BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petitions for approval of an increase in the accrual of nuclear decommissioning costs by Florida Power ORDER NO. 21245

Corporation and Florida Power & Light Company.

Pursuant to Notice, a Prehearing Conference was held on May 4, 1989, in Tallahassee, Florida, before Commissioner Gerald L. Gunter, Prehearing Officer.

APPEARANCES:

MATTHEW M. CHILDS, Esquire, Steel, Hector and Davis, 310 West College Avenue, Tallahassee, Florida 32301-1406 On behalf of Florida Power and Light Company.

JAMES McGEE, Esquire, P. O. Box 14042, St. Petersburg, Florida 33733 On behalf of Florida Power Corporation.

M. ROBERT CHRIST, Esquire, Florida Public Service Commission, Division of Legal Services, 101 East Gaines Street, Tallahassee, Florida 32399-0863 On behalf of the Commission Staff.

PRENTICE P. PRUITT, Esquire, Florida Public Service Commission, General Counsel, 101 East Gaines Street, Tallahassee, Florida 32399-0862 On behalf of the Commissioners.

PREHEARING ORDER

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 the 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 & 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 & 4 and revisions to its studies on its St. Lucie Units. Also, on June 29, 1988, FPL filed apetition seeking approval of revised annual accruals to its nuclear decommissioning reserve.

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 subsequent 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 its base rates.

On October 21, 1988, the Commission issued Order No. 20186 granting the petition of Metropolitan Dade County for leave to intervene. On February 27, 1989, FPC and FPL each filed their direct testimony. On March 31, 1989, Staff filed its direct testimony. Final hearings are scheduled to be held on May 25 and 26, 1989.

Use of Prefiled Testimony

All testimony which has been prefiled in this case will be inserted into the record as though read after the witness has taken the stand and affirmed the correctness of the testimony and exhibits, unless there is a sustainable objection. All testimony remains subject to appropriate objections. Each witness will have the opportunity to orally summarize his testimony at the time he or she takes the stand.

Use of Depositions and Interrogatories

If any party desires to use any portion of a deposition or an interrogatory, at the time the party seeks to introduce that deposition or a portion thereof, the request will be subject to proper objections and the appropriate evidentiary rules will govern. The parties will be free to utilize any exhibits requested at the time of the depositions subject to the same conditions.

Order of Witnesses

In keeping with Commission practice, witnesses will be grouped by the subject matter of their testimony. The witness schedule is set forth below in order of appearance by the witness's name, subject matter, and the issues which will be covered by his or her testimony.

Witness	Subject Matter	Issues
FPL		
T. S. LaGuardia (Also, will testify for FPC)	Engineering cost estimates, alterna- tives evaluated, schedule of estimates as well as decommissioning feasibility and recommended method	4, 5, 6, 8, 9, 10, 29

Witness	Subject Matter	Issues
FPL		
E. L. Hoffman	Selection of decom- missioning methodology, as well as determining additional annual accrual requirements for inclusion in the Company's cost of service based on assumptions of inflation and investment earnings rates	4, 6, 7, 8, 9, 10, 13, 15, 16, 18, 19, 20, 21, 26, 29
G. G. Kuberek	The accounting and tax treatment for nuclear decommissioning costs and significant changes in laws and regulations subsequent to the last decommissioning hearing	2, 3, 11, 12, 13, 14, 15, 17, 19, 22, 23, 24, 25, 27, 28, 30
R. R. Denis	Feasibility of future use of non-contaminated plant and equipment	1, 3
FPC		
Elizabeth A. Czura	Development of future decommissioning costs and annual accrual	6 thru 11, 21 thru 25
Kenneth E. McDonald	Decommissioning fund investment	12 thru 18, 20
Thomas S. LaGuardia	Development of decommissioning cost estimates	1 thru 5, 9
<u>Staff</u>		
George W. Woerner	Appropriate timing and expenses associated with dismantling non-contaminated plant and facilities	1, 2, 3

EXHIBIT LIST

Exhibit Number	Witness	Description
FPL		
1	LaGuardia	1988 Decommissioning
	Hoffman Kuberek	Study - St. Lucie Units Nos. 1 & 2 as Revised on June 29, 1988
2	LaGuardia	1988 Decommissioning- Study - Turkey Point
	Hoffman Kuberek	Units Nos. 3 & 4 as filed on June 29, 1988
3	LaGuardia	Cost and Schedule Estimate Summary for the St. Lucie Nuclear Units Nos. 1 & 2, Document No. 1
4	LaGuardia	Cost and Schedule Estimate Summary for the Turkey Point Nuclear Units Nos. 3 & 4, Document No. 2
5	Kuberek	Excerpts from the Florida Municipal Power Agency and Orlando Utilities Commission Participation Agreement, Document No. 1
6	Kuberek	Decommissioning Funding Alternatives, Qualified vs. Non-qualified, Document No. 2
7	Denis	Nuclear Decommissioning Table, Document No. 1
FPC	2	
Composite 8	Czura	CR-3 Decommissioning Study, Sections B through G
Composite 8	McDonald	CR-3 Decommissioning Study, Section I

Exhibit Number	Witness	Description
FPC		
Composite 8	LaGuardia	CR-3 Decommissioning Study, Sections H and J
<u>Staff</u>		
9	Hoffman	Annual Accrual Schedule - Turkey Point Unit No.
10	Hoffman	Annual Accrual Schedule - Turkey Point Unit No. 4
11	Hoffman	Annual Accrual Schedule - St. Lucie No. 1
12	Hoffman	Annual Accrual Schedule - St. Lucie Unit No. 2
13	Hoffman	Escalation Rate Analysis - Turkey Point Unit No. 3
14	Hoffman	Escalation Rate Analysis - Turkey Point Unit No. 4
15	Hoffman	Escalation Rate Analysis - St. Lucie Unit No. 1
16	Hoffman	Escalation Rate Analysis - St. Lucie Unit No. 2
17	Hoffman	Late Filed Deposition Exhibit No. 2 - State Street Trustee Statement
18	Kuberek	Late Filed Deposition Exhibit No. 1 - Study Evaluating Qualified vs. Non-qualified Election (Pages 1-12)
19	Czura	U. S. Long-Term Review
20	Czura	Annual Accrual Schedule - Crystal River Unit No. 3
21	Czura	Escalation Rate Analysis - Crystal River Unit No. 3

Exhibit Number Witness Description

Staff

22 Denis

Excerpts from 1985 FPL Depreciation Study - Nuclear Interim Retirements for Turkey Point Units 3, 4 and Common

PARTIES' STATEMENT OF BASIC POSITION

FPL: FPL, pursuant to the procedures established in Docket No. 810100-EU, has completed and filed new decommissioning studies for its nuclear units, Turkey Point Unit Nos. 3 and 4 and St. Lucie Unit Nos. 1 and 2. Based on these studies FPL is requesting this Commission to authorize an increase in the annual accrual and funding of the reserves for the cost of decommissioning these nuclear units.

Based on these studies the total jurisdictional decommissioning cost estimates in current 1988 dollars for Turkey Point Unit Nos. 3 and 4 were \$160,210,146 and \$188,172,816, respectively and for St. Lucie Nuclear Unit Nos. 1 and 2, were \$202,843,912 and \$171,073,492, respectively. The annual jurisdictional accruals for these units based upon the new decommissioning studies are \$9,243,243 and \$12,628,212 for Turkey Point Nuclear Unit Nos. 3 and 4 and \$9,923,209 and \$8,092,801 for St. Lucie Unit Nos. 1 and 2, respectively.

At this time FPL is not requesting that its base rates be adjusted, however, the increased costs of nuclear decommissioning should be authorized to be included in cost of service, effective January 1, 1989.

FPC: FPC's basic position is that its Decommissioning Study was timely filed in January, 1987, in accordance with the five-year review interval previously established by the Commission, and that it provides a sound technical and economic basis for estimating the future cost of decommissioning the Crystal River 3 (CR-3) nuclear plant. Updates to the Study for revisions in escalation rates since the Study was filed strongly support and confirm the reasonableness of the annual decommissioning costs accrual approved by the Commission, effective January 1, 1989, in Order No. 18627, Docket No. 870220-EI. The Study updates indicate the need for an annual accrual of \$9,255,465, compared to the accrual of \$9,251,000 approved by the Commission.

STAFF: The estimated decommissioning costs submitted in the FPL and FPC studies are based on the assumption that non-contaminated as well as contaminated components at the nuclear plant sites will be dismantled or decommissioned upon the license termination of each unit. In Staff's opinion, non-contaminated components and facilities could be retained and used for future generation of electricity and therefore logic would dictate that the dismantlement of these assets be

recovered through the use of lives and costs specifically related to them. In cost studies submitted with this docket, however, there is no way to distinguish between the costs of dismantling contaminated and non-contaminated assets at the time of decommissioning the nuclear facilities. For this reason, Staff's position is to basically accept each company's estimated decommissioning costs at this time with the exception of the contingency allowance. The companies should, however, be required to submit no later than two years from the date of the order in this proceeding new studies based on the premise that the non-contaminated assets at each nuclear unit could be used with a subsequent generating source of electricity after decommissioning of the contaminated components.

The annual accrual amounts proposed by FPL and FPC should also be adjusted to reflect escalation rates using projected inflation rates as of December, 1988. Further, in order to ensure the availability of the decommissioning funds at the time of license termination, the companies should be required to qualify the funds on a prospective basis pursuant to Section 468(a) of the Internal Revenue Code.

New accrual amounts for FPL should be implemented by FPL as of January 1, 1989. Any change to the accrual amount approved for FPC in Order No. 18627, Docket No. 870220-EI, should be implemented as of January 1, 1990.

STATEMENT OF ISSUES AND POSITIONS

*Issues marked with an asterick are required by the Internal Revenue Service.

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 contaminated steam generation components?

FPL: It is unknown at this time. Components with potential for reuse after decommissioning would be limited to the 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. (Denis)

FPC: While it is possible that certain components and facilities at CR-3 could be used with a new, non-nuclear steam source, FPC believes this possibility is unlikely and should not serve as the premise for funding future decommissioning costs. (LaGuardia)

STAFF: Yes, there are portions of the nuclear electric generating units that, if not radioactive, could be retained and used for future generation of electricity. (Woerner)

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?

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. (Kuberek)

FPC: FPC believes it is preferable to continue funding the total cost of decommissioning CR-3. FPC agrees with Staff that the costs of dismantling contaminated and non-contaminated facilities cannot be properly distinguished at this time. (LaGuardia)

STAFF: The dismantlement of non-contaminated plant components 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 and potentially non-contaminated assets at the time of decommissioning. (Woerner)

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?

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. (Kuberek, Denis)

FPC: Future decommissioning studies should be premised on the plan considered most likely to occur, as opposed to a plan which is only a possibility. FPC does not believe that retrofitting a non-nuclear steam source to uncontaminated plant

facilities is likely to occur. However, if the possibility of such a plan is to be pursued, its feasibility should be separately evaluated before deciding whether to base the next decommissioning studies on this plan. (LaGuardia)

STAFF: Yes, Florida Power & Light and Florida Power Corporation should file a new site-specific Nuclear Decommissioning Study for each of their nuclear generating plants premised on the possibility that, at the termination of the operating license, the non-contaminated portion of the nuclear plant assets could be used with a new generating source. These studies should be submitted no later than two years from the date of the order in this proceeding. (Woerner)

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

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. (Hoffman, LaGuardia)

FPC: The appropriate decommissioning methodology for CR-3 is the Prompt Removal/Dismantlement approach. (LaGuardia)

STAFF: 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

25.54

St. Lucie Unit 1: Mothball/Prompt Integrated

Dismantling

St. Lucie Unit 2: Integrated Prompt
Removal/Dismantling

Crystal River Unit 3: Prompt Removal/Dismantling

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

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%. (LaGuardia)

FPC: Yes. The contingency allowance included in FPC's decommissioning study is intended to provide for the costs of problems that cannot be accurately predicted at the time decommissioning activities begin. It is not an allowance for uncertainties due to the time period between now and when those activities begin. Accordingly, subsequent five-year review proceedings will not affect the necessity for a contingency allowance. Sound engineering judgment based on actual decommissioning experience indicates that a 25% contingency allowance is reasonable. (LaGuardia)

STAFF: Since the purpose of a five year minimum review of the companies' decommissioning funds is to "zero in" on the actual cost of decommissioning, a contingency factor is not warranted at this time.

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

FPL:

UNIT	Estimated Future Costs at 1/1/89
Turkey Point Unit No. 3	\$163,143,465
Turkey Point Unit No. 4	191,618,110
St. Lucie Unit No. 1	206,557,821
St. Lucie Unit No. 2	204,031,505

The above was based on the Company's November, 1987 Inflation Rate Forecast. An updated Inflation Rate Forecast is expected to be completed by the Research Economics and Forecasting Department in May, 1989. (Hoffman, LaGuardia)

FPC: The appropriate estimated total cost in current dollars (as of January 1, 1989) to decommission CR-3 is \$195,133,000. (Czura)

STAFF: The estimated cost in current (January 1, 1989) dollars to decommission each of the nuclear units on a total company basis excluding any contingency allowance is as follows:

Turkey Point Unit 3: \$130,736,000
Turkey Point Unit 4: 153,629,000
St. Lucie Unit 1: 168,823,000
St. Lucie Unit 2: 163,631,000
Crystal River Unit 3: 156,106,000

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

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 Prices 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:

UNIT	OVERALL ESCALATION RATE
Turkey Point Unit No. 3	5.4%
Turkey Point Unit No. 4	5.4%
St. Lucie Unit No. 1	5.5%
St. Lucie Unit No. 2	5.4%

The above was based on the Company's November, 1987 Inflation Rate Forecast. An updated Inflation Rate Forecast is expected to be completed by the Research Economics and Forecasting Department in May, 1989.

(Hoffman)

FPC: The methodology used by FPC in its Decommissioning Study for converting the current estimate of decommissioning costs to future costs is appropriate. The appropriate escalation rate

to use in converting CR-3's current estimated decommissioning costs (in January 1, 1989 dollars) to future costs is 6.66%. (Czura)

STAFF: The methodology used by Florida Power & Light and Florida Power Corporation in their escalation rate analyses is reasonable for determining an appropriate escalation rate. The disparity among these numbers results from differences in the time frame and type of inflation measures used by each party.

The appropriate escalation rate to use in converting the current (1-1-89) estimated decommissioning cost to the future decommissioning cost for each nuclear unit is based on projected inflation rates as of December, 1988.

Turkey Point Unit 3: 6.35%
Turkey Point Unit 4: 6.34
St. Lucie Unit 1: 6.63
St. Lucie Unit 2: 6.48
Crystal River Unit 3: 6.67

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

FPL:

UNIT	LICENSE EXPIRATION	EST. FUTURE COST
Turkey Point No. 3	April 27, 2007	\$ 503,344,063
Turkey Point No. 4	April 27, 2007	621,942,760
St. Lucie No. 1	March 1, 2016	1,370,729,178
St. Lucie No. 2	April 6, 2023	1,473,080,158

The above was based on the Company's November, 1987 Inflation Rate Forecast. An updated Inflation Rate Forecast is expected to be completed by the Research Economics and Forecasting Department in May, 1989. (Hoffman, LaGuardia)

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

STAFF: The estimated total cost of decommissioning each nuclear unit in future dollars based upon present operating license termination dates, the escalation rates stated in ISSUE 7 and excluding any contingency allowance is as follows:

Turkey Point Unit 3: \$ 489,125,361
Turkey Point Unit 4: 608,703,970
St. Lucie Unit 1: 1,637,325,998
St. Lucie Unit 2: 1,734,127,975
Crystal River Unit 3: 1,180,573,324

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

FPL:

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

(Hoffman, LaGuardia)

FPC: As presently planned, funds for decommissioning CR-3 will be expended in the years 2015 through 2023. (Czura, LaGuardia)

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

<u>Unit</u>	Year(s) of Fund Expenditures
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

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

FPL:

Turkey Point Plant:

Integrated Prompt Removal/Dismantling

Year of	Fatimated	Future Cost
		Future Cost
Decommissioning	Unit No. 3	Unit No. 4
2005	\$ 1,115,261	\$ 611,541
2006	4,757,530	2,662,549
2007	30,421,764	22,037,228
2008	94,863,296	32,891,160
2009	126,463,249	110,230,751
2010	133,292,265	146,870,251
2011	67,745,350	154,801,245
2012	33,067,696	86,896,867
2013	11,617,652	51,398,161
2014		13,543,007
Totals	\$503,344,063	\$621,942,760

(Hoffman, LaGuardia)

St Lucie Plant:

Mothball/Prompt - Integrated Dismantling

Year of	Estimated	future Cost
Decommissioning	Unit No. 1	Unit No. 2
2014	\$ 1,852,197	
2015	7,299,018	
2016	78,763,017	
2017	28,331,287	
2018	12,680,922	
2019	13,378,372	
2020	14,114,183	
2021	14,890,463	\$ 1,276,476
2022	76,534,689	5,333,059
2023	262,488,312	61,780,306
2024	287,329,270	272,605,419
2025	303,132,380	353,445,292
2026	134,676,440	372,531,338
2027	124,327,707	232,741,082
2028	10,930,921	173,367,186
Totals	\$1,370,729,178	\$1,473,080,158

(Hoffman, LaGuardia)

 $\overline{\text{FPC:}}$ As presently planned, total costs for decommissioning in $\overline{\text{CR-3}}$ will be incurred in the following future dollar amounts:

Year of Decommissioning	Estimated Future Cost Unit No. 3
Decommissioning	OHIE NO. 3
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	89,118,597
Total	\$1,471,378,780

(Czura)

STAFF: The estimated future cost of decommissioning, by unit, on a total company basis as calculated in ISSUE 8, in each year in which decommissioning funds will be expended is as follows:

Turkey Point Plant

Year of	Estimated	Future Cost
Decommissioning	Unit No. 3	Unit No. 4
2005	\$ 1,041,046	\$ 570,068
2006	4,480,877	2,504,741
2007	28,910,002	20,915,128
2008	90,962,296	31,494,809
2009	122,355,839	106,492,006
2010	130,125,435	143,154,190
2011	66,732,012	152,230,165
2012	32,866,783	86,215,517
2013	11,651,071	51,449,947
2014		13,677,399
Totals	\$489,125,361	\$608,703,970

St Lucie Plant

Year of		Estimated	Futur	re Cost	
Decommissioning		Unit No. 1		Unit No. 2	
2014	\$	1,997,130			
2015		7,953,530			
2016		86,749,149			
2017		31,538,523			
2018		14,267,704			
2019		15,213,653			
2020		16,222,318			
2021		17,297,858	\$	1,433,133	
2022		89,859,167	100	6,048,660	
2023		311,489,720		70,790,767	
2024		344,619,204		315,566,783	
2025		367,467,457		113,338,362	
2026		165,009,098	4	440,122,688	
2027		153,960,453		277,786,328	
2028		13,681,036		209,041,255	
Totals	\$1	,637,325,998	-	734,127,975	

Crystal River Plant

Year of Decommissioning	Estimated Future Cost Unit No. 3			
2015	\$ 28,388,267			
2016	30,281,765			
2017	32,301,558			
2018	257,533,984			
2019	274,711,501			
2020	293,034,758			
2021	125,733,313			
2022	67,059,161			
2023	71,529,016			
Total	\$1,180,573,324			

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

 $\overline{\text{FPL:}}$ 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

(Kuberek)

FPC: The projected date that CR-3 will be removed from rate base is December 3, 2016, the date its operating license is scheduled to terminate. (Czura)

STAFF: 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

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

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. §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. (Kuberek)

FPC: NRC regulations (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," which is defined as "an account segregated from licensee assets and outside licensee's administrative control," which "may be in the form of a trust, escrow account, (etc.)." FPC's establishment of an external trust fund under the administrative control of an independent trustee complies with this requirement. (McDonald)

 $\underline{\mathsf{STAFF:}}$ Yes, FPL and FPC comply with NRC requirements as they pertain to control of the 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?

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. §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 decomissioning 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. (Kuberek, Hoffman)

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 reugirements to the extent it is not already in compliance. (McDonald)

STAFF: No position at this time.

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

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 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 decomissioning fund. (Kuberek)

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. (McDonald)

STAFF: No position at this time.

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

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. (Kuberek, Hoffman)

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. (McDonald)

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

ISSUE 16: What are the fee structures associated with the administration and management of the decommissioning trust funds for Florida Power & Light and Florida Power Corporation and are these appropriate?

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. (Hoffman)

FPC: The fee structures for FPC are appropriate. FPC pays the following annual fees: Trustee fees of 2/100 of 1% of the market value of the trust fund and investment manager fees of 29/100 of 1% of the market value of the trust fund. In addition, FPC pays investment performance evaluation consulting fees of \$1,438 for each quarterly performance evaluation. In 1988, FPC's trustee fees totaled \$4,115, and its investment manager fees totaled \$78,480. (McDonald)

STAFF: At this time, each company's fee structure appears reasonable.

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?

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. (Kuberek)

FPC: The 10% co-owners of CR-3 are contractually obligated to provide their pro rata share of the plant's decommissioning costs. (McDonald)

STAFF: 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.

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

FPL: 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. (Hoffman)

FPC: Agree with Staff. FPC's current strategy is consistent with the investment guidelines for a qualified trust fund under Section 468(a) of the Internal Revenue Code. (McDonald)

STAFF: 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?

FPL: 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. (Hoffman)

FPC: A minimum fund earnings rate should not be mandated. Nonetheless, over the long-term, the fund should be expected to maintain as a minimum the purchasing power of the contributed funds when measured by the Consumer Price Index. However, this objective should not serve as a basis for imposing a penalty in the event earnings fall below the rate of inflation where the fund has been prudently managed. (McDonald)

STAFF: No position at this time.

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

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 5.6% 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. (Hoffman)

FPC: Agree with Staff. (McDonald)

STAFF: 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.

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

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. (Hoffman)

FPC: Agree with Staff. (McDonald)

STAFF: Contributions should be made to each company's decommissioning fund once a month.

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

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 nonqualified 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. (Kuberek)

FPC: Assuming that their respective tax benefits are fully realized and that tax rates do not change, 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 might otherwise occur because of changes in the tax rate, or because of insufficient earnings to fully utilize the tax deduction at the time decommissioning costs are incurred. On the other hand, a non-qualified fund is permitted to make higher risk investments which affords it the opportunity to earn higher rates of return. (McDonald)

STAFF: No position at this time.

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

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. (Kuberek)

FPC: Agree with Staff. (McDonald)

STAFF: Yes, to ensure the availability of the monies at decommissioning, it was appropriate for the companies to qualify the decommissioning funds.

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

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. (Kuberek)

FPC: No position.

STAFF: No, the most conservative approach to ensuring the availability of funds would have been to qualify the decommissioning funds in 1988 rather than assuming future increases in tax rates.

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

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. (Kuberek)

FPC: FPC believes its election to seek qualified fund status under Section 468(a) is justified by the benefits associated with such qualification, but that the decision whether or not qualification should be sought for each individual tax year in the future should remain with the utility, subject to the burden to justify the reasonableness of its decision. (McDonald)

STAFF: Yes, to assure the availability of the monies at decommissioning, the companies should be required, prospectively, to qualify the funds.

*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?

FPL:

Unit	Jurisdictional Annual Accrual	Annual Revenus Requirements
Turkey Point No. 3	\$ 9,243,243	\$ 9,421,363
Turkey Point No. 4	12,628,212	12,871,562
St. Lucie No. 1	9,923,209	10,114,432
St. Lucie No. 2	8,092,801	8,248,752
Totals	\$39,887,465	\$40,656,109

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

FPC: In accordance with the settlement stipulation approved by Order No. 18627 in Docket No. 870220-EI, the retail portion of FPC's annual accrual for decommissioning costs was increased to \$9,251,000. This increase was derived from FPC's Decommissioning Study filed in this docket. (Czura)

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

	Current Approved Accrual	Change In Accrual Based on Current Studies	Total Annual Accrual
Florida Power & Light			
Turkey Point Unit # 3 Turkey Point Unit # 4 St. Lucie Unit # 1 St. Lucie Unit # 2 Totals	\$ 5,355,895 3,914,544 4,884,338 4,667,100 \$18,821,877	\$ 1,561,250 6,097,479 2,973,778 2,480,945 \$13,113,452	\$ 6,917,145 10,012,023 7,858,116 7,148,045 \$31,935,329

Florida Power Corporation

Crystal River Unit # 3 \$ 9,251,000**(\$ 2,457,307) \$ 6,793,693

^{**} Per Order No. 18627 in Docket No. 870220-EI

*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?

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:

	TOTAL COMPANY	JURISDICTIONAL
Turkey Point Unit No. 3	\$ 9,412,479	\$ 9,243,243
Turkey Point Unit No. 4	12,859,425	12,628,212
St. Lucie Unit No. 1	10,104,895	9,923,209
St. Lucie Unit No. 2	8,240,974	8,092,801

(Kuberek)

FPC: Agree with Staff. (Czura)

STAFF: 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. That accrual amount will be that which the Commission approves as being appropriate and 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.

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

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

FPC: FPC's annual accrual was adjusted effective January 1, 1989, by Order No. 18627 in Docket No. 870220-EI. (Czura)

STAFF: The effective date for adjusting the annual accrual amounts for FPL should be January 1, 1989. Any adjustment to the annual accrual amount approved for FPC in Order No. 18627 in Docket No. 870220-EI should be made 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?

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:

	Previously Authorized by the Commission	Increase Based on Current Studies	Total Annual Revenue Requirements
Turkey Point Unit 3 Turkey Point Unit 4 St. Lucie Unit 1 St. Lucie Unit 2	\$ 5,459,105 3,989,885 4,978,857 4,756,925	\$ 3,962,258 8,881,677 5,135,575 3,491,827	\$ 9,421,363 12,871,562 10,114,432 8,248,752
Totals	\$19,184,772	\$21,471,337	\$ 40,656,109

(Hoffman, LaGuardia)

FPC: The additional jurisdictional annual revenue requirements needed to recover the costs associated with the decommissioning of CR-3, as approved for base rate recovery beginning January 1, 1989, by Order No. 20632, in Docket No. 870220-EI, are as follows:

Amount Previously Approved	Additional Amount Approved Effective January 1, 1989	Total Approved Amount as of January 1, 1989
\$5,031,000	\$4,369,000	\$9,400,000
(Czura)		

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

	Previously Authorized by the Commission	Increase/ Decrease Based on Current Studies	Total Annual Revenue Requirements
Florida Power & Light			
Turkey Point Unit # 3	\$ 5,459,105	\$ 1,572,311	\$ 7,031,416
Turkey Point Unit # 4	3,989,885	6,187,537	10,177,422
St. Lucie Unit # 1	4,978,857	3,009,075	7,987,932
St. Lucie Unit # 2	4,756,925	2,509,206	7,266,131
Totals	\$19,184,772	\$13,278,129	\$32,462,901

Florida Power Corporation

Crystal River Unit # 3 \$ 9,400,000 (\$ 2,494,075)\$ 6,905,925

ISSUE 29: Should base rates be revised in this docket to reflect any change in revenue requirements?

<u>FPL:</u> 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. (Kuberek)

FPC: The additional revenue requirements associated with the increased annual accrual were approved for base rate recovery beginning January 1, 1989, by Order No. 20632 in Docket No. 870220-EI. (Czura)

 $\underline{\text{STAFF:}}$ No, base rates should not be revised in this docket to reflect any change in revenue requirements.

STIPULATED ISSUES

No issues have been stipulated to by the parties.

MOTIONS

No Motions are pending.

Based on the foregoing, it is

ORDERED by the Florida Public Service Commission that these proceedings shall be governed by this order unless modified by the Commission.

By ORDER of Commissioner Gerald L. Gunter, as Prehearing Officer, this <u>17th</u> day of <u>MAY</u>, <u>1989</u>.

GERALD L. GUNTER, Commissioner and Prehearing Officer

(SEAL)

MRC