824	76,527,310	28,797,227	47,730,083	258,237,824	5,818,773	31,481,764	3,510,669
2025	20.2418%	41,546,157	341,309,561	334,917,995	273,783,742	81,134,254	30,530,820	50,603,434	273,783,742	5,818,773	31,481,764	3,510,669
2026	8.5243%	17,496,068	161,315,779	158,462,103	122,237,666	36,224,437	13,631,256	22,593,181	122,237,666	2,450,423	13,257,714	1,478,426
2027	7.4590%	15,309,547	149,653,381	147,006,012	113,400,438	33,605,574	12,645,778	20,959,797	113,400,438	2,144,188	11,600,869	1,293,664
2028	0.6216%	1,275,830	13,222,231	12,988,329	10,019,197	2,969,132	1,117,284	1,851,848	10,019,197	178,687	966,765	107,808
100.00%		205,249,321	1,622,545,122	1,593,842,299	1,229,489,949	364,352,350	137,105,789	227,246,560	1,229,489,949	28,746,321	155,528,480	17,343,660

NONQUALIFIED QUALIFIED TOTAL

NPV @ 12/31/88	28,746,321	155,528,480	184,274,801
LESS BALANCE @ 12/31/88	18,922,376	23,198,421	42,120,797
PV OF FUND REQUIREMENTS	9,823,945	132,330,059	142,154,004
MONTHLY FUND REQUIREMENT	56,002.84	754,366.99	810,369.83
ANNUAL FUND REQUIREMENT	672,034	9,052,404	9,724,438
MONTHLY ACCRUAL	154,872.93	754,366.99	909,239.92
ANNUAL ACCRUAL	1,858,475	9,052,404	10,910,879

Schedule 2
Docket NO. 870098-EI

FPL TURKEY POINT UNIT #3
ANNUAL ACCRUAL SCHEDULE

1988 COST: 162,072,000
EARNINGS RATE: 5.14%
ESCALATION RATE: 5.80%

YEAR	% OF 1988 COST TO BE SPENT	ESTIMATED COST IN 1988 \$	ESTIMATED COST IN YEAR INCURRED	FPL SHARE IN YEAR INCURRED	QUALIFIED PLAN AMOUNT	NONQUALIFIED PLAN AMOUNT	TAX SAVINGS	NET AMOUNT NONQUALIFIED FUND	AMOUNT QUALIFIED FUND	1988 NPV OF NONQUALIFIED FUND	1988 NPV OF QUALIFIED FUND	1988 NPV OF TAX SAVINGS
2005	0.2795%	452,991	1,181,262	1,160,365	773,616	386,750	145,534	241,216	773,616	92,502	296,667	55,879
2006	1.1316%	1,834,007	5,059,912	4,970,402	3,313,767	1,656,635	623,392	1,033,243	3,313,767	374,508	1,201,102	225,903
2007	6.8650%	11,126,243	32,477,023	31,902,505	21,269,400	10,633,105	4,001,237	6,631,868	21,269,400	2,271,999	7,286,644	1,370,776
2008	20.3103%	32,917,309	101,657,092	99,858,778	66,575,848	33,282,931	12,524,367	20,758,564	66,575,848	6,721,775	21,557,746	4,055,482
2009	25.6887%	41,634,190	136,034,524	133,628,073	89,089,836	44,538,237	16,759,738	27,778,498	89,089,836	8,501,778	27,266,484	5,129,419
2010	25.6887%	41,634,190	143,924,526	141,378,501	94,257,047	47,121,454	17,731,803	29,389,651	94,257,047	8,501,778	27,266,484	5,129,419
2011	12.3873%	20,076,345	73,426,868	72,127,947	48,087,702	24,040,245	9,046,344	14,993,901	48,087,702	4,099,626	13,148,120	2,473,448
2012	5.7367%	9,297,584	35,977,100	35,340,665	23,561,622	11,779,044	4,432,454	7,346,590	23,561,622	1,898,584	6,089,045	1,145,482
2013	1.9122%	3,099,141	12,687,703	12,463,257	8,309,254	4,154,004	1,563,152	2,590,852	8,309,254	632,850	2,029,646	381,821
	100.00%	162,072,000	542,426,010	532,830,494	355,238,090	177,592,404	66,828,021	110,764,382	355,238,090	33,095,398	106,141,938	19,967,610

	NONQUALIFIED	QUALIFIED	TOTAL
NPV @ 12/31/88	33,095,398	106,141,938	139,237,336
LESS BALANCE @ 12/31/88	15,649,644	19,815,377	35,465,021
PV OF FUND REQUIREMENTS	17,445,754	86,326,561	103,772,315
MONTHLY FUND REQUIREMENT	122,649.48	606,904.56	729,554.05
ANNUAL FUND REQUIREMENT	1,471,794	7,282,855	8,754,649
MONTHLY ACCRUAL	263,028.45	606,904.56	869,933.02
ANNUAL ACCRUAL	3,156,341	7,282,855	10,439,196

Schedule 2
Docket No. 870098-EI

FPL TURKEY POINT UNIT #4
ANNUAL ACCRUAL SCHEDULE

1908 COST:
EARNINGS RATE: 5.142
ESCALATION RATE 5.808

YEAR	% OF 1908 COST TO BE SPENT	ESTIMATED COST IN 1908 \$	ESTIMATED COST IN YEAR INCURRED	FPL SHARE IN YEAR INCURRED	QUALIFIED PLAN AMOUNT	NONQUALIFIED PLAN AMOUNT	TAX SAVINGS	NET AMOUNT NONQUALIFIED FUND	AMOUNT QUALIFIED FUND	1908 MPV OF NONQUALIFIED FUND	1908 MPV OF QUALIFIED FUND	1908 MPV OF TAX SAVINGS
2005	0.13042	248,404	647,762	636,303	436,313	199,990	75,256	126,734	436,313	47,833	167,318	28,859
2006	0.53922	1,027,144	2,833,826	2,783,666	1,906,780	876,916	329,231	545,685	1,906,780	197,788	691,833	119,332
2007	4.23402	8,065,516	23,542,894	23,126,420	15,857,786	7,268,634	2,735,187	4,533,447	15,857,786	1,533,105	5,432,689	937,043
2008	5.99543	11,421,258	35,271,774	34,647,817	23,750,008	10,889,889	4,097,835	6,791,974	23,750,008	2,199,291	7,693,017	1,326,909
2009	19.06402	36,315,776	118,657,270	116,558,223	79,923,973	36,634,249	13,785,448	22,848,781	79,923,973	6,993,008	24,441,216	4,219,126
2010	24.09933	45,907,721	146,697,422	135,890,261	106,893,932	48,996,309	18,437,311	30,558,998	106,893,932	8,840,044	30,922,062	5,333,507
2011	24.09933	45,907,721	167,902,084	164,931,896	113,093,801	51,838,095	19,506,675	32,331,420	113,093,801	8,840,044	30,922,062	5,333,507
2012	12.80492	24,449,714	94,608,426	92,934,803	63,725,394	29,209,408	10,991,500	18,217,908	63,725,394	4,708,065	16,468,593	2,840,540
2013	7.20275	13,720,711	56,171,797	55,178,118	37,835,436	17,342,453	6,525,976	10,816,506	37,835,436	2,442,076	9,241,859	1,594,057
2014	1.80043	3,430,035	14,856,822	14,594,004	10,807,109	4,586,896	1,726,049	2,860,847	10,807,109	650,492	2,310,369	398,498
100.005	190,494,000		673,190,276	661,281,540	453,440,752	207,840,788	78,210,489	129,630,299	453,440,752	36,481,745	128,311,037	22,131,379

MPV @ 12/31/08					TOTAL	
LESS BALANCE @ 12/31/08	36,681,745	128,311,037	164,992,783			
	11,165,134	14,846,056	26,031,190			
PV OF FUND REQUIREMENTS	25,516,611	113,444,981	138,961,593			
MONTHLY FUND REQUIREMENT	179,390.30	797,556.12	976,946.42			
ANNUAL FUND REQUIREMENT	2,152,604	9,570,673	11,723,357			
MONTHLY ACCRUAL	334,981.29	797,556.12	1,132,537.41			
ANNUAL ACCRUAL	4,019,775	9,570,673	13,590,449			

Schedule 2
Docket No. 870098-EI

FPC CRYSTAL RIVER UNIT #5
ANNUAL ACCRUAL SCHEDULE

1988 COST: 189,123,000
EARNINGS RATE: 5.14%
ESCALATION RATE 6.06%

YEAR	% OF 1988 COST TO BE SPENT	ESTIMATED COST IN 1988 \$	ESTIMATED COST IN YEAR INCURRED	FPC SHARE IN YEAR INCURRED	QUALIFIED PLAN AMOUNT	NONQUALIFIED PLAN AMOUNT	TAX SAVINGS	NET AMOUNT NONQUALIFIED FUND	AMOUNT QUALIFIED FUND	1988 NPV OF NONQUALIFIED FUND	1988 NPV OF QUALIFIED FUND	1988 NPV OF TAX SAVINGS
2015	3.1811%	6,016,192	29,609,186	25,206,063	20,795,002	4,411,061	1,659,882	2,751,179	20,795,002	559,003	4,225,267	337,266
2016	3.1811%	6,016,192	31,409,425	26,738,592	22,059,338	4,679,254	1,760,803	2,918,450	22,059,338	559,003	4,225,267	337,266
2017	3.1811%	6,016,192	33,319,118	28,364,298	23,400,546	4,963,752	1,867,860	3,095,892	23,400,546	559,003	4,225,267	337,266
2018	23.7764%	44,966,641	264,177,471	224,892,168	185,536,038	39,356,129	14,809,711	24,546,418	185,536,038	4,178,138	31,580,787	2,520,817
2019	23.7764%	44,966,641	280,239,461	238,565,612	196,816,630	41,748,982	15,710,142	26,038,840	196,816,630	4,178,138	31,580,787	2,520,817
2020	23.7764%	44,966,641	297,278,021	253,070,401	208,783,081	44,287,320	16,665,319	27,622,002	208,783,081	4,178,138	31,580,787	2,520,817
2021	9.5639%	18,087,535	126,848,472	107,985,089	89,087,699	18,897,391	7,111,088	11,786,303	89,087,699	1,680,628	12,703,163	1,013,982
2022	4.7819%	9,043,673	67,279,726	57,274,693	47,251,621	10,023,071	3,771,682	6,251,390	47,251,621	840,305	6,351,515	506,986
2023	4.7817%	9,043,294	71,367,348	60,754,453	50,122,423	10,632,029	4,000,833	6,631,197	50,122,423	840,270	6,351,250	506,964
	100.00%	189,123,000	1,201,528,228	1,022,851,368	843,852,379	178,998,989	67,357,320	111,641,670	843,852,379	17,572,627	132,824,090	10,602,180

	NONQUALIFIED	QUALIFIED	TOTAL
NPV @ 12/31/88	17,572,627	132,824,090	150,396,717
LESS BALANCE @ 12/31/88	8,773,682	24,951,975	33,725,657
PV OF FUND REQUIREMENTS	8,798,945	107,872,115	116,671,060
MONTHLY FUND REQUIREMENT	49,542.85	607,378.74	656,921.59
ANNUAL FUND REQUIREMENT	594,514	7,288,545	7,883,059
MONTHLY ACCRUAL	109,238.90	607,378.74	716,617.64
ANNUAL ACCRUAL	1,310,867	7,288,545	8,599,412