

BEFORE THE  
FLORIDA PUBLIC SERVICE COMMISSION  
DOCKET NO. 990002-EG  
DETERMINATION OF CONSERVATION COSTS RECOVERY FACTOR

ORIGINAL

Direct Testimony of  
MICHAEL A. PEACOCK

On Behalf of  
FLORIDA PUBLIC UTILITIES COMPANY

- 1 Q. Please state your name and business address.
- 2 A. Michael A. Peacock: my business address is P.O. Box 610  
3 Marianna, Florida 32446.
- 4 Q. By whom are you employed and in what capacity?
- 5 A. I am employed by Florida Public Utilities Company as  
6 Manager of Customer Relations.
- 7 Q. What is the purpose of your testimony at this time?
- 8 A. To Advise the Commission of the actual over/under  
9 recovery of the Conservation Program costs for the period  
10 April 1, 1998 through December 31, 1998 as compared to  
11 the true-up amounts previously reported for that period  
12 which were based on seven months actual and two months  
13 estimated data.
- 14 Q. Please state the actual amounts of over/under recovery of  
15 Conservation Program costs for both divisions of Florida  
16 Public Utilities Company for April 1, 1998 through  
17 December 31, 1998
- 18 A. The Company over-recovered \$88,996 in the Marianna

1 Division during that period. In the Fernandina Beach  
2 Division we over-recovered \$122,660. These amounts are  
3 substantiated on Schedule CT-3, page 2 of 3, Energy  
4 Conservation Adjustment.

5 Q. How do these amounts compare with the estimated true-up  
6 amounts which were allowed by the Commission during the  
7 February 1999 hearing?

8 A. We had estimated that we would over-recover \$78,282 in  
9 Marianna. In Fernandina Beach we had estimated an over-  
10 recovery of \$106,572 as of December 31, 1998.

11 Q. Have you prepared any exhibits at this time?

12 A. We have prepared and pre-filed Schedules CT-1, CT-2,  
13 CT-3, CT-4, CT-5 and CT-6 (Composite Exhibit MAP-2).

14 Q. Does this conclude your testimony?

15 A. Yes.

16

17 Disk Conservation 11-97

18 Peacocktest.499

19

20

COMPANY: FLORIDA PUBLIC UTILITIES COMPANY - MARIANNA

SCHEDULE CT-1

CONSERVATION ADJUSTMENT TRUE-UP

PAGE 1 OF 1

FOR MONTHS      April-98    THROUGH    December-98

1.	ADJUSTED END OF PERIOD TOTAL NET TRUE-UP		
2.	FOR MONTHS      April-98      THROUGH    December-98		
3.	END OF PERIOD NET TRUE-UP		
4.	PRINCIPAL	<u>(84,724)</u>	
5.	INTEREST	<u>(4,272)</u>	<u>(88,996)</u>
6.	LESS PROJECTED TRUE-UP		
7.	November-99      (DATE) HEARINGS		
8.	PRINCIPAL	<u>(74,083)</u>	
9.	INTEREST	<u>(4,199)</u>	<u>(78,282)</u>
10.	ADJUSTED END OF PERIOD TOTAL TRUE-UP		<u><u>(10,714)</u></u>

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(MAP-2)  
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ANALYSIS OF ENERGY CONSERVATION PROGRAM COSTS  
ACTUAL VS PROJECTED

		FOR MONTHS	April-98	THROUGH	December-98	
			<u>ACTUAL</u>		<u>PROJECTED*</u>	<u>DIFFERENCE</u>
1.	LABOR/PAYROLL		38,361		40,705	(2,344)
2.	ADVERTISING		22,187		20,518	1,669
3.	LEGAL		317		1,317	(1,000)
4.	OUTSIDE SERVICES/CONTRACT		20,236		22,836	(2,600)
5.	VEHICLE COST		6,937		7,933	(996)
6.	MATERIAL & SUPPLIES		14,176		15,716	(1,540)
7.	TRAVEL		921		2,968	(2,047)
8.	GENERAL & ADMIN		7,666		7,688	(22)
9.	INCENTIVES		275		275	0
10.	OTHER		2,010		4,097	(2,087)
11.	SUB-TOTAL		113,086		124,053	(10,967)
12.	PROGRAM REVENUES					
13.	TOTAL PROGRAM COSTS		113,086		124,053	(10,967)
14.	LESS: PRIOR PERIOD TRUE-UP		112,506		112,506	0
15.	AMOUNTS INCLUDED IN RATE BASE					
16.	CONSERVATION ADJ REVENUE		85,304		85,630	(326)
17.	ROUNDING ADJUSTMENT					
18.	TRUE-UP BEFORE INTEREST		(84,724)		(74,083)	(10,641)
19.	ADD INTEREST PROVISION		(4,272)		(4,199)	(73)
20.	END OF PERIOD TRUE-UP		(88,996)		(78,282)	(10,714)

() REFLECTS OVERRECOVERY

\* 2 MONTHS ACTUAL AND 10 MONTHS PROJECTED

ACTUAL CONSERVATION PROGRAM COSTS PER PROGRAM

FOR MONTHS April-98 THROUGH December-98

PROGRAM NAME	LABOR & PAYROLL	ADVERTISING	LEGAL	OUTSIDE SERVICES	VEHICLE COST	MATERIALS & SUPPLIES	TRAVEL	GENERAL & ADMIN.	INCENTIVES	OTHER	SUB TOTAL	PROGRAM REVENUES	TOTAL
1. In Concert with the Environment	1,639	0	0	11,739	0	0	0	53	275	0	13,706		13,706
2. Direct Leakage Repair	2,538	1,233	0	0	0	3,013	0	0	0	0	6,784		6,784
3. Residential Geothermal Heat Pump	724	518	0	0	0	0	0	0	0	0	1,242		1,242
4. Residential Energy Audits	5,846	6,205	0	0	0	3,169	0	410	0	0	15,630		15,630
5. Low Income Customer Energy Audits	1,241	500	0	0	0	1,415	37	0	0	0	3,193		3,193
6. FPU Express	2,306	4,386	0	0	0	1,706	0	10	0	0	8,408		8,408
7. Enhanced Good Cents Home	4,635	6,405	0	4,728	0	1,596	316	292	0	731	18,703		18,703
8. Commercial/Industrial Good Cents Building	949	1,257	0	0	0	1,559	108	0	0	0	3,873		3,873
9. Commercial/Industrial Energy Audits & Tech. Ass	986	1,683	0	3,769	0	329	19	22	0	0	6,808		6,808
10. Common	17,497	0	317	0	6,937	1,389	441	6,879	0	1,279	34,739		34,739
11.													
12.													
13.													
14.													
15.													
16.													
17.													
18.													
19.													
20.													
TOTAL ALL PROGRAMS	38,361	22,187	317	20,236	6,937	14,176	921	7,666	275	2,010	113,086	0	113,086

CONSERVATION COSTS PER PROGRAM--VARIANCE ACTUAL VS PROJECTED  
VARIANCE ACTUAL VS PROJECTED

FOR MONTHS April-98 THROUGH December-98

PROGRAM NAME	LABOR	ADVERTISING	LEGAL	OUTSIDE	VEHICLE	MATERIALS	TRAVEL	GENERAL	INCENTIVES	OTHER	SUB	PROGRAM	TOTAL
	& PAYROLL					& SUPPLIES		& ADMIN.					
1. In Concert with the Environment	370	0	0	0	(100)	(2,000)	0	0	0	0	(1,730)	0	(1,730)
2. Direct Leakage Repair	38	97	0	(300)	(200)	(301)	0	(200)	0	(200)	(1,066)	0	(1,066)
3. Residential Geothermal Heat Pump	(19)	(200)	0	(200)	(200)	(300)	(100)	(200)	0	(200)	(1,419)	0	(1,419)
4. Residential Energy Audits	253	(615)	0	0	(200)	325	(700)	(200)	0	(200)	(1,337)	0	(1,337)
5. Low Income Customer Energy Audits	237	(300)	0	(200)	(200)	320	37	(200)	0	(300)	(606)	0	(606)
6. FPU Express	253	1,398	0	(300)	(200)	320	0	(100)	0	(300)	1,071	0	1,071
7. Enhanced Good Cents Home	350	663	0	(500)	(200)	14	(800)	(158)	0	(300)	(931)	0	(931)
8. Commercial/Industrial Good Cents Building	(147)	566	0	(300)	(200)	320	(283)	(200)	0	(300)	(544)	0	(544)
9. Commercial/Industrial Energy Audits & Tech. As	(490)	60	0	(800)	(200)	(299)	(300)	(201)	0	(300)	(2,530)	0	(2,530)
10. Common	(3,189)	0	(1,000)	0	704	61	99	1,437	0	13	(1,875)	0	(1,875)
11.													
12.													
13.													
14.													
15.													
16.													
17.													
18.													
19.													
20.													
TOTAL ALL PROGRAMS	(2,344)	1,669	(1,000)	(2,600)	(996)	(1,540)	(2,047)	(22)	0	(2,087)	(10,967)	0	(10,967)

ENERGY CONSERVATION ADJUSTMENT CALCULATION OF TRUE-UP AND INTEREST PROVISION  
SUMMARY OF EXPENSES BY PROGRAM BY MONTH

FOR MONTHS April-98 THROUGH December-98

A. CONSERVATION EXPENSE BY PROGRAM		APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL		
1.	In Concert with the Environment	861	235	204	0	0	292	11,443	288	383	0	0	13,706
2.	Direct Leakage Repair	373	1,015	416	3,272	414	262	298	185	549	0	0	6,784
3.	Residential Geothermal Heat Pump	39	119	285	310	9	190	109	16	165	0	0	1,242
4.	Residential Energy Audits	1,492	1,491	2,777	1,243	1,857	1,196	2,311	1,684	1,579	0	0	15,630
5.	Low Income Customer Energy Audits	75	164	155	594	46	263	902	667	327	0	0	3,193
6.	FPU Express	540	976	772	458	547	624	1,221	1,480	1,791	0	0	8,409
7.	Enhanced Good Cents Home	1,050	1,299	1,002	5,353	1,817	1,859	2,654	1,225	2,444	0	0	18,703
8.	Commercial/Industrial Good Cents Building	93	46	189	100	109	247	1,233	937	919	0	0	3,873
9.	Commercial/Industrial Energy Audits & Tech. As	323	448	222	4,309	414	225	397	155	315	0	0	6,808
10.	Common	3,253	3,426	3,694	3,468	4,749	4,518	5,505	2,998	3,127	0	0	34,738
11.													
12.													
13.													
14.													
15.													
16.													
17.													
18.													
19.													
20.													
21.	TOTAL ALL PROGRAMS	8,099	9,219	9,716	19,107	9,962	9,676	26,073	9,635	11,599	0	0	113,086
22.	LESS AMOUNT INCLUDED IN RATE BASE												
23.	RECOVERABLE CONSERVATION EXPENSES	8,099	9,219	9,716	19,107	9,962	9,676	26,073	9,635	11,599	0	0	113,086

COMPANY: FLORIDA PUBLIC UTILITIES COMPANY - MARIANNA

SCHEDULE CT-3  
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CALCULATION OF TRUE-UP AND INTEREST PROVISION

FOR MONTHS April-98 THROUGH December-98

B. CONSERVATION REVENUES	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER			TOTAL	
1. RESIDENTIAL CONSERVATION												0	
2. CONSERVATION ADJ. REVENUES	7,002	7,796	10,901	12,538	10,818	10,894	9,804	7,618	7,933	0	0	0	85,304
3. TOTAL REVENUES	7,002	7,796	10,901	12,538	10,818	10,894	9,804	7,618	7,933	0	0	0	85,304
4. PRIOR PERIOD TRUE-UP ADJ. NOT APPLICABLE TO THIS PERIOD	9,376	9,376	9,376	9,376	9,376	9,376	9,376	9,376	9,376			0	84,384
5. CONSERVATION REVENUE APPLICABLE	16,378	17,172	20,277	21,914	20,194	20,270	19,180	16,994	17,309	0	0	0	169,688
6. CONSERVATION EXPENSES (FROM CT-3, PAGE 1, LINE 23)	8,099	9,219	9,716	19,107	9,962	9,676	26,073	9,635	11,599	0	0	0	113,086
7. TRUE-UP THIS PERIOD (LINE 5 - 6)	8,279	7,953	10,561	2,807	10,232	10,594	(6,893)	7,359	5,710	0	0	0	56,602
8. INTEREST PROVISION THIS PERIOD (FROM CT-3, PAGE 3, LINE 10)	517	511	516	509	494	486	437	410	392	0	0	0	4,272
9. TRUE-UP AND INTEREST PROVISION BEGINNING OF MONTH	112,506	111,926	111,014	112,715	106,655	108,005	109,709	93,877	92,270		0	0	112,506
9A. DEFERRED TRUE-UP BEGINNING OF PERIOD													
10. PRIOR TRUE-UP COLLECTED (REFUNDED)	(9,376)	(9,376)	(9,376)	(9,376)	(9,376)	(9,376)	(9,376)	(9,376)	(9,376)	0	0	0	(84,384)
11. TOTAL NET TRUE-UP (LINES 7+8+9+9A+10)	111,926	111,014	112,715	106,655	108,005	109,709	93,877	92,270	88,996	0	0	0	88,996

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CALCULATION OF TRUE-UP AND INTEREST PROVISION

FOR MONTHS April-98 THROUGH December-98

C. INTEREST PROVISION	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER				TOTAL
1. BEGINNING TRUE-UP (LINE B-9)	112,506	111,926	111,014	112,715	106,655	108,005	109,709	93,877	92,270	0	0	0	112,506
2. ENDING TRUE-UP BEFORE INTEREST (LINES B7+B9+B9A+B10)	111,409	110,503	112,199	106,146	107,511	109,223	93,440	91,860	88,604	0	0	0	84,724
3. TOTAL BEG. AND ENDING TRUE-UP	223,915	222,428	223,212	218,860	214,165	217,227	203,148	185,736	180,873	0	0	0	197,230
4. AVERAGE TRUE-UP (LINE C-3 X 50%)	111,957	111,214	111,606	109,430	107,083	108,614	101,574	92,868	90,437	0	0	0	98,615
5. INTEREST RATE - FIRST DAY OF REPORTING BUSINESS MONTH	5.55%	5.53%	5.50%	5.60%	5.56%	5.52%	5.22%	5.10%	5.50%	0.00%	0.00%	0.00%	
6. INTEREST RATE - FIRST DAY OF SUBSEQUENT BUSINESS MONTH	5.53%	5.50%	5.60%	5.56%	5.52%	5.22%	5.10%	5.50%	4.90%	0.00%	0.00%	0.00%	
7. TOTAL (LINE C-5 + C-6)	11.08%	11.03%	11.10%	11.16%	11.08%	10.74%	10.32%	10.60%	10.40%	0.00%	0.00%	0.00%	
8. AVG. INTEREST RATE (C-7 X 50%)	5.54%	5.52%	5.55%	5.58%	5.54%	5.37%	5.16%	5.30%	5.20%	0.00%	0.00%	0.00%	
9. MONTHLY AVERAGE INTEREST RATE	0.462%	0.460%	0.463%	0.465%	0.462%	0.448%	0.430%	0.442%	0.433%	0.000%	0.000%	0.000%	
10. INTEREST PROVISION (LINE C-4 X C-9)	517	511	516	509	494	486	437	410	392	0	0	0	4,272

COMPANY: FLORIDA PUBLIC UTILITIES COMPANY - MARIANNA  
 SCHEDULE OF CAPITAL INVESTMENT, DEPRECIATION & RETURN

SCHEDULE CT-4  
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FOR MONTHS April-98 THROUGH December-98

PROGRAM NAME:	BEGINNING OF PERIOD	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL
1. INVESTMENT											
2. DEPRECIATION BASE											
3. DEPRECIATION EXPENSE											
4. CUMULATIVE INVESTMENT											
5. LESS ACCUMULATED DEPRECIATION											
6. NET INVESTMENT											
7. AVERAGE INVESTMENT											
8. RETURN ON AVERAGE INVESTMENT											
9. RETURN REQUIREMENTS											
10. TOTAL DEPRECIATION AND RETURN											NONE

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SCHEDULE CT-5  
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RECONCILIATION AND EXPLANATION OF  
DIFFERENCES BETWEEN FILING AND PSC AUDIT

FOR MONTHS April-98 THROUGH December-98

AUDIT EXCEPTION: TO OUR KNOWLEDGE, NONE EXIST

COMPANY RESPONSE:

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1. IN CONCERT WITH THE ENVIRONMENT
2. DUCT LEAKAGE REPAIR
3. RESIDENTIAL GEOTHERMAL HEAT PUMP
4. RESIDENTIAL ENERGY AUDITS
5. LOW INCOME CUSTOMER ENERGY AUDITS
6. FU EXPRESS LOAN
7. ENHANCED GOOD CENTS HOME
8. COMMERCIAL/INDUSTRIAL GOOD CENTS BUILDING
9. COMMERCIAL/INDUSTRIAL ENERGY AUDITS AND  
TECHNICAL ASSISTANCE

**PROGRAM TITLE :** In Concert With the Environment

**PROGRAM DESCRIPTION :** In Concert With the Environment® is an environmental and energy awareness program that is being implemented in the 8th and 9th grade science classes in Florida Public Utilities Company's service area. The program shows students how everyday energy use impacts the environment and how using energy wisely increases environmental quality. In Concert With the Environment® is brought to students who are already making decisions which impact our country's energy supply and the environment. Wise energy use today can best be achieved by linking environmental benefits to wise energy-use activities and by educating both present and future consumers on how to live "in concert with the environment".

The "In Concert" program was designed for teachers and students from the ground up. "In Concert" comes complete with suggestions for implementation and evaluation, with quality materials designed to accentuate distinctive teaching styles. The program is flexible enough to be used as a stand-alone learning unit, or it can be integrated into existing lessons.

**PROGRAM ACCOMPLISHMENTS :** The program goal for the current reporting period is 75 participants. As of the end of this reporting period we have a total of 171 participants for the Marianna Division. The program itself will continue during the current school year for 9th grade students in schools within our service area, so we expect participant numbers to be even larger. The schools which have the opportunity to take part are the three county school systems located in Calhoun, Liberty, and Jackson counties (Marianna Division).

**PROGRAM FISCAL EXPENDITURES :** The expenditures April 1, 1998 through December 31, 1998 were \$13,706.

**PROGRAM PROGRESS SUMMARY :** This program was instituted for the first time during the 1997 school year with 557 students participating thus far for both divisions. We expect to exceed Program To Date Goals by the end of 1999.

**PROGRAM TITLE :** Duct Leakage Repair

**PROGRAM DESCRIPTION :** The objective of the Duct Leakage Repair Program is to provide FPUC's residential customers a means to identify house air duct leakage and recommend repairs that can reduce customer energy usage and demand.

FPUC will identify program participants through the Residential Energy Audit Program as well as through promotional activities. Blower Door testing required to identify and quantify the duct leakage will be performed by a contractor. After identification of the leakage sites and quantities, the customer will be given a written summary of the test findings and the potential savings, along with a list of approved repair contractors. Testing will be done on new construction duct systems to ensure maximum efficiency and comfort in these new homes also. This testing will be available to the Builder, HVAC contractor, or homeowner. FPUC will utilize duct testing and expertise for the purpose of educating Builders and HVAC contractors by identifying problem areas and improvement methodologies or techniques.

Additionally, FPUC will offer two approved continuing education courses for building contractors licensed by the Florida Construction Industry Licensing Board (CILB). The two courses are: "Duct Leakage in Homes: Consequences, Control, and Code Requirements" and "Repairing Duct Leakage".

**PROGRAM ACCOMPLISHMENTS :** The program goal for this reporting period is 11 participants. As of the end of this reporting period we have had a total of 16 participants in the Marianna Division service territory.

**PROGRAM FISCAL EXPENDITURES :** The expenditures April 1, 1998 through December 31, 1998 were \$6,784.

**PROGRAM PROGRESS SUMMARY :** In order to ensure that we continue to exceed our goals FPUC will be sponsoring continuing education courses for building and HVAC contractors which will provide training in the areas of duct leakage identification and repair solutions. Contractors will then be in a better position to provide quality duct repair/installation services to FPUC customers. This training will be offered to area contractors in both service areas. The Marianna Division will be cosponsoring this training with Gulf Power and West Florida Electric Cooperative. As with the Enhanced Good Cents Program we are planning to offer these training seminars in cooperation with other utilities in order to allow us to offer these courses to local contractors at a much lower cost to us.

**PROGRAM TITLE :** Residential Geothermal Heat Pump

**PROGRAM DESCRIPTION :** The objective of the Residential Geothermal Heat Pump Program is to reduce the demand and energy requirements of new and existing residential customers through the promotion and installation of advanced and emerging geothermal systems. Geothermal heat pumps also provide significant benefits to participating customers in the form of reduced operating costs and increased comfort levels, and are superior to other available heating and cooling technologies with respect to source efficiency and environmental impacts. FPUC's proposed Geothermal Heat Pump program is designed to overcome existing market barriers, specifically, lack of consumer awareness, knowledge, and acceptance of this technology.

This program will promote efficiency levels well above current market conditions, specifically those units with an Energy Efficiency Ratio (EER) of 13.0 or higher. The Department of Energy (DOE) is touting geothermal technology as the most energy-efficient and environmentally clean space-conditioning system available today. Additionally, a recent DOE study indicates that geothermal systems have the lowest life-cycle cost of any HVAC system today.

**PROGRAM ACCOMPLISHMENTS :** At this time we have one geothermal installation in the process, which should be completed within the next reporting period. Many customers are beginning to learn more about this technology and we are confident that we will see a greater number of geothermal installations in the future.

**PROGRAM FISCAL EXPENDITURES :** The expenditures April 1, 1998 through December 31, 1998 were \$1,242.

**PROGRAM PROGRESS SUMMARY :** Even though there is not a particular goal for this program we feel confident that by our efforts to promote this technology we will see a number of geothermal installations in our service territory in the future. We will continue to educate customers and strive to develop a network of installers in order to better promote this highly energy efficient heating and cooling source.

**PROGRAM TITLE :** Residential Energy Audits

**PROGRAM DESCRIPTION :** The objective of the Residential Energy Audit Program is to provide FPUC's residential customers with energy conservation advice that will encourage the implementation of efficiency measures resulting in energy savings for the customer. FPUC views this program as a vehicle to promote the installation of cost-effective conservation features. During the audit process, the customer is provided with specific whole-house recommendations. Through follow-up audit work, FPUC monitors and tracks the implementation of the measures.

The "Appliance Efficiency Education" DSM program from JEA's DSM Plan will be incorporated into these residential energy audits. The customer will be educated on the expense of operating a second refrigerator or freezer and on the value of a high efficiency pool pump. The resulting increase in operating efficiencies will provide for a reduction in weather-sensitive peak demand, as well as a reduction in energy consumption.

**PROGRAM ACCOMPLISHMENTS :** The goal for this program for this reporting period is 106 participants. As of the end of this reporting period 125 audits have been conducted.

**PROGRAM FISCAL EXPENDITURES :** Expenditures beginning April 1, 1998 through December 31, 1998 were \$15,630.

**PROGRAM PROGRESS SUMMARY:** The Program to Date Goal for both divisions is 819 participants. At the end of this reporting period the Program to Date Actuals for both divisions is 1,280. We feel confident that by our efforts to promote this program through newspaper, radio and cable TV that we will continue to exceed our goal participants in this program in the future.



**PROGRAM TITLE :** Low Income Customer Energy Audits

**PROGRAM DESCRIPTION :** FPUC has provided low income customers benefits through its energy conservation programs for many years. Although programs are offered to customers without discrimination, the company recognizes that a customer may be less likely to participate in a particular program due to various circumstances, including lack of disposable income. FPUC does not directly identify low income participants, but base on experience and observations, it is apparent that low income customers are participating at levels similar to the overall residential population.

Every FPUC customer is eligible for an FPUC residential energy audit, but the audit recommendations usually require the customer to spend money replacing or adding energy conservation measures. Low income persons may not have the discretionary income to make these changes. In an effort to further assist FPUC's low income customers, FPUC will work with a local weatherization agency to provide weatherization energy audits for low income customers. FPUC will pay for these weatherization energy audits for any FPUC customer through the state weatherization program. The estimated cost per audit is \$50.

**PROGRAM ACCOMPLISHMENTS:** At the reporting time there has been no low-income customer audits completed. The Marianna Division conducted 83 low-income audits during the beginning of the current year.

**PROGRAM FISCAL EXPENDITURES :** Expenditures beginning April 1, 1998 through December 31, 1998 were \$3,193.

**PROGRAM PROGRESS SUMMARY:** The Program to Date Goal for both divisions is 105 participants . At the end of this reporting period the Program to Date Actuals for both divisions is 211. The Marianna Division is currently working with low-income agencies to assist them with energy audits for their home owners. We feel this alliance will assist us in continued success in exceeding our goals.

**PROGRAM TITLE : FPUC Express Loan Program**

**PROGRAM DESCRIPTION :** The objective of the FPUC Express Loan Program is to provide FPUC's residential customers a vehicle to encourage installation of energy conservation features in their homes. This below-market interest rate loan program provides financing from participating banks in FPUC's service area for up to \$5,000 for a period of 5 years (\$7,500 and 7 years if a closed loop heat pump is installed) to customers that choose to install energy conservation features in their existing homes.

The program provides FPUC a financing option to offer customers who wish to install conservation features in their homes. The program is designed to work in conjunction with FPUC's approved Residential Energy Audit Program. During the audit process, the customer is provided with specific whole-house recommendations. An FPUC representative will submit a completed loan application to a participating bank once the customer decides to install the conservation features. Along with the application, the FPUC representative will also provide the bank with a copy of the energy audit and a list of the specific energy conservation features recommended. After the application has been approved, the customer will contact a licensed contractor of their choice to install the recommended conservation features. After the work is completed, an inspection is performed by FPUC to ensure all energy conservation features covered by the loan are installed. Confirmation of the installed features is provided to the participating bank. The increased operating efficiencies of the installed features provide a reduction in weather sensitive peak demand as well as a reduction in overall energy consumption.

**PROGRAM ACCOMPLISHMENTS:** This year's goal is 8 program participants. To date, we have completed 13 FPUC Express Loans. Program participation is expected to increase as contractors, realtors and customers become more aware of the availability of the program.

**PROGRAM FISCAL EXPENDITURES :** Expenditures beginning April 1, 1998 through December 31, 1998 were \$8,408.

**PROGRAM PROGRESS SUMMARY :** We feel this program will be extremely successful due to increased advertising and our new promotional efforts on cable TV. During Residential Audits we will continue to inform customers of the advantages of this program. We will continue to develop close relationships with area realtors and contractors by providing them with program materials that will enhance their efforts to inform customers of this program.

**PROGRAM TITLE :** Enhanced Good Cents Home Program

**PROGRAM DESCRIPTION :** The objective of the Enhanced Good Cents Home Program is to provide Florida Public Utilities Company's residential customers guidance concerning energy efficiency in new construction. The program promotes energy efficient home construction techniques by evaluating components in the categories of design and construction practices. These categories include: wall insulation, doors, windows, perimeter/floor insulation, moisture/infiltration barrier, attic/ceiling insulation, attic ventilation system, centsable duct system, centsable water heating system, and HVAC system.

The program will result in reductions in energy usage and peak demand. FPUC will identify potential program participants through builder/developer relationships as well as through promotional activities. Additionally, FPUC will provide education and training to building contractors and building inspectors to encourage energy conservation. Two classes will be provided, both of which are approved continuing education courses for building contractors licensed by the Florida Construction Industry Licensing Board (CILB). The two classes are: "Constructing an Energy Efficient Home" and "Load and Duct Sizing Calculations: Computer Solutions".

**PROGRAM ACCOMPLISHMENTS :** A total of 15 Enhanced Good Cents Homes have been built at the end of this reporting period with 14 more qualified homes currently under construction.

**PROGRAM FISCAL EXPENDITURES :** Expenditures beginning April 1, 1998 through December 31, 1998 were \$18,703.

**PROGRAM PROGRESS SUMMARY :** The program goal through for this reporting period is thirty-two participants. We are considerably below our goal at this time but we are making progress. We've enhanced our efforts in promoting contractor participation and customer benefits. Information presentations have been made to educate area builders, realtors, and suppliers. Through our increased efforts we have seen our participation numbers rise over the past year. We will continue to build on our success with even greater creativity and better marketing efforts in order to reach our goal during the current year.

**PROGRAM TITLE :** Commercial/Industrial Good Cents Buildings

**PROGRAM DESCRIPTION :** The commercial/industrial market is comprised of a wide range of diverse businesses with variable size and operational characteristics. The success of the Commercial/Industrial Good Cents Building program lies in its ability to address this diversity by focusing on the mutual characteristics of commercial buildings. The most common critical areas in commercial buildings that affect summer peak demand are the thermal efficiency of the building and HVAC equipment efficiency. The Commercial/Industrial Good Cents Building program provides requirements for these area that, if adhered to, will help reduce peak demand and energy consumption.

Promotion of the Commercial/Industrial Good Cents Building program will feature a positive relationship with trade allies, the public, and local commercial/industrial customers. The program's design is sufficiently flexible to allow an architect or designer to use initiative and ingenuity to achieve results that are meaningful to both the customer and FPUC.

To provide an accurate quantitative analysis of the demand and energy savings due to the Commercial/Industrial Good Cents Building program, the Good Cents standards for our average commercial building are compared to the Florida Model Energy Code. The features used to prepare the customer's analysis include: wall and ceiling R-values; glass area; description of glass; and equipment used in determining the demand and energy differences for the two types of structures. The AXCESS - Energy Analysis Computer Program (AXCESS) is used in calculating these demand and energy differences.

**PROGRAM ACCOMPLISHMENTS :** To date, we have had one Good Cents Building qualification in the Marianna Division service territory with three more under construction.

**PROGRAM FISCAL EXPENDITURES :** Expenditures beginning April 1, 1998 through December 31, 1998 were \$3,873.

**PROGRAM PROGRESS SUMMARY :** The goal for this current reporting period is one Good Cents Buildings. The Program to Date Goal for both divisions is 11, and the Program to Date Actual total of Good Cents Building qualifications for both divisions is 21. We feel that we will continue our success with this program as we further develop relations with architects and contractors to gain knowledge of possible projects. We also plan to subscribe to the Dodge Report to learn about projects more in advance. We have laid the foundation of customer trust in this area through our Commercial/Industrial Audit and Technical Assistance Program and with these changes we feel we will continue to exceed program goal.

**PROGRAM TITLE :** Commercial/Industrial Energy Audits and Technical Assistance

**PROGRAM DESCRIPTION :** FPUC provides auditing services to the commercial and industrial classes to assist in the evaluation of specific energy requirements of a given structure.

FPUC's representative will be provided a prospective customer for an audit through a phone call, advertising, a complaint, or referral. In this initial contact the representative determines needs, sets an appointment, and begins to gather some basic data such as the address, account number, business type, and past energy records. At the time of the audit, the representative discusses the audit and submits an outline of the procedure to the customer. During the discussion, the representative also acquires some customer data as it relates to the characteristics of the operation, time of operation, occupancy, and duration of the occupancy. In the audit's visual inspections, the representative observes overall layout, gathers equipment data, statistics, observes housekeeping and maintenance, checks various energy sources, and checks waste heat sources. The representative also makes appropriate measurements of lighting, ambient air temperatures, water temperatures, and air quantities.

After the visual inspection, the representative will return to the customer to review the total energy consumption and billing of the structure, and make general suggestions for improved efficiency that will have little or no cost associated with them. The representative will also identify major items for further study in which the customer will have the option of making capital expenditures.

**PROGRAM PROJECTION :** Commercial/Industrial Audits have been completed for eighteen customers to date. The DSM plan goal is nine participants for this particular program.

**PROGRAM FISCAL EXPENDITURES :** Expenditures beginning April 1, 1998 through December 31, 1998 were \$6,808.

**PROGRAM PROGRESS SUMMARY :** The Program to Date Goal for both divisions is 63 and the Program to Date Actual participation for both divisions is 98. This program has exceeded goal and we are optimistic that our commercial/industrial customers will involve us to a greater extent in future projects based upon the work we are currently doing in this area.

COMPANY: FLORIDA PUBLIC UTILITIES COMPANY - FERNANDINA

SCHEDULE CT-1

CONSERVATION ADJUSTMENT TRUE-UP

PAGE 1 OF 1

FOR MONTHS      April-98    THROUGH      December-98

1.	ADJUSTED END OF PERIOD TOTAL NET TRUE-UP		
2.	FOR MONTHS      April-98      THROUGH      December-98		
3.	END OF PERIOD NET TRUE-UP		
4.	PRINCIPAL	<u>(117,268)</u>	
5.	INTEREST	<u>(5,392)</u>	<u>(122,660)</u>
6.	LESS PROJECTED TRUE-UP		
7.	November-98      (DATE) HEARINGS		
8.	PRINCIPAL	<u>(101,275)</u>	
9.	INTEREST	<u>(5,297)</u>	<u>(106,572)</u>
10.	ADJUSTED END OF PERIOD TOTAL TRUE-UP		<u><u>(16,088)</u></u>

EXHIBIT NO. \_\_\_\_\_  
DOCKET NO. 990002-EG  
FLORIDA PUBLIC UTILITIES COMPANY  
(MAP-2)  
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ANALYSIS OF ENERGY CONSERVATION PROGRAM COSTS  
ACTUAL VS PROJECTED

		FOR MONTHS	April-98	THROUGH	December-98	
			<u>ACTUAL</u>		<u>PROJECTED*</u>	<u>DIFFERENCE</u>
1.	LABOR/PAYROLL		38,656		40,588	(1,932)
2.	ADVERTISING		11,979		12,270	(291)
3.	LEGAL		317		1,317	(1,000)
4.	OUTSIDE SERVICES/CONTRACT		19,960		23,460	(3,500)
5.	VEHICLE COST		4,884		5,640	(756)
6.	MATERIAL & SUPPLIES		11,193		13,015	(1,822)
7.	TRAVEL		2,668		2,915	(247)
8.	GENERAL & ADMIN		7,553		7,676	(123)
9.	INCENTIVES		0		359	(359)
10.	OTHER		1,614		4,118	(2,504)
11.	SUB-TOTAL		98,824		111,358	(12,534)
12.	PROGRAM REVENUES					
13.	TOTAL PROGRAM COSTS		98,824		111,358	(12,534)
14.	LESS: PRIOR PERIOD TRUE-UP		137,457		137,457	0
15.	AMOUNTS INCLUDED IN RATE BASE					
16.	CONSERVATION ADJ REVENU		78,635		75,176	3,459
17.	ROUNDING ADJUSTMENT					
18.	TRUE-UP BEFORE INTEREST		(117,268)		(101,275)	(15,993)
19.	ADD INTEREST PROVISION		(5,392)		(5,297)	(95)
20.	END OF PERIOD TRUE-UP		(122,660)		(106,572)	(16,088)

() REFLECTS OVERRECOVERY

\* 7 MONTHS ACTUAL AND 2 MONTHS PROJECTED

ACTUAL CONSERVATION PROGRAM COSTS PER PROGRAM

FOR MONTHS April-98 THROUGH December-98

PROGRAM NAME	LABOR & PAYROLL		LEGAL	OUTSIDE SERVICES	VEHICLE COST	MATERIALS & SUPPLIES		GENERAL & ADMIN.			SUB TOTAL	PROGRAM REVENUES	TOTAL
		ADVERTISING				TRAVEL	INCENTIVES	OTHER					
1. In Concert with the Environment	927	0	0	11,388	0	0	0	25	0	0	12,340	0	12,340
2. Direct Leakage Repair	2,106	102	0	0	0	3,014	0	0	0	16	5,238	0	5,238
3. Residential Geothermal Heat Pump	972	572	0	0	0	0	0	0	0	0	1,544	0	1,544
4. Residential Energy Audits	5,276	4,015	0	32	0	2,219	74	104	0	21	11,741	0	11,741
5. Low Income Customer Energy Audits	499	0	0	0	0	1,415	0	0	0	0	1,914	0	1,914
6. FPU Express	1,966	2,839	0	0	0	1,795	0	62	0	0	6,662	0	6,662
7. Enhanced Good Cents Home	5,108	3,766	0	0	0	4	1,288	472	0	746	11,384	0	11,384
8. Commercial/Industrial Good Cents Building	1,108	685	0	0	0	1,415	91	18	0	0	3,317	0	3,317
9. Commercial/Industrial Energy Audits & Tech. Ass	5,186	0	0	8,540	0	328	1,200	140	0	98	15,492	0	15,492
10. Common	15,508	0	317	0	4,884	1,003	15	6,732	0	733	29,192	0	29,192
11.													
12.													
13.													
14.													
15.													
16.													
17.													
18.													
19.													
20.													
TOTAL ALL PROGRAMS	38,656	11,979	317	19,960	4,884	11,193	2,668	7,553	0	1,614	98,824	0	98,824



COMPANY: FLORIDA PUBLIC UTILITIES COMPANY - FERNANDINA

SCHEDULE CT-2  
PAGE 3 OF 3

CONSERVATION COSTS PER PROGRAM--VARIANCE ACTUAL VS PROJECTED  
VARIANCE ACTUAL VS PROJECTED

FOR MONTHS April-98 THROUGH December-98

PROGRAM NAME	LABOR	ADVERTISING	LEGAL	OUTSIDE	VEHICLE	MATERIALS	TRAVEL	GENERAL	INCENTIVES	OTHER	SUB	PROGRAM	TOTAL
	&					&		SUPPLIES					
	PAYROLL			SERVICES	COST						TOTAL		TOTAL
1. In Concert with the Environment	(42)	0	0	0	(100)	(2,000)	0	(100)	0	0	(2,242)	0	(2,242)
2. Direct Leakage Repair	60	(200)	0	(300)	(100)	(300)	(200)	(100)	0	(184)	(1,324)	0	(1,324)
3. Residential Geothermal Heat Pump	(40)	(199)	0	(300)	(100)	(300)	0	(100)	0	(400)	(1,439)	0	(1,439)
4. Residential Energy Audits	6	(632)	0	0	(200)	319	(200)	(312)	(21)	(379)	(1,419)	0	(1,419)
5. Low Income Customer Energy Audits	(188)	(300)	0	(200)	(100)	320	0	(100)	0	(500)	(1,068)	0	(1,068)
6. FPU Express	4	253	0	(200)	(100)	319	0	(163)	0	(500)	(387)	0	(387)
7. Enhanced Good Cents Home	(382)	702	0	(500)	(200)	(200)	(301)	(100)	0	(372)	(1,353)	0	(1,353)
8. Commercial/Industrial Good Cents Building	187	385	0	(700)	(100)	320	(300)	0	0	(500)	(708)	0	(708)
9. Commercial/Industrial Energy Audits & Tech. As	1,544	(300)	0	(1,300)	(200)	(300)	753	(475)	0	(402)	(680)	0	(680)
10. Common	(3,081)	0	(1,000)	0	444	0	1	1,327	(338)	733	(1,914)	0	(1,914)
11.													
12.													
13.													
14.													
15.													
16.													
17.													
18.													
19.													
20.													
TOTAL ALL PROGRAMS	(1,932)	(291)	(1,000)	(3,500)	(756)	(1,822)	(247)	(123)	(359)	(2,504)	(12,534)	0	(12,534)

EXHIBIT NO. \_\_\_\_\_  
DOCKET NO. 990002-EG  
FLORIDA PUBLIC UTILITIES COMPANY  
(MAP-2)  
PAGE 23 OF 38

ENERGY CONSERVATION ADJUSTMENT CALCULATION OF TRUE-UP AND INTEREST PROVISION  
SUMMARY OF EXPENSES BY PROGRAM BY MONTH

FOR MONTHS April-98 THROUGH December-98

A. CONSERVATION EXPENSE BY PROGRAM		APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL		
1.	In Concert with the Environment	285	212	93	107	97	73	11,315	28	130	0	0	12,340
2.	Direct Leakage Repair	180	504	397	2,831	153	286	611	184	92	0	0	5,238
3.	Residential Geothermal Heat Pump	158	105	499	232	112	176	102	88	72	0	0	1,544
4.	Residential Energy Audits	630	1,425	1,572	1,438	975	1,171	2,349	1,680	501	0	0	11,741
5.	Low Income Customer Energy Audits	9	51	54	59	97	132	780	647	85	0	0	1,914
6.	FPU Express	384	954	601	1,052	602	445	1,010	935	679	0	0	6,662
7.	Enhanced Good Cents Home	385	704	811	1,675	1,994	2,352	1,016	1,281	1,166	0	0	11,384
8.	Commercial/Industrial Good Cents Building	176	129	51	143	114	214	798	766	926	0	0	3,317
9.	Commercial/Industrial Energy Audits & Tech. As	1,038	414	274	9,818	265	328	436	817	2,102	0	0	15,492
10.	Common	2,745	2,940	3,442	3,791	3,399	3,263	3,528	4,167	1,917	0	0	29,192
11.													
12.													
13.													
14.													
15.													
16.													
17.													
18.													
19.													
20.													
21.	TOTAL ALL PROGRAMS	5,990	7,438	7,794	21,146	7,808	8,440	21,945	10,593	7,670	0	0	98,824
22.	LESS AMOUNT INCLUDED IN RATE BASE												
23.	RECOVERABLE CONSERVATION EXPENSES	5,990	7,438	7,794	21,146	7,808	8,440	21,945	10,593	7,670	0	0	98,824

COMPANY: FLORIDA PUBLIC UTILITIES COMPANY - FERNANDINA

SCHEDULE CT-3  
PAGE 2 OF 3

CALCULATION OF TRUE-UP AND INTEREST PROVISION

FOR MONTHS April-98 THROUGH December-98

B. CONSERVATION REVENUES	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER				TOTAL
1. RESIDENTIAL CONSERVATION													0
2. CONSERVATION ADJ. REVENUES	6,161	6,648	10,147	11,205	9,619	9,724	9,129	8,109	7,893	0	0	0	78,635
3. TOTAL REVENUES	6,161	6,648	10,147	11,205	9,619	9,724	9,129	8,109	7,893	0	0	0	78,635
4. PRIOR PERIOD TRUE-UP ADJ. NOT APPLICABLE TO THIS PERIOD	8,591	8,591	8,591	8,591	8,591	8,591	8,591	8,591	8,591	0	0	0	103,095
5. CONSERVATION REVENUE APPLICABLE	14,752	15,239	18,738	19,796	18,210	18,315	17,720	16,700	16,484	0	0	0	181,730
6. CONSERVATION EXPENSES (FROM CT-3, PAGE 1, LINE 23)	5,990	7,438	7,794	21,146	7,808	8,440	21,945	10,593	7,670	0	0	0	98,824
7. TRUE-UP THIS PERIOD (LINE 5 - 6)	8,762	7,801	10,944	(1,350)	10,402	9,875	(4,225)	6,107	8,814	0	0	0	82,906
8. INTEREST PROVISION THIS PERIOD (FROM CT-3, PAGE 3, LINE 10)	635	634	644	633	613	604	558	542	529	0	0	0	5,392
9. TRUE-UP AND INTEREST PROVISION BEGINNING OF MONTH	137,457	138,263	138,107	141,104	131,796	134,220	136,108	123,850	121,908	0	0	0	137,457
9A. DEFERRED TRUE-UP BEGINNING OF PERIOD													
10. PRIOR TRUE-UP COLLECTED (REFUNDED)	(8,591)	(8,591)	(8,591)	(8,591)	(8,591)	(8,591)	(8,591)	(8,591)	(8,591)	0	0	0	(103,095)
11. TOTAL NET TRUE-UP (LINES 7+8+9+9A+10)	138,263	138,107	141,104	131,796	134,220	136,108	123,850	121,908	122,660	0	0	0	122,660

EXHIBIT NO. \_\_\_\_\_  
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FLORIDA PUBLIC UTILITIES COMPANY  
(MAP-2)  
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CALCULATION OF TRUE-UP AND INTEREST PROVISION

FOR MONTHS April-98 THROUGH December-98

C.	INTEREST PROVISION	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER			TOTAL	
1.	BEGINNING TRUE-UP (LINE B-9)	137,457	138,263	138,107	141,104	131,796	134,220	136,108	123,850	121,908	0	0	0	137,457
2.	ENDING TRUE-UP BEFORE INTEREST (LINES B7+B9+B9A+B10)	137,628	137,473	140,460	131,163	133,607	135,504	123,292	121,366	122,131	0	0	0	117,268
3.	TOTAL BEG. AND ENDING TRUE-UP	275,085	275,737	278,568	272,268	265,404	269,725	259,401	245,217	244,040	0	0	0	254,725
4.	AVERAGE TRUE-UP (LINE C-3 X 50%)	137,543	137,868	139,284	136,134	132,702	134,862	129,700	122,608	122,020	0	0	0	127,363
5.	INTEREST RATE - FIRST DAY OF REPORTING BUSINESS MONTH	5.55%	5.53%	5.50%	5.60%	5.56%	5.52%	5.22%	5.10%	5.50%				
6.	INTEREST RATE - FIRST DAY OF SUBSEQUENT BUSINESS MONTH	5.53%	5.50%	5.60%	5.56%	5.52%	5.22%	5.10%	5.50%	4.90%				
7.	TOTAL (LINE C-5 + C-6)	11.08%	11.03%	11.10%	11.16%	11.08%	10.74%	10.32%	10.60%	10.40%	0.00%	0.00%	0.00%	
8.	AVG. INTEREST RATE (C-7 X 50%)	5.54%	5.52%	5.55%	5.58%	5.54%	5.37%	5.16%	5.30%	5.20%	0.00%	0.00%	0.00%	
9.	MONTHLY AVERAGE INTEREST RATE	0.462%	0.460%	0.463%	0.465%	0.462%	0.448%	0.430%	0.442%	0.433%	0.000%	0.000%	0.000%	
10.	INTEREST PROVISION (LINE C-4 X C-9)	635	634	644	633	613	604	558	542	529	0	0	0	5,392

COMPANY: FLORIDA PUBLIC UTILITIES COMPANY - FERNANDINA

SCHEDULE CT-4  
PAGE 1 OF 1

SCHEDULE OF CAPITAL INVESTMENT, DEPRECIATION & RETURN

FOR MONTHS April-98 THROUGH December-98

PROGRAM NAME:	BEGINNING													
	OF PERIOD	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	TOTAL
1. INVESTMENT														
2. DEPRECIATION BASE														
3. DEPRECIATION EXPENSE														
4. CUMULATIVE INVESTMENT														
5. LESS: ACCUMULATED DEPRECIATION														
6. NET INVESTMENT														
7. AVERAGE INVESTMENT														
8. RETURN ON AVERAGE INVESTMENT														
9. RETURN REQUIREMENTS														
10. TOTAL DEPRECIATION AND RETURN														NONE

EXHIBIT NO. \_\_\_\_\_  
DOCKET NO. 990002-EG  
FLORIDA PUBLIC UTILITIES COMPANY  
(MAP-2)  
PAGE 27 OF 38

COMPANY: FLORIDA PUBLIC UTILITIES COMPANY - FERNANDINA

SCHEDULE CT-5  
PAGE 1 OF 1

RECONCILIATION AND EXPLANATION OF  
DIFFERENCES BETWEEN FILING AND PSC AUDIT

FOR MONTHS April-98 THROUGH December-98

AUDIT EXCEPTION: TO OUR KNOWLEDGE, NONE EXIST

COMPANY RESPONSE:

EXHIBIT NO. \_\_\_\_\_  
DOCKET NO. 990002-EG  
FLORIDA PUBLIC UTILITIES COMPANY  
(MAP-2)  
PAGE 28 OF 38

1. IN CONCERT WITH THE ENVIRONMENT
2. DUCT LEAKAGE REPAIR
3. RESIDENTIAL GEOTHERMAL HEAT PUMP
4. RESIDENTIAL ENERGY AUDITS
5. LOW INCOME CUSTOMER ENERGY AUDITS
6. FU EXPRESS LOAN
7. ENHANCED GOOD CENTS HOME
8. COMMERCIAL/INDUSTRIAL GOOD CENTS BUILDING
9. COMMERCIAL/INDUSTRIAL ENERGY AUDITS AND  
TECHNICAL ASSISTANCE

**PROGRAM TITLE :** In Concert With the Environment

**PROGRAM DESCRIPTION :** In Concert With the Environment® is an environmental and energy awareness program that is being implemented in the 8th and 9th grade science classes in Florida Public Utilities Company's service area. The program will show students how everyday energy use impacts the environment and how using energy wisely increases environmental quality. In Concert With the Environment® is brought to students who are already making decisions which impact our country's energy supply and the environment. Wise energy use today can best be achieved by linking environmental benefits to wise energy-use activities and by educating both present and future consumers on how to live "in concert with the environment".

The "In Concert" program was designed for teachers and students from the ground up. "In Concert" comes complete with suggestions for implementation and evaluation, with quality materials designed to accentuate distinctive teaching styles. The program is flexible enough to be used as a stand-alone learning unit, or it can be integrated into existing lessons.

**PROGRAM ACCOMPLISHMENTS :** The offering of this program has been implemented in cooperation with area school board members, administrators, and teachers. The school which will participate in the Fernandina Beach service territory is Fernandina Beach High School. The goal for this particular program is 75 participants. Program participants numbered 44 for the period covered.

**PROGRAM FISCAL EXPENDITURES :** The expenditures April 1, 1998 through December 31, 1998 were \$12,340.

**PROGRAM PROGRESS SUMMARY :** Program accomplishments in this territory will fall short due to the small number of students. In the future we hope to offer "In Concert" to schools outside of our service territory in cooperation with other utilities and business partners.



**PROGRAM TITLE :** Duct Leakage Repair

**PROGRAM DESCRIPTION :** The objective of the Duct Leakage Repair Program is to provide FPUC's residential customers a means to identify house air duct leakage and recommend repairs that can reduce customer energy usage and demand.

FPUC will identify program participants through the Residential Energy Audit Program as well as through promotional activities. Blower Door testing required to identify and quantify the duct leakage will be performed by a contractor. After identification of the leakage sites and quantities, the customer will be given a written summary of the test findings and the potential savings, along with a list of approved repair contractors. Testing will be done on new construction duct systems to ensure maximum efficiency and comfort in these new homes also. This testing will be available to the Builder, HVAC contractor, or homeowner. FPUC will utilize duct testing and expertise for the purpose of educating Builders and HVAC contractors by identifying problem areas and improvement methodologies or techniques.

Additionally, FPUC will offer two approved continuing education courses for building contractors licensed by the Florida Construction Industry Licensing Board (CILB). The two courses are: "Duct Leakage in Homes: Consequences, Control, and Code Requirements" and "Repairing Duct Leakage".

**PROGRAM ACCOMPLISHMENTS :** The program goal for the current period is 14 participants. As of the end of this reporting period we have had a total of 125 participants in the Fernandina Beach service territory.

**PROGRAM FISCAL EXPENDITURES :** The expenditures April 1, 1998 through December 31, 1998 were \$5,238.

**PROGRAM PROGRESS SUMMARY :** While we do have a few area contractors who can provide this service, we will continue to sponsor continuing education courses for building and HVAC contractors which will provide training in the areas of duct leakage identification and repair solutions. More contractors will then be in a better position to provide quality duct repair/installation services to FPUC customers. The Fernandina Beach Division will be cosponsoring this training along with JEA and Clay Electric Cooperative. As with the Enhanced Good Cents Program we are offering these training seminars in cooperation with other utilities in order to allow us to offer these courses to local contractors at a much lower cost. With this training we feel confident that we continue to meet our PSC approved goals now and in the future.

**PROGRAM TITLE :** Residential Geothermal Heat Pump

**PROGRAM DESCRIPTION :** The objective of the Residential Geothermal Heat Pump Program is to reduce the demand and energy requirements of new and existing residential customers through the promotion and installation of advanced and emerging geothermal systems. Geothermal heat pumps also provide significant benefits to participating customers in the form of reduced operating costs and increased comfort levels, and are superior to other available heating and cooling technologies with respect to source efficiency and environmental impacts. FPUC's proposed Geothermal Heat Pump program is designed to overcome existing market barriers, specifically, lack of consumer awareness, knowledge, and acceptance of this technology.

This program will promote efficiency levels well above current market conditions, specifically those units with an Energy Efficiency Ratio (EER) of 13.0 or higher. The Department of Energy (DOE) is touting geothermal technology as the most energy-efficient and environmentally clean space-conditioning system available today. Additionally, a recent DOE study indicates that geothermal systems have the lowest life-cycle cost of any HVAC system today.

**PROGRAM ACCOMPLISHMENTS :** At this time we have had no geothermal installations completed in our service territory during this reporting period. However, customers are beginning to inquire concerning this technology.

**PROGRAM FISCAL EXPENDITURES :** The expenditures April 1, 1998 through December 31, 1998 were \$1,544.

**PROGRAM PROGRESS SUMMARY :** Even though there is no goal for this particular program, we feel confident that by our efforts to promote this technology we will see a number of geothermal installations in this service area during the next few years. We have contacted and been contacted by Representatives from Water Furnace International , the International Ground Source Heat Pump Association, the Geothermal Consortium and the U.S. Department of Energy concerning geothermal promotion, education, design assistance, etc. in this area of the country. We look forward to working closely with these contacts to develop a network of geothermal installers in this territory.

**PROGRAM TITLE :** Residential Energy Audits

**PROGRAM DESCRIPTION :** The objective of the Residential Energy Audit Program is to provide FPUC's residential customers with energy conservation advice that will encourage the implementation of efficiency measures resulting in energy savings for the customer. FPUC views this program as a vehicle to promote the installation of cost-effective conservation features. During the audit process, the customer is provided with specific whole-house recommendations. Through follow-up audit work, FPUC monitors and tracks the implementation of the measures.

The "Appliance Efficiency Education" DSM program from JEA's DSM Plan will be incorporated into these residential energy audits. The customer will be educated on the expense of operating a second refrigerator or freezer and on the value of a high efficiency pool pump. The resulting increase in operating efficiencies will provide for a reduction in weather-sensitive peak demand, as well as a reduction in energy consumption.

**PROGRAM ACCOMPLISHMENTS :** The goal for this program is 106 participants. Audits have been conducted for 280 residential customers during this reporting period.

**PROGRAM FISCAL EXPENDITURES :** Expenditures beginning April 1, 1998 through December 31, 1998 were \$11,741.

**PROGRAM PROGRESS SUMMARY:** This has been a very successful program to date. We feel confident that by our continuing efforts to promote this program through newspaper and cable TV advertisements that we will see increased participation in this program in the future.

**PROGRAM TITLE :** Low Income Customer Energy Audits

**PROGRAM DESCRIPTION :** FPUC has provided low income customers benefits through its energy conservation programs for many years. Although programs are offered to customers without discrimination, the company recognizes that a customer may be less likely to participate in a particular program due to various circumstances, including lack of disposable income. FPUC does not directly identify low income participants, but base on experience and observations, it is apparent that low income customers are participating at levels similar to the overall residential population.

Every FPUC customer is eligible for an FPUC residential energy audit, but the audit recommendations usually require the customer to spend money replacing or adding energy conservation measures. Low income persons may not have the discretionary income to make these changes. In an effort to further assist FPUC's low income customers, FPUC will work with a local weatherization agency to provide weatherization energy audits for low income customers. FPUC will pay for these weatherization energy audits for any FPUC customer through the state weatherization program. The estimated cost per audit is \$50.

**PROGRAM ACCOMPLISHMENTS:** The goal for the current reporting period is 15 participants. No low-income customer audits were completed during this period.

**PROGRAM FISCAL EXPENDITURES :** Expenditures beginning April 1, 1998 through December 31, 1998 were \$1,914.

**PROGRAM PROGRESS SUMMARY:** At this time the agencies that we deal with to provide these services are at a standstill. Whether this is due to a lack of funding or aggressiveness on their part we cannot determine. We have made the contacts we need to make and will keep in touch with these organizations in order to stay up to date on their progress and needs. Also, many low-income customers likely have been participating in the Residential Energy Audit program without our knowledge. FPUC does not attempt to identify low-income customers during the time of participation.

**PROGRAM TITLE :** FPUC Express Loan Program

**PROGRAM DESCRIPTION :** The objective of the FPUC Express Loan Program is to provide FPUC's residential customers a vehicle to encourage installation of energy conservation features in their homes. This below-market interest rate loan program provides financing from participating banks in FPUC's service area for up to \$5,000 for a period of 5 years (\$7,500 and 7 years if a closed loop heat pump is installed) to customers that choose to install energy conservation features in their existing homes.

The program provides FPUC a financing option to offer customers who wish to install conservation features in their homes. The program is designed to work in conjunction with FPUC's approved Residential Energy Audit Program. During the audit process, the customer is provided with specific whole-house recommendations. An FPUC representative will submit a completed loan application to a participating bank once the customer decides to install the conservation features. Along with the application, the FPUC representative will also provide the bank with a copy of the energy audit and a list of the specific energy conservation features recommended. After the application has been approved, the customer will contact a licensed contractor of their choice to install the recommended conservation features. After the work is completed, an inspection is performed by FPUC to ensure all energy conservation features covered by the loan are installed. Confirmation of the installed features is provided to the participating bank. The increased operating efficiencies of the installed features provide a reduction in weather sensitive peak demand as well as a reduction in overall energy consumption.

**PROGRAM ACCOMPLISHMENTS:** The current period's goal is eight program participants. To date 19 FPUC Express Loans have been completed. Program participation is expected to increase as contractors, realtors and customers become more aware of the availability of the program.

**PROGRAM FISCAL EXPENDITURES :** Expenditures beginning April 1, 1998 through December 31, 1998 were \$6,662.

**PROGRAM PROGRESS SUMMARY :** We feel this program will continue to be extremely successful due to continued advertising and promotional efforts and cooperation from area HVAC contractors. During Residential Audits we inform customers of the advantages of this program. We will continue to develop close relationships with area realtors and contractors by providing them with program materials that will enhance their efforts to inform customers of this program.

**PROGRAM TITLE :** Enhanced Good Cents Home Program

**PROGRAM DESCRIPTION :** The objective of the Enhanced Good Cents Home Program is to provide Florida Public Utilities Company's residential customers guidance concerning energy efficiency in new construction. The program promotes energy efficient home construction techniques by evaluating components in the categories of design and construction practices. These categories include: wall insulation, doors, windows, perimeter/floor insulation, moisture/infiltration barrier, attic/ceiling insulation, attic ventilation system, centsable duct system, centsable water heating system, and HVAC system.

The program will result in reductions in energy usage and peak demand. FPUC will identify potential program participants through builder/developer relationships as well as through promotional activities. Additionally, FPUC will provide education and training to building contractors and building inspectors to encourage energy conservation. Two classes will be provided, both of which are approved continuing education courses for building contractors licensed by the Florida Construction Industry Licensing Board (CILB). The two classes are: "Constructing an Energy Efficient Home" and "Load and Duct Sizing Calculations: Computer Solutions".

**PROGRAM ACCOMPLISHMENTS :** The goal for this program during the current reporting period was 32 Enhanced Good Cents Homes. A total of 22 Enhanced Good Cents Homes have been built to date with several more currently under construction.

**PROGRAM FISCAL EXPENDITURES :** Expenditures beginning April 1, 1998 through December 31, 1998 were \$11,384.

**PROGRAM PROGRESS SUMMARY :** The program goal is forty-two participants by the end of the current year. We are approximately 21 percent below our goal at this time but are making progress each year. During 1997 there were only a total of eight Enhanced Good Cents Homes built in the Fernandina Beach service territory. Through our increased efforts this number has risen to 33 in 1998. We will continue to build on our successes with even greater creativity and focused marketing efforts in order to reach our goals in the upcoming years.

**PROGRAM TITLE :** Commercial/Industrial Good Cents Buildings

**PROGRAM DESCRIPTION :** The commercial/industrial market is comprised of a wide range of diverse businesses with variable size and operational characteristics. The success of the Commercial/Industrial Good Cents Building program lies in its ability to address this diversity by focusing on the mutual characteristics of commercial buildings. The most common critical areas in commercial buildings that affect summer peak demand are the thermal efficiency of the building and HVAC equipment efficiency. The Commercial/Industrial Good Cents Building program provides requirements for these area that, if adhered to, will help reduce peak demand and energy consumption.

Promotion of the Commercial/Industrial Good Cents Building program will feature a positive relationship with trade allies, the public, and local commercial/industrial customers. The program's design is sufficiently flexible to allow an architect or designer to use initiative and ingenuity to achieve results that are meaningful to both the customer and FPUC.

To provide an accurate quantitative analysis of the demand and energy savings due to the Commercial/Industrial Good Cents Building program, the Good Cents standards for our average commercial building are compared to the Florida Model Energy Code. The features used to prepare the customer's analysis include: wall and ceiling R-values; glass area; description of glass; and equipment used in determining the demand and energy differences for the two types of structures. The AXCESS - Energy Analysis Computer Program (AXCESS) is used in calculating these demand and energy differences.

**PROGRAM ACCOMPLISHMENTS :** The program goal for this program is two. During the current reporting period there were fourteen Good Cents Commercial Building qualifications in the Fernandina Beach service territory.

**PROGRAM FISCAL EXPENDITURES :** Expenditures beginning April 1, 1998 through December 31, 1998 were \$3,317.

**PROGRAM PROGRESS SUMMARY :** The goal for this program is two Good Cents Buildings for the current year. By developing a plan of action to gain knowledge of possible projects before the design stage begins we feel that we will have greater success with this program. We have laid the foundation of customer trust in this area through our Commercial/Industrial Audit and Technical Assistance Program. We feel that we will continue to exceed this goal in the upcoming years.

**PROGRAM TITLE :** Commercial/Industrial Energy Audits and Technical Assistance

**PROGRAM DESCRIPTION :** FPUC provides auditing services to the commercial and industrial classes to assist in the evaluation of specific energy requirements of a given structure.

FPUC's representative will be provided a prospective customer for an audit through a phone call, advertising, a complaint, or referral. In this initial contact the representative determines needs, sets an appointment, and begins to gather some basic data such as the address, account number, business type, and past energy records. At the time of the audit, the representative discusses the audit and submits an outline of the procedure to the customer. During the discussion, the representative also acquires some customer data as it relates to the characteristics of the operation, time of operation, occupancy, and duration of the occupancy. In the audit's visual inspections, the representative observes overall layout, gathers equipment data, statistics, observes housekeeping and maintenance, checks various energy sources, and checks waste heat sources. The representative also makes appropriate measurements of lighting, ambient air temperatures, water temperatures, and air quantities.

After the visual inspection, the representative will return to the customer to review the total energy consumption and billing of the structure, and make general suggestions for improved efficiency that will have little or no cost associated with them. The representative will also identify major items for further study in which the customer will have the option of making capital expenditures.

**PROGRAM ACCOMPLISHMENTS :** Commercial/Industrial Audits have been completed for twenty customers during this reporting period.

**PROGRAM FISCAL EXPENDITURES :** Expenditures beginning April 1, 1998 through December 31, 1998 were \$15,492.

**PROGRAM PROGRESS SUMMARY :** The DSM plan goal is nine participants for this particular program. Program participation has been excellent with many commercial/industrial customers having participated thus far. This program has far exceeded its goals. Our commercial/industrial customers are beginning to involve us to a greater extent in large capital projects which involve energy-based decisions.