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STEEL
HECTOR
& DAVIS

Steel Hector & Davis LLP
215 South Monroe, Suite 601
Tallahassee, Florida 32301-1804
850.222.2300
850.222.8410 Fax
www.steelhector.com

December 29, 1999

Blanca S. Bayó, Director
Records and Reporting
Florida Public Service Commission
4075 Esplanade Way, Room 110
Tallahassee, Florida 32399-0850

Charles A. Guyton
850.222.3423

ORIGINAL
By Hand Delivery

Re: Approval of Demand Side Management Plan
of Florida Power and Light Company
Docket No. 991788-EG

Dear Ms. Bayó:

Enclosed for filing on behalf of Florida Power & Light Company ("FPL") in Docket No. 991788-EG are the original and fifteen (15) copies of the Petition For Approval Of Modifications To Florida Power & Light Company's Demand Side Management Plan, the Demand Side Management Plan of Florida Power & Light Company Plan Document, and the Demand Side Management Plan of Florida Power & Light Company Plan Appendix A.

Attached as Appendices A and B to FPL's petition are the new and revised rate schedules necessary to implement the modifications to FPL's DSM Plan. These rate schedules are for the General Service Load Management Program, the Commercial Industrial Demand Reduction Rider, and the Commercial Industrial Demand Reduction Rider Customer Request for Approval and the Commercial Industrial Demand Reduction Rider Agreement, and the following tariff sheets are being filed:

- Thirty-~~Fourth~~ Revised Sheet No. 8.010
- First Revised Sheet No. 8.109
- Original Sheet No. 8.680
- Original Sheet No. 8.681
- Original Sheet No. 8.682
- Original Sheet No. 8.683
- Original Sheet No. 8.684
- Original Sheet No. 8.685
- Thirty-Third Revised Sheet No. 9.010
- Original Sheet No. 9.494
- Original Sheet No. 9.495
- Original Sheet No. 9.496
- Original Sheet No. 9.497

Petition 15834-99
Plan 15835-99
 Plan App A 15836-99
 Pet App A 15837-99
 Pet App B 15838-99

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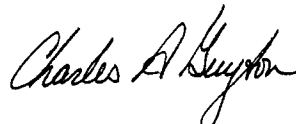
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The changes to the General Service Load Management Program rate schedule will not change the typical bill, and the Commercial Industrial Demand Reduction Rider is a new rider. The estimated number of customers and the estimated gross decrease in annual revenues for these rates are shown in the Plan Document or on their respective cost-effectiveness analyses in the Plan Appendix A.

A description of the service offered under the rate schedules and the justification and supporting documentation for the changes to the General Service Load Management Program are in the Plan Document. The tariff sheets in final form are in Appendix A to the petition. The tariff sheets in legislative format are in Appendix B to the petition.

If you or your Staff have any questions regarding this transmittal, please contact me.

Very truly yours,



Charles A. Guyton

CAG
encs.
cc: All Parties of Record

TAL_1998/33029-1



FPL

ORIGINAL

**BEFORE THE FLORIDA PUBLIC SERVICE
COMMISSION**

DOCKET NO. 991788-EG

**DEMAND-SIDE MANAGEMENT PLAN OF
FLORIDA POWER & LIGHT COMPANY**

PLAN DOCUMENT

DECEMBER 29, 1999

DOCUMENT NUMBER-DATE

15835 DEC 29 8

FPSC-RECORDS/REPORTING

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INTRODUCTION

Pursuant to Florida Administrative Code Rule 25-17.0021, Florida Power & Light Company (FPL) is submitting a Demand Side Management Plan designed to meet the conservation goals established by the Commission in Order No. PSC-99-1942-FOF-EG. This Demand Side Management (DSM) Plan consists of: six (6) Residential DSM programs, nine (9) Commercial/Industrial DSM programs, one (1) Conservation Research and Development program, and five (5) research and development (R&D) projects. FPL anticipates that the proposed programs will achieve FPL's approved goals in their entirety through the year 2009. FPL's R&D projects and the continuation of the existing Conservation Research and Development program reflects FPL's commitment to find the savings necessary to ensure that it achieves its goals through 2009 as well as other DSM potential which may emerge.

This report builds upon FPL's Adoption of Numeric Conservation Goals Report filed with the Commission and reviewed and approved in Docket No. 971004-EG. That report contained a detailed evaluation of 169 measures and identified 56 of those measures to be cost-effective under the Rate Impact Measure (RIM) and Participants tests. Those 56 measures been packaged into comprehensive FPL programs as part of the Demand Side Management Plan.

This report contains five sections. Section I provides an overview of FPL's DSM Plan, addressing how the Plan will achieve FPL's goals, listing the programs, projects and measures offered. Section II is a detailed description of the Residential DSM programs being proposed. Section III is a detailed description of the Commercial/Industrial DSM programs being proposed. Section IV is a detailed description of FPL's DSM research and development efforts being undertaken and proposed. Section V is a summary.

This report also has a companion Appendix A, which contains copies of the cost effectiveness analyses performed in support of individual programs.

SECTION I - OVERVIEW

A. Commission Approved Goals

FPL has developed a comprehensive portfolio of DSM programs in order to achieve the goals approved in Order No. PSC-99-1942-FOF-EG. The approved goals for FPL are shown in Tables 1 and 2 below.

**Table 1
Residential Market Segment
Approved Goals @ Meter**

Year	Summer Demand Savings Cum. MW	Winter Demand Savings Cum. MW	Cum Energy GWH
2000	75.5	91.6	91.9
2001	126.5	139.0	178.3
2002	169.4	170.0	267.1
2003	212.8	200.4	357.3
2004	256.6	230.1	448.9
2005	302.0	260.6	544.2
2006	347.0	289.0	640.9
2007	392.6	317.2	739.3
2008	439.4	345.7	840.3
2009	485.9	372.4	943.2

**Table 2
Commercial/Industrial Market Segment
Approved Goals @ Meter**

Year	Summer Demand Savings Cum. MW	Winter Demand Savings Cum. MW	Cum Energy GWH
2000	46.2	20.5	68.5
2001	73.3	32.2	97.6
2002	99.6	44.1	126.4
2003	126.6	56.8	157.1
2004	153.8	70.1	188.8
2005	181.6	84.2	222.6
2006	207.2	97.1	254.9
2007	232.4	109.8	285.7
2008	257.2	122.2	315.3
2009	278.8	133.0	343.4

B. Composition of DSM Plan

FPL's DSM Plan is a diversified plan designed to achieve FPL's approved conservation goals. To meet those goals, FPL's DSM Plan captures all known cost-effective DSM potential and attempts

to find additional cost-effective savings through research. As set forth herein, FPL's DSM Plan consists of six (6) Residential programs, nine (9) Commercial/Industrial programs, one (1) research program and five (5) individual research projects. Other concepts may evolve into research projects or programs. As with prior plans, FPL anticipates that the Plan will likely change over time due to program experience, research results, changes in FPL's system needs, and the options which may become available to FPL.

Residential Programs

- Residential Building Envelope
- Duct System Testing and Repair
- Residential Air Conditioning
- Residential Load Management (On Call)
- Residential New Construction (BuildSmart)
- Residential Conservation Service (RCS)

Commercial/Industrial Programs

- Commercial/Industrial Heating, Ventilating and Air Conditioning
- Commercial/Industrial Efficient Lighting
- Commercial/Industrial Building Envelope
- Business Custom Incentive
- Business On Call
- Commercial/Industrial Demand Reduction
- Commercial/Industrial Load Control
- Business Energy Evaluation
- Cogeneration and Small Power Production

Research Efforts

Research Program:

- Conservation Research and Development

Research Projects:

- Cool Communities
- Green Energy
- Photovoltaic Research, Development and Education
- Commercial/Industrial New Construction
- Low Income Weatherization Retrofit

C. Comparison of Existing and Proposed DSM Plans

Tables 3 and 4 show how existing conservation programs are being incorporated into FPL's proposed Plan. These tables show that all existing FPL programs, except the Off Peak Battery Charging Program, will be continued in some fashion. These tables also illustrate how some of the existing programs have been combined with other measures under one of the proposed programs to offer a more comprehensive approach.

This is the approach that will be used in the future to address applications that previously would have qualified for the Off Peak Battery Program. Over the last two years, participation in the Off Peak Battery Program has only been approximately 150 kw annually. This level of participation does not support a full-scale DSM program and its associated administrative costs. For this reason, future off peak battery charging applications will be addressed using FPL's Business Custom Incentive Program.

The Commercial/Industrial Load Control program has been closed to new participants and customers with outstanding program participating agreements have until December 31, 2000 to go on the rate. Beyond 2000 no new customers will be added to the Commercial/Industrial Load Control program, but the program will continue in effect for then existing participants.

Table 3
Classification of Residential Programs and R&D Projects

DSM Program or R&D Project	Existing Program or R&D Project to Continue w/o Change	Existing Program or R&D Project to Continue with Modifications	Existing Program or R&D Project to be Discontinued	New Program or R&D Project
Building Envelope Program		X		
Duct System Testing and Repair Program		X		
Air Conditioning Program		X		
Residential Load Management (On Call) Program	X			
Residential New Construction (BuildSmart) Program		X		
Residential Conservation Service Program		X		
Conservation Research & Development		X		
Cool Communities R&D		X		
Green Energy R&D				X
Photovoltaic Research, Development and Education R&D				X
Low Income Weatherization Retrofit R&D				X
Thermal Energy Storage R&D			X	

Table 4
Classification of Commercial/Industrial Programs and R&D Projects

DSM Program or R&D Project	Existing Program or R&D Project to Continue w/o Change	Existing Program or R&D Project to Continue with Modifications	Existing Program or R&D Project to be Discontinued	New Program or R&D Project
Heating, Ventilating & Air Conditioning Program		X		
Efficient Lighting Program		X		
Building Envelope Program		X		
Business Custom Incentive Program	X			
Business On Call Program		X		
Commercial/Industrial Demand Reduction Program				X
Commercial/Industrial Load Control Program	X*			
Business Energy Evaluation Program	X			
Off Peak Battery Charging Program			Included as part of Business Custom Incentive	
Cogeneration and Small Power Production Program	X			
Conservation Research & Development		X		
Green Energy R&D				X
New Construction R&D	X			

* The Commercial/Industrial Load Control Program is closed to new customers effective December 31, 2000; however, existing customers remain eligible for service.

D. Measures Comprising Programs

Table 5 lists the proposed Residential programs and the measures offered in each program. As shown in the table, FPL is proposing six (6) Residential programs: Residential Building Envelope, Duct System Testing and Repair, Residential Air Conditioning, Residential Load Management (On Call), Residential New Construction (BuildSmart) and Residential Conservation Services (RCS). The table also shows the maximum incentive amount and demand and energy savings associated with each program.

**Table 5
Summary of Residential Programs**

DSM Program	Eligible Measures	Measure Description	Summer kw Savings / Participant	Winter kw Savings / Participant	kWh Savings / Participant	Incentive / Participant
Residential Building Envelope Program	RSC-10A	Ceiling Ins R0-R19 AC	0.30	0.74	801	\$190
	RSC-10B	Ceiling Ins R0-R19 HP	0.30	0.46	740	\$168
	Program		0.30	0.71	795	\$188
Duct System Testing & Repair Program	RSC-5A	Reduce Duct Leak AC	0.20	0.20	454	\$82
	RSC-5B	Reduce Duct Leak HP	0.20	0.20	454	\$82
	Program		0.20	0.20	454	\$82
Residential Air Conditioning Program	RSC-1	Hi Eff Air Source HP	0.45	0.39	1200	\$146
	RSC-2	Ground Source HP	0.73	0.28	1455	\$318
	RSC-21A	Hi Eff Central AC	0.51	0.00	1273	\$110
	Program		0.50	0.07	1260	\$117
Residential Load Management (On Call) Program	RLC-1	Res Load Control	1.08	1.92	40	\$72 *
Residential New Construction (BuildSmart) Program	BLDSMT-1	BuildSmart EPI <=90	0.95	.93	1421	\$111
Residential Conservation Service Program	Program	Residential Audits	N/A	N/A	N/A	N/A

* Annual incentive

Table 6 lists the proposed Commercial/Industrial programs and their associated measures. The eight (8) Commercial/Industrial programs are: Commercial/Industrial Heating, Ventilation and Air Conditioning, Commercial/Industrial Efficient Lighting, Commercial/Industrial Building Envelope, Business Custom Incentive (BCI), Commercial/Industrial Demand Reduction, Business On Call, Business Energy Evaluation (BEE) and Cogeneration and Small Power Production.

**Table 6
Summary of Commercial/Industrial Programs**

DSM Program	Eligible Measures	Measure Description	Rate Class	Summer kw Savings / Participant **	Winter kw Savings / Participant **	kWh Savings / Participant **	Incentive / Participant **
Commercial/Industrial Heating, Ventilating & Air Conditioning Program	SCD-1	High Eff Chiller	GSD	1.0	0.033	4241	\$65
			GSLD	1.0	0.033	4339	\$81
	SCD-2	High Eff Chiller w/ASD	GSD	1.0	0.033	4954	\$25
			GSLD	1.0	0.033	5068	\$90
	SCD-3	Hi Eff DX AC	GS	1.0	0.000	3694	\$75
			GSD	1.0	0.000	3754	\$105
			GSLD	1.0	0.000	3967	\$145
	SCD-5	Cool Storage	GSD	1.0	0.341	(291)	\$478
			GSLD	1.0	0.290	(377)	\$338
	VD-1	Leak Free Ducts DX AC	GS	1.0	0.052	2054	\$267
GSD			1.0	0.052	2054	\$140	
GSLD			1.0	0.052	2054	\$161	
Program			1.0	0.209	1153	\$275	
Commercial/Industrial Efficient Lighting Program	FL8HP	Fluorescent 8 Hour High Permanence	GS	1.0	1.135	3275	\$129
			GSD	1.0	1.130	3548	\$102
	HID8HP Program	HID 8 Hour High Per	GSLD	1.0	1.140	4140	\$111
			GSLD	1.0	1.130	3210	\$189
	Program			1.0	1.134	3722	\$120
Commercial/Industrial Building Envelope Program	SCD-18	Roof Ins Chiller	GSD	1.0	0.261	1724	\$271
			GSLD	1.0	0.261	1724	\$393
	SCD-19	Roof Ins DX AC	GS	1.0	0.156	1184	\$418
			GSD	1.0	0.156	1184	\$247
			GSLD	1.0	0.156	1184	\$359
	SCD-22	Window Film Chiller	GSD	1.0	0.002	1995	\$80
			GSLD	1.0	0.002	1895	\$190
	SCD-23	Window Film DX AC	GS	1.0	0.002	2005	\$295
			GSD	1.0	0.002	1995	\$80
			GSLD	1.0	0.002	1895	\$190
	SCD-26A	Light Colored Roof Chiller	GSD	1.0	0.000	1115	\$200
			GSLD	1.0	0.000	1115	\$340
	SCD-27	Light Colored Roof DX AC	GS	1.0	0.000	2619	\$300
			GSD	1.0	0.000	2619	\$200
			GSLD	1.0	0.000	2619	\$300
Program			1.0	0.179	1476	\$303	
Business Custom Incentive Program	OPBC	Off Peak Battery Charging	GSD	1.0	0.093	0	\$144
			GSLD	1.0	0.093	0	\$144
	Program			1.0	0.093	0	\$144
Business On Call Program	CILM	Commercial Load Management	GS	1.0	0.0	88	\$39 *
			GSD	1.0	0.0	88	\$39 *
	Program			1.0	0.0	88	\$39 *
Commercial/Industrial Demand Reduction Program	CIDR	Commercial/Industrial Demand Reduction	GSD	1.0	1.0	48	\$57 *
			GSLD	1.0	1.0	48	\$57 *
	Program			1.0	1.0	48	\$57 *
Business Energy Evaluation Program	Program	C/I Energy Audits	ALL	N/A	N/A	N/A	N/A
Cogeneration and Small Power Production Program	Program	Cogeneration Support	ALL	N/A	N/A	N/A	N/A

* Annual incentive

** Participant is equal to 1 kw of summer demand reduction

E. Summary

FPL's DSM Plan provides a variety of programs in which FPL's customers may participate. It is designed to achieve FPL's Commission approved RIM based goals. To meet those goals FPL will offer programs that include all measures currently known to be cost-effective to both

participants and non-participants. To achieve its goals through 2009 and to address changing market conditions, FPL is supplementing these programs with additional R&D efforts as well.

SECTION II - RESIDENTIAL PROGRAMS

A. Residential Program Overview

FPL's DSM Plan offers six (6) conservation programs. The six conservation programs are: Residential Building Envelope, Duct System Testing and Repair, Residential Air Conditioning, Residential Load Management (On Call), BuildSmart and Residential Conservation Service. While the program descriptions that follow provide details as to the proposed changes to each program, the significant modifications being proposed are:

- **Residential Building Envelope** – The maximum cost-effective incentive level has increased slightly.
- **Duct System Testing and Repair** – The incentive structure is being revised as well as changes in eligibility requirements and testing procedures in order to encourage participation by single family attached and mobile homes.
- **Residential Air Conditioning** – The incentive structure is being revised and window/wall air conditioners are being eliminated due to a lack of cost-effectiveness. In addition, the minimum qualifying SEER for air-cooled air conditioners is being increased from 11.0 to 11.5.
- **Residential New Construction (BuildSmart)** – The fee structure for participants has been revised to encourage participation at the higher energy efficiency levels.
- **Residential Conservation Service** – The types of home energy surveys offered has been to expanded to allow FPL to include telephone and internet based audits.

B. DETAILED PROGRAM DESCRIPTIONS

RESIDENTIAL BUILDING ENVELOPE PROGRAM

Program Description

The Residential Building Envelope Program is designed to encourage qualified customers to install energy-efficient roof and ceiling insulation measures that cost-effectively reduce FPL's coincident peak air conditioning load and customer energy consumption. The objective is accomplished by providing incentives to customers to facilitate the installation of these measures.

The proposed Residential Building Envelope Program is basically unchanged from the existing program. The only substantive change to this program is to update the maximum cost-effective incentive from \$614 per kw to \$626 per kw.

FPL plans to make residential customers aware of this program through contractors, retail outlets and other trade allies, appropriate advertising and promotion activities, as well as direct contact with potential participants by FPL personnel.

FPL plans to facilitate the application of this program to potential low income participants by targeting public agencies and governmental housing authorities for program education and implementation. An example of this effort is the potential qualification of public agency or housing authorities as participating contractors, thus, assisting in lowering the installation costs of measures for low income participants. FPL also will assist agencies in selecting qualifying contractors, if requested to do so.

Description of Program Administration

The Residential Building Envelope Program will be available to all existing residential customers served by FPL who have whole-house electric air conditioning or heating. Whole-house electric air conditioning or heating is defined as a central system(s) or sufficient window/wall units to provide cooling to the majority of the living spaces of the house. An energy audit must be

performed prior to FPL issuing an incentive (Watt-Saver Certificate) for the building envelope measure.

Building envelope measures that are required to be installed, by federal, state, or local building or energy codes when additions and/or renovations are made to existing buildings are not eligible for this program. To be eligible for incentives, qualifying building envelope measures must be installed according to manufacturer's recommendations and specifications by contractors who are certified, licensed and insured as deemed necessary by applicable state or local governmental agencies and FPL. All performance claims must be supported by testing procedures and documentation which are acceptable to FPL. All installations must be accessible for verification by FPL.

All incentive requests will be tracked by a computer system, which will record a history of the incentive payments made to customers/contractors.

FPL will file Program Standards for this program. The Program Standards will be subject to periodic review and may change over time based on factors such as, but not limited to, technological advances, operational needs, program results, application assumptions, and incentive amounts.

Projected Participation and Savings

The projected demand and energy savings for a typical installation are shown on Attachments B and C. The energy consumption and demand reduction projections are based on evaluation results.

The projected participation in this program and associated savings are shown on Attachments A, B and C. The projected participation is based upon FPL's Adoption of Numeric Conservation Goals Report, filed February 1, 1999.

Cost-Effectiveness Analysis

FPL has used the Commission approved cost-effectiveness methodologies required by Rule 25-17.008 to determine the cost-effectiveness of this program. These cost-effectiveness analyses can be found in Appendix A. These analyses show the following benefit-cost ratios: 3.24 Participants, 1.04 RIM, and 2.18 TRC for the Residential Building Envelope program.

Program Monitoring and Evaluation

The impact of this program on demand and energy consumption will be evaluated over time by FPL. Data will be collected from non-participants in order to establish a non-DSM technology baseline. Participants' data will be compared against non-participants' data to establish usage patterns, demand impacts and to validate engineering assumptions.

FPL will utilize any or all three major impact evaluation analysis methods in a manner that most cost-effectively meets the overall impact evaluation objectives--engineering analysis, statistical billing analysis and on-site metering research. As these evaluations proceed, the components to be analyzed and the periods for which data is available will increase, resulting in continual enhancements in the scope and accuracy of reported evaluation results.

Program Name: Residential Building Envelope Program

Attachment A

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level % *
2000	3,398,802	413,886	6,851	1.66%
2001	3,462,962	378,499	18,315	6.65%
2002	3,525,089	342,326	16,338	12.12%
2003	3,585,232	309,809	14,581	18.10%
2004	3,643,479	280,563	13,021	24.63%
2005	3,700,888	254,241	11,633	31.76%
2006	3,757,466	230,538	10,400	39.53%
2007	3,813,758	209,180	9,302	48.02%
2008	3,870,300	189,924	8,323	57.27%
2009	3,927,596	172,553	7,453	67.35%

Note: Column a - The total number of customers in the residential rate class.
 Column b - The total number of eligible customers in the residential rate class.
 Column c - The annual number of participants in the program.
 * Does not reflect participation prior to 2000.

Attachment B – At the Meter

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	790	0.69	0.30	5,412,801	4,727	2,055
2001	795	0.71	0.30	14,568,244	13,085	5,494
2002	795	0.71	0.30	12,995,360	11,671	4,901
2003	795	0.71	0.30	11,597,828	10,414	4,374
2004	795	0.71	0.30	10,356,210	9,298	3,906
2005	795	0.71	0.30	9,252,101	8,306	3,490
2006	795	0.71	0.30	8,271,182	7,424	3,120
2007	795	0.71	0.30	7,397,292	6,639	2,790
2008	795	0.71	0.30	6,618,468	5,939	2,497
2009	795	0.71	0.30	5,926,487	5,317	2,236

Attachment C - At the Generator

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	850	0.76	0.33	5,821,468	5,195	2,259
2001	855	0.79	0.33	15,668,148	14,381	6,039
2002	855	0.79	0.33	13,976,511	12,826	5,387
2003	855	0.78	0.33	12,473,465	11,445	4,808
2004	855	0.78	0.33	11,138,105	10,219	4,293
2005	855	0.78	0.33	9,950,635	9,128	3,835
2006	855	0.78	0.33	8,895,657	8,159	3,429
2007	855	0.78	0.33	7,955,788	7,296	3,067
2008	855	0.78	0.33	7,118,163	6,527	2,744
2009	855	0.78	0.33	6,373,938	5,844	2,457

DUCT SYSTEM TESTING AND REPAIR PROGRAM

Program Description

The objective of FPL's Duct System Testing and Repair Program is to encourage demand and energy conservation through air leak identification in air conditioning duct systems and repair of those leaks by qualified contractors. This objective is accomplished by performing on-site tests at the customer's premise, identifying leak sites, and providing incentives to customers for leak repairs.

The proposed Duct Testing & Repair Program remains essentially unchanged from the existing program. The only substantive changes include the following:

- increasing the maximum average incentive from \$ 369 per kw to \$ 406 per kw, and
- offering no-cost duct tests for multi-family dwellings and manufactured homes.

FPL makes residential customers aware of this program through contractors, retail outlets and other trade allies, appropriate advertising and promotion activities, as well as direct contact with potential participants by FPL personnel.

FPL plans to facilitate the application of this program to potential low income participants by: 1) offering no-cost duct tests to residential multi-family dwellings and manufactured homes, and 2) targeting public agencies and governmental housing authorities for program education and implementation. An example of this effort is the potential qualification of public agency or housing authority personnel to perform duct system testing or duct repairs as participating contractors, thus, assisting in lowering the installation costs of measures for low income participants. FPL also will assist agencies in selecting qualifying contractors, if requested to do so. Additionally, by including multi-family units in the program, the potential to reach low income participants is increased.

Description of Program Administration

The Duct System Testing and Repair Program is available to residential customers. Dwellings must have an electric air conditioning duct system and have accessible duct systems. Eligible dwellings must be one year old or older to qualify for FPL test and repair incentives.

Duct tests are performed by diagnosticians using measurement equipment designed to assist in locating air leakage in air conditioning duct systems. A charge for this test may be assessed, and FPL proposes to continue to pay a portion of the customer cost of the test. If leaks are identified during the test, the diagnostician will provide the customer with a diagram of the leak sites and a list of independent FPL participating contractors. Repair incentive certificates are also given to customers by the diagnostician at the time the test is performed. When the repair of the duct system is completed, the customer signs and gives the Watt-Saver Certificate to the contractor as partial payment for the installation. The contractor then completes the Watt-Saver certificate and forwards it to FPL. FPL will perform post installation inspections on a random basis for a sample of participants prior to payment of incentives.

Duct system testing and duct system repairs must be performed by approved and current FPL Testing and Repair Contractors, to qualify for conservation incentives. As part of the Duct System Repair Contractor responsibilities, each contractor must complete an FPL specified training course in testing and repair techniques.

Repair incentives will be based on the amount of time required to repair the leak sites identified and will be included in the Program Standards. Incentives will not exceed a program average of \$406 per kw, which is based on cost-effectiveness analyses included in Appendix A. All incentive requests will be tracked by a computer system, which will record a history of incentive payments made to customers.

FPL will file Program Standards for this program. The Program Standards will be subject to periodic review and may change over time based on factors such as, but not limited to, technological advances, program results, operational needs, application assumptions and incentive amounts.

Projected Participation and Savings

The projected demand and energy savings for a typical installation are shown on Attachments B and C. The energy consumption and demand reduction projections are based on evaluation results.

The projected participation in this program and associated savings are shown on Attachments A, B and C. The projected participation is based upon FPL's Adoption of Numeric Conservation Goals Report, filed February 1, 1999.

Cost-Effectiveness Analysis

FPL has used the Commission approved cost-effectiveness methodologies required by Rule 25-17.008 to determine the cost-effectiveness of this program. These cost-effectiveness analyses can be found in Appendix A. These analyses show the following benefit-cost ratios: 2.86 Participants, 1.05 RIM, and 1.81 TRC for the Duct System Testing and Repair program.

Program Monitoring and Evaluation

The impact of this program on demand and energy consumption will be evaluated over time by FPL. Data will be collected from non-participants in order to establish a non-DSM technology baseline. Participants' data will be compared against non-participants' data to establish usage patterns, demand impacts and to validate engineering assumptions.

FPL will utilize any or all three major impact evaluation analysis methods in a manner that most cost-effectively meets the overall impact evaluation objectives--engineering analysis, statistical

billing analysis and on-site metering research. As these evaluations proceed, the components to be analyzed and the periods for which data is available will increase, resulting in continual enhancements in the scope and accuracy of reported evaluation results.

Program Name: Duct System Testing and Repair Program

Attachment A

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level % *
2000	3,398,802	1,618,745	32,279	1.99%
2001	3,462,962	1,649,303	29,133	3.72%
2002	3,525,089	1,678,892	29,722	5.43%
2003	3,585,232	1,707,536	30,291	7.11%
2004	3,643,479	1,735,278	30,846	8.77%
2005	3,700,888	1,762,620	31,391	10.42%
2006	3,757,466	1,789,566	31,933	12.05%
2007	3,813,758	1,816,376	32,475	13.66%
2008	3,870,300	1,843,305	33,021	15.25%
2009	3,927,596	1,870,594	33,571	16.82%

Note: Column a - The total number of customers in the residential rate class.
 Column b - The total number of eligible customers in the residential rate class.
 Column c - The annual number of participants in the program.
 * Does not reflect participation prior to 2000.

Attachment B – At the Meter

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	454	0.20	0.20	14,654,577	6,412	6,436
2001	454	0.20	0.20	13,226,119	5,787	5,809
2002	454	0.20	0.20	13,493,696	5,904	5,926
2003	454	0.20	0.20	13,751,801	6,017	6,040
2004	454	0.20	0.20	14,003,986	6,127	6,151
2005	454	0.20	0.20	14,251,436	6,236	6,259
2006	454	0.20	0.20	14,497,702	6,343	6,367
2007	454	0.20	0.20	14,743,375	6,451	6,475
2008	454	0.20	0.20	14,991,417	6,559	6,584
2009	454	0.20	0.20	15,241,234	6,669	6,694

Attachment C - At the Generator

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	488	0.22	0.22	15,761,000	7,047	7,074
2001	488	0.22	0.22	14,224,692	6,360	6,384
2002	488	0.22	0.22	14,512,471	6,489	6,513
2003	488	0.22	0.22	14,790,063	6,613	6,638
2004	488	0.22	0.22	15,061,289	6,734	6,760
2005	488	0.22	0.22	15,327,421	6,853	6,879
2006	488	0.22	0.22	15,592,280	6,971	6,998
2007	488	0.22	0.22	15,856,502	7,090	7,116
2008	488	0.22	0.22	16,123,270	7,209	7,236
2009	488	0.22	0.22	16,391,949	7,329	7,357

RESIDENTIAL AIR CONDITIONING PROGRAM

Program Description

The Residential Air Conditioning Program is designed to reduce the summer and winter coincident peak demand and energy attributable to central and room heating, ventilating, and air conditioning (HVAC) equipment by encouraging customers, through the use of incentives, to purchase higher efficiency equipment.

FPL proposes to implement the following substantive changes to the Residential Air Conditioning Program:

- the minimum qualifying SEER for central air-cooled air conditioners (straight-cooled and heat pumps) is being increased from 11.0 to 11.5,
- the exclusion of window/wall units due to a lack of cost-effectiveness, and
- the program incentive structure will change from a range not exceeding \$182 to \$ 303 per kw of summer demand reduction to a range not to exceed \$216 to \$436 per kw, depending on the technology.

FPL plans to make residential customers aware of this program through contractors, retail outlets and other trade allies, appropriate advertising and promotion activities, as well as direct contact with potential participants by FPL personnel.

FPL plans to continue to facilitate the application of this program to potential low income participants by targeting public agencies and governmental housing authorities for program education and implementation. Another example of how FPL will facilitate low income participation in this program is the potential qualification of public agency or housing authority personnel to install measures as participating contractors, thus, assisting in lowering the

installation costs of measures for low income participants. FPL also will assist agencies in the selection of qualified contractors for the installation of qualifying measures, if requested to do so.

Description of Program Administration

The primary method of encouraging prospective customers to participate in the program will be the payment of incentives. The amount of the incentives will vary depending on several factors: the size of the unit being installed and the Seasonal Energy Efficiency Ratio (SEER) or Energy Efficiency Ratio (EER) for central units. Incentive tables will be included in FPL's Program Standards and will range from \$216 to \$436 per kw which is based on cost effectiveness analyses included in Appendix A. Eligible units can be either a straight cool or a heat pump. Central air conditioning units must have a single speed compressor. To be eligible for incentives for central air conditioning systems, the customer must make an installation at a residence which has had a Certificate of Occupancy or equivalent for at least one year.

The incentives for central air conditioning systems will be issued to the customer at the time the customer purchases a qualifying HVAC unit(s) from a qualifying contractor. The contractor fills out the incentive certificate and gives it to the customer for his/her signature. The customer signs and gives the incentive certificate back to the contractor as partial payment for the installation. The contractor then forwards the certificate to FPL for payment.

FPL will perform random post installation inspection on a selected sample of participants prior to payment of incentives. All incentive requests will be tracked by a computer system, which will record a history of incentive payments made to customers.

FPL will file Program Standards for this program. The Program Standards will be subject to periodic review and may change over time based upon factors such as, but not limited to, technological advances, operational needs, program evaluation results, application assumptions, and incentive amounts.

Projected Participation and Savings

The projected demand and energy savings for a typical installation are shown on Attachments B and C. The energy consumption and demand reduction projections are based on evaluation results.

The projected participation in this program and associated savings are shown on Attachments A, B and C. The projected participation is based upon FPL's Adoption of Numeric Conservation Goals Report, filed February 1, 1999.

Cost-Effectiveness Analysis

FPL has used the Commission approved cost-effectiveness methodologies required by Rule 25-17.008 to determine the cost-effectiveness of this program. These cost-effectiveness analyses can be found in Appendix A. These analyses show the following benefit-cost ratios: 2.73 Participants, 1.06 RIM, and 1.83 TRC for the Residential Air Conditioning program.

Program Monitoring and Evaluation

The impact of this program on demand and energy consumption will be evaluated over time by FPL. Data will be collected from non-participants in order to establish a non-DSM technology baseline. Participants' data will be compared against non-participants' data to establish usage patterns, demand impacts and to validate engineering assumptions.

FPL will utilize any or all three major impact evaluation analysis methods in a manner that most cost-effectively meets the overall impact evaluation objectives--engineering analysis, statistical billing analysis and on-site metering research. As these evaluations proceed, the components to be analyzed and the periods for which data is available will increase, resulting in continual enhancements in the scope and accuracy of reported evaluation results.

Program Name: Residential Air Conditioning Program

Attachment A

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level % *
2000	3,398,802	1,377,603	49,460	3.59%
2001	3,462,962	1,426,850	45,252	6.64%
2002	3,525,089	1,474,755	47,212	9.62%
2003	3,585,232	1,521,812	49,020	12.55%
2004	3,643,479	1,568,405	50,714	15.41%
2005	3,700,888	1,615,207	52,331	18.20%
2006	3,757,466	1,662,336	53,903	20.93%
2007	3,813,758	1,710,067	55,453	23.59%
2008	3,870,300	1,758,629	56,998	26.18%
2009	3,927,596	1,808,218	58,550	28.70%

Note: Column a - The total number of customers in the residential rate class.
 Column b - The total number of eligible customers in the residential rate class.
 Column c - The annual number of participants in the program.
 * Does not reflect participation prior to 2000.

Attachment B -- At the Meter

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	1247	0.15	0.49	61,667,628	7,183	24,176
2001	1260	0.07	0.50	56,998,213	3,302	22,582
2002	1260	0.07	0.50	59,467,098	3,442	23,560
2003	1260	0.07	0.50	61,744,406	3,572	24,463
2004	1260	0.07	0.50	63,878,903	3,695	25,308
2005	1260	0.07	0.50	65,915,806	3,813	26,115
2006	1260	0.07	0.50	67,895,364	3,927	26,900
2007	1260	0.07	0.50	69,848,057	4,040	27,673
2008	1260	0.07	0.50	71,793,461	4,153	28,444
2009	1260	0.07	0.50	73,748,605	4,266	29,219

Attachment C - At the Generator

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	1341	0.16	0.54	66,323,541	7,895	26,569
2001	1355	0.08	0.55	61,301,584	3,629	24,818
2002	1355	0.08	0.55	63,956,870	3,783	25,893
2003	1355	0.08	0.55	66,406,116	3,926	26,885
2004	1355	0.08	0.55	68,701,767	4,061	27,815
2005	1355	0.08	0.55	70,892,456	4,190	28,701
2006	1355	0.08	0.55	73,021,472	4,316	29,563
2007	1355	0.08	0.55	75,121,593	4,440	30,414
2008	1355	0.08	0.55	77,213,875	4,564	31,261
2009	1355	0.08	0.55	79,316,632	4,689	32,112

RESIDENTIAL LOAD MANAGEMENT PROGRAM ("ON CALL" PROGRAM)

Program Description

The On Call Program is designed primarily to reduce system peak demand, but it also reduces energy consumption. The On Call Program involves the installation of direct load control equipment on selected customer end-use equipment to allow FPL to control customer loads on an as needed basis. FPL is proposing no change to this program.

FPL plans to make residential customers aware of this program through contractors, appropriate advertising and promotion activities, as well as direct contact with potential participants by FPL personnel.

Description of Program Administration

FPL's On Call Program is available to all residential customers who are individually metered (i.e., who do not receive service through commonly owned facilities of condominium, cooperative or homeowners' associations) and who have one or more of the following electrical appliances/equipment: central electric air conditioners, central electric space heaters, conventional electric water heaters and swimming pool pumps. A customer may sign up for one, or more than one, of these appliances/equipment (with the exception of electric space heating, which is eligible only in combination with one of the other equipment types).

Customers who participate in the Program will be eligible based on three primary factors: whether the customer has the proper eligible loads, whether their service characteristics (voltage, etc.) are compatible with existing load control equipment, and whether the customer receives service from a substation which has load control equipment installed.

Once the customer signs-up for the program, the installation request will be sent to a contractor for installation. Once the installation is completed, the contractor sends the paperwork to FPL,

which is then entered into the Load Management Information System (LMIS), resulting in the activation of the equipment at the customer's facility. Upon installation and inspection of the equipment, the customer will receive a monthly credit, which may vary seasonally, on his/her electric bill.

The incentives will be paid as specified in the On Call Program tariff sheets, Schedule RSL. FPL maintains an internal audit trail for all incentive payments by means of LMIS. This computer database maintains interview and installation information for each program participant as well as a history of all incentives paid.

FPL will file Program Standards for this program. The Program Standards will be subject to periodic review and may change over time based on factors such as, but not limited to, technological advances, operational needs, program results, application assumptions, and incentive amounts.

Projected Participation and Savings

The projected demand and energy savings for a typical installation are shown on Attachments B and C. The energy consumption and demand reduction projections are based on the program monitoring and evaluation results performed to determine the demand reductions obtained for the On Call Program and are from FPL's Adoption of Numeric Conservation Goals Report, filed February 1, 1999.

Cost-Effectiveness Analysis

FPL has used the Commission approved cost-effectiveness methodologies required by Rule 25-17.008 to determine the cost-effectiveness of this program. These cost-effectiveness analyses can be found in Appendix A. These analyses show the following benefit-cost ratios: infinite Participants, 1.26 RIM, and 3.46 TRC for the On Call Program.

Program Monitoring and Evaluation

The impact of this program on demand and energy consumption will be evaluated over time by FPL. Data will be collected from non-participants in order to establish a non-DSM technology baseline. Participants' data will be compared against non-participants' data to establish usage patterns, demand impacts and to validate engineering assumptions.

FPL will utilize any or all three major impact evaluation analysis methods in a manner that most cost-effectively meets the overall impact evaluation objectives--engineering analysis, statistical billing analysis and on-site metering research. As these evaluations proceed, the components to be analyzed and the periods for which data is available will increase, resulting in continual enhancements in the scope and accuracy of reported evaluation results.

Program Name: Residential Load Management (On Call) Program

Attachment A

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level % *
2000	3,398,802	2,135,321	36,808	1.72%
2001	3,462,962	2,126,591	13,585	2.37%
2002	3,525,089	2,117,563	5,094	2.62%
2003	3,585,232	2,108,299	5,094	2.87%
2004	3,643,479	2,098,875	5,094	3.13%
2005	3,700,888	2,089,905	5,094	3.39%
2006	3,757,466	2,081,372	4,245	3.60%
2007	3,813,758	2,073,550	4,245	3.82%
2008	3,870,300	2,066,687	4,245	4.04%
2009	3,927,596	2,060,997	3,396	4.22%

Note: Column a - The total number of customers in the residential rate class.
 Column b - The total number of eligible customers in the residential rate class.
 Column c - The annual number of participants in the program.
 * Does not reflect participation prior to 2000.

Attachment B – At the Meter

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	40	1.92	1.08	1,477,841	70,671	39,753
2001	40	1.92	1.08	545,445	26,084	14,672
2002	40	1.92	1.08	204,542	9,781	5,502
2003	40	1.92	1.08	204,542	9,781	5,502
2004	40	1.92	1.08	204,542	9,781	5,502
2005	40	1.92	1.08	204,542	9,781	5,502
2006	40	1.92	1.08	170,452	8,151	4,585
2007	40	1.92	1.08	170,452	8,151	4,585
2008	40	1.92	1.08	170,452	8,151	4,585
2009	40	1.92	1.08	136,361	6,521	3,668

Attachment C - At the Generator

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	43	2.11	1.19	1,589,418	77,669	43,689
2001	43	2.11	1.19	586,626	28,666	16,125
2002	43	2.11	1.19	219,985	10,750	6,047
2003	43	2.11	1.19	219,985	10,750	6,047
2004	43	2.11	1.19	219,985	10,750	6,047
2005	43	2.11	1.19	219,985	10,750	6,047
2006	43	2.11	1.19	183,321	8,958	5,039
2007	43	2.11	1.19	183,321	8,958	5,039
2008	43	2.11	1.19	183,321	8,958	5,039
2009	43	2.11	1.19	146,657	7,167	4,031

RESIDENTIAL NEW CONSTRUCTION PROGRAM ("BUILDSMART^R PROGRAM")

Program Description

The BuildSmart^R Program objective is to encourage the design and construction of energy-efficient homes that cost-effectively reduce FPL's coincident peak load and customer energy consumption.

The BuildSmart^R Program will utilize an FPL approved energy-rating tool to qualify each home for participation. The program standard will utilize a performance based energy standard rather than a prescriptive based standard. Therefore, the BuildSmart^R Program will accept any efficiency technique or combination of efficiency improvements that are recognized by the energy-rating tool.

The current recognized rating tool is Florida's Building Energy Code or the Energy Performance Index (EPI) rating. As rating tools and methodologies are developed or modified, FPL will review and consider them as a potential program rating standard.

The BuildSmart^R Program includes an educational effort that will promote the benefits of building homes energy efficiently and support the residential new construction market in their efforts as well. FPL, through its BuildSmart^R Program, will consult with builders, developers and customers on which efficiency combinations would be most cost-effective. FPL, through its BuildSmart^R Program, will perform plan reviews and home inspections throughout the construction process and provide certification of completed homes once successfully meeting program standards.

Participation is encouraged by educating customers on the benefits and advantages of building homes that are more energy efficient. These benefits/advantages include:

- installation cost savings - installation cost as compared to retrofit options,
- improved cash flow - no capital investment required, upgrades amortized through mortgage,
- immediate energy and cost savings,
- increased comfort levels with improved design and equipment performance, and
- quality control advantages with FPL 's inspection/certification process.

FPL proposes to modify the existing Program by changing the fee structure. Currently, a fixed fee of \$175 is charged by FPL for each participating home, regardless of the level of energy efficiency of the new home. The revised fee structure will be tiered to encourage participation at higher energy efficiency levels, with higher energy efficiency homes having a lower fee.

FPL plans to make residential customers aware of this program through participating builders, community developments, new homebuyers workshops, other trade allies, appropriate advertising and promotional activities.

Description of Program Administration

The BuildSmart^R Program is available to all residential customers that construct a home in FPL's service territory, whether built by a developer, a custom builder or an owner-builder. The new home must have whole-house electric air-conditioning to qualify. Each participating developer or custom builder must enter into a BuildSmart^R Program Agreement with FPL. An owner builder must enter into a BuildSmart^R Program Single Home Agreement with FPL. To be eligible for BuildSmart^R certification, builders must comply with all national, state and local codes and ordinances.

FPL reserves the right to perform a series of inspections on each BuildSmart^R home to verify that energy-efficiency upgrades are incorporated as submitted. FPL will be the final judge of whether the requirements of the BuildSmart^R Program are met.

BuildSmart offers three levels of energy efficiency to select. The Gold Level certifies the home is at least 30% more energy efficient than the minimum required by the Energy Code; the Silver Level is between 20 to 29% more energy efficient; and the Bronze Level is certified to be at least 10% more energy efficient.

Each home is inspected and certified by an FPL Representative accredited by the State of Florida to rate the energy efficiency of homes per the applicable Energy Code. The process begins with each home's set of plans analyzed and the energy calculations done to determine the energy efficiency level. FPL will assist the builder and/or the homebuyer to determine the achievable levels and the measures that are the most cost effective. Just prior to the Certificate of Occupancy being issued, FPL will inspect the home to verify all energy measures called for have been installed and to determine if any changes were made to the home that will affect the energy efficiency level of the home. In addition, an air conditioning duct test is performed to determine the level of tightness of the air ducts. Following this inspection, FPL will re-run the energy calculation, if needed, and then certify the home at its final energy efficiency level. A certificate is then issued for the home and provided to the homeowner indicating the energy level achieved.

The BuildSmart Gold Level is equal to the EPA's Energy Star Program – 5 Star level. FPL will also be able to provide the HERS rating required to obtain this certification from the Energy Star Program.

FPL will offer three different service offerings as part of its BuildSmart^R Program. Two service offerings for certification will be available to participating builders. The Basic Service Offering will include an initial inspection and a final inspection. The Premium Service Offering will include the same features as the Basic Service as well as a midpoint inspection. For qualifying homes, in both service offerings, the builder or new homeowner will be awarded appropriate BuildSmart^R Certification. Although the per unit savings achieved from both level of services

are the same, there is a benefit to the builder/home owner in identifying duct leakage and/or changes to the homes during the construction phase. The third service offering will be for builders which opt not to participate in certification but choose to purchase the EPI calculations performed by FPL as part of FPL's ongoing efforts to recruit participating builders. Builders must pay FPL a fee dependent on which of the three service offerings they select.

FPL will file Program Standards for this program. The Program Standards will be subject to periodic review and may change over time based on factors such as, but not limited to, technological advances, operational needs, program results, application assumptions, state energy code revisions or rating tool improvements.

Projected Participation and Savings

The projected demand and energy savings for a typical installation are shown on Attachments B and C. The participation levels, energy consumption and demand projections are based on results from the New Home Construction Research Project and the 1999 program evaluation just completed.

Cost-Effectiveness Analysis

FPL has used the Commission approved cost-effectiveness methodologies required by Rule 25-17.008 to determine the cost-effectiveness of this program. These cost-effectiveness analyses can be found in Appendix A. These analyses show the following benefit-cost ratios: 1.20 Participants, 1.21 RIM, and .99 TRC for the BuildSmart^R Program.

Program Evaluation and Monitoring

The feasibility and cost-effectiveness of a residential new construction program were studied in detail during the New Home Construction Research Project which FPL filed a final report on June 1, 1995. Included in this final report were results from an extensive end-use monitoring and engineering evaluation effort coupled with a detailed pilot program market analysis. The results

from these research efforts were used to develop and design the BuildSmart^R program. The updated demand and energy impacts as utilized in this filing, were validated by a study conducted in 1999. These analyses also included end-use metering and engineering evaluations and were concluded in October 1999.

FPL anticipates that the demand and energy impact evaluation efforts will be valid until there are significant changes in the construction market practices or viable new technology applications emerge. Program participation and efficiency upgrades will be tracked in a BuildSmart^R database in which actual results will be compared to those forecasted. FPL will monitor the program's actual results on a continual basis and re-evaluate the research participation levels along with the energy and demand impact data as necessary over time.

Program Name: Residential New Construction (BuildSmart[®]) Program

Attachment A

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level % *
2000	3,398,802	44,386	3,140	7.07%
2001	3,462,962	45,904	2,572	6.33%
2002	3,525,089	45,177	3,181	6.56%
2003	3,585,232	44,437	3,128	6.68%
2004	3,643,479	43,717	3,077	6.75%
2005	3,700,888	43,760	4,276	7.25%
2006	3,757,466	43,788	4,279	7.60%
2007	3,813,758	44,225	4,322	7.87%
2008	3,870,300	45,082	4,861	8.20%
2009	3,927,596	46,353	4,998	8.47%

Note: Column a - The total number of customers in the residential rate class.
 Column b - The total number of eligible customers in the residential rate class.
 Column c - The annual number of participants in the program.
 * Does not reflect participation prior to 2000.

Attachment B – At the Meter

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	1421	0.93	0.95	4,462,064	2,927	2,979
2001	1421	0.93	0.95	3,654,937	2,398	2,440
2002	1421	0.93	0.95	4,519,488	2,965	3,018
2003	1421	0.93	0.95	4,445,049	2,916	2,968
2004	1421	0.93	0.95	4,372,738	2,869	2,920
2005	1421	0.93	0.95	6,076,319	3,986	4,057
2006	1421	0.93	0.95	6,080,572	3,989	4,060
2007	1421	0.93	0.95	6,141,187	4,029	4,100
2008	1421	0.93	0.95	6,906,841	4,531	4,611
2009	1421	0.93	0.95	7,101,445	4,659	4,741

Attachment C - At the Generator

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	1528	1.02	1.04	4,798,950	3,217	3,274
2001	1528	1.02	1.04	3,930,885	2,635	2,682
2002	1528	1.02	1.04	4,860,710	3,259	3,316
2003	1528	1.02	1.04	4,780,651	3,205	3,262
2004	1528	1.02	1.04	4,702,880	3,153	3,209
2005	1528	1.02	1.04	6,535,081	4,381	4,459
2006	1528	1.02	1.04	6,539,656	4,384	4,462
2007	1528	1.02	1.04	6,604,847	4,428	4,506
2008	1528	1.02	1.04	7,428,308	4,980	5,068
2009	1528	1.02	1.04	7,637,605	5,120	5,211

RESIDENTIAL CONSERVATION SERVICE

Program Description

The Residential Conservation Service (RCS) Program is an existing program which FPL intends to continue offering to its residential customers. The RCS Program has been an integral component of FPL's demand side management efforts since the 1980's.

FPL offers its residential energy audits through the RCS Program. The program provides a walk through energy audit, a computer generated Class A audit and a customer assisted energy audit. The walk through energy audits and the computerized Class A audits are conducted by an FPL representative in order to inform residential customers of cost-effective conservation measures and practices that are suitable for the customer's home. The walk through, computerized, and customer assisted energy audit provide a residence's energy analysis directly to the customer, and is based on the customer's responses to an energy survey.

The only change to this Program is to increase the effectiveness of the customer assisted audit. This type of audit has been administered as a mail audit, focused primarily at customers who prefer to receive information in this manner. Based on advances in technology and results from FPL conducted customer research, the customer assisted audit will be expanded to include telephone and internet based audits. It is expected that this change will increase the number of customers who participate in an audit (increasing the overall energy efficiency of our customers) and decrease the cost per audit.

In addition to providing conservation information, the RCS Program also serves as the vehicle for introducing customers to residential conservation incentive programs featuring incentive payments for qualified customers to help them overcome the initial cost of implementing conservation measures.

During the RCS Program audit, the auditor discusses a variety of potential conservation measures with the customer. In addition, if the customer is eligible for participating in any, or all, of the residential conservation programs featuring incentive payments, the customer receives a Watt-Saver Certificate(s), which can be used by the customer as a partial payment for the cost of the conservation measure with the participating contractors. Upon request, FPL's representative also provides a listing of participating contractors from which the customer can choose.

Description of Program Administration

The number of audits which FPL will conduct in the future are related to the number of projected participants for the residential conservation programs featuring incentive payments as well as customers' requests for evaluations of their overall energy conservation opportunities.

FPL will file Program Standards for this program. The Program Standards will be subject to periodic review and may change over time based on factors such as, but not limited to, technological advances, operational needs, program results, and application assumptions.

Projected Participation and Savings

FPL does not project demand or energy savings associated with the performance of a home energy audit. Demand and energy savings attributable to the implementation of measures identified during the performance of a residential home energy audit will be reported through their respective programs. It should be pointed out that FPL recommends measures beyond FPL's programs, and there should be additional savings associated with these measures.

Cost Effectiveness Analysis

Since FPL does not project demand or energy savings from the implementation of this program, a cost effectiveness analysis is not applicable.

Program Monitoring and Evaluation

Since FPL does not project demand or energy savings from the implementation of this program, separate monitoring and evaluation is not necessary for RCS. Savings achieved through other programs will be monitored and evaluated in those programs.

Program Name: Residential Conservation Service Program

Attachment A

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level % *
2000	3,398,802	3,398,802	50,000 - 70,000	1.5% - 2.1%
2001	3,462,962	3,462,962	50,000 - 70,000	2.9% - 4.0%
2002	3,525,089	3,525,089	50,000 - 70,000	4.3% - 6.0%
2003	3,585,232	3,585,232	50,000 - 70,000	5.6% - 7.8%
2004	3,643,479	3,643,479	50,000 - 70,000	6.9% - 9.6%
2005	3,700,888	3,700,888	50,000 - 70,000	8.1% - 11.3%
2006	3,757,466	3,757,466	50,000 - 70,000	9.3% - 13.0%
2007	3,813,758	3,813,758	50,000 - 70,000	10.5% - 14.7%
2008	3,870,300	3,870,300	50,000 - 70,000	11.6% - 16.3%
2009	3,927,596	3,927,596	50,000 - 70,000	12.7% - 17.8%

Note: Column a - The total number of customers in the residential rate class.
 Column b - The total number of eligible customers in the residential rate class.
 Column c - The annual number of participants in the program.
 * Does not reflect participation prior to 2000.

Attachment B – At the Meter

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	N/A	N/A	N/A	N/A	N/A	N/A
2001	N/A	N/A	N/A	N/A	N/A	N/A
2002	N/A	N/A	N/A	N/A	N/A	N/A
2003	N/A	N/A	N/A	N/A	N/A	N/A
2004	N/A	N/A	N/A	N/A	N/A	N/A
2005	N/A	N/A	N/A	N/A	N/A	N/A
2006	N/A	N/A	N/A	N/A	N/A	N/A
2007	N/A	N/A	N/A	N/A	N/A	N/A
2008	N/A	N/A	N/A	N/A	N/A	N/A
2009	N/A	N/A	N/A	N/A	N/A	N/A

Attachment C - At the Generator

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	N/A	N/A	N/A	N/A	N/A	N/A
2001	N/A	N/A	N/A	N/A	N/A	N/A
2002	N/A	N/A	N/A	N/A	N/A	N/A
2003	N/A	N/A	N/A	N/A	N/A	N/A
2004	N/A	N/A	N/A	N/A	N/A	N/A
2005	N/A	N/A	N/A	N/A	N/A	N/A
2006	N/A	N/A	N/A	N/A	N/A	N/A
2007	N/A	N/A	N/A	N/A	N/A	N/A
2008	N/A	N/A	N/A	N/A	N/A	N/A
2009	N/A	N/A	N/A	N/A	N/A	N/A

SECTION III - COMMERCIAL/INDUSTRIAL PROGRAMS

A. Commercial/Industrial Program Overview

FPL's DSM Plan offers nine (9) Commercial/Industrial Conservation Programs. FPL will continue to offer with some modifications the following programs: Commercial/Industrial Heating, Ventilating and Air Conditioning, Commercial/Industrial Efficient Lighting, and Commercial/Industrial Building Envelope. While the program descriptions that follow provide details as to the proposed changes to each program, the significant modifications being proposed are:

- **Commercial/Industrial Heating Ventilating and Air Conditioning** – This program will have a revised incentive structure, eligible technologies will be slightly expanded, and more stringent commissioning requirements.
- **Commercial/Industrial Efficient Lighting** – This program will have a revised incentive structure.
- **Commercial/Industrial Building Envelope** – In addition to revised incentive structures, the eligible technologies will be expanded.
- **Business On Call** – This program is being expanded to include customers in the 21 to 499 kw range.

The Business Custom Incentive, Business Energy Evaluation, Commercial/Industrial Load Control, and Cogeneration and Small Power Production programs remain unchanged. In addition, FPL is proposing one new program. The Commercial/Industrial Demand Reduction program is designed to reduce peak demand by controlling customer loads of 200 kw or greater

during periods of extreme demand or capacity shortages. FPL is also proposing to terminate the Off Peak Battery Charging program.

B. DETAILED PROGRAM DESCRIPTIONS

COMMERCIAL/INDUSTRIAL HEATING, VENTILATING, AND AIR CONDITIONING PROGRAM

Program Description

FPL's Commercial/Industrial Heating, Ventilating, and Air Conditioning (C/I HVAC) Program is designed to reduce the current and future growth of coincident peak demand and energy consumption of commercial and industrial customers by increasing the use of high efficiency heating, ventilating, and air conditioning (HVAC) systems.

FPL will provide an incentive to customers (or their designees), who install qualifying HVAC equipment. The customers will also receive any operating savings from the installation of the equipment.

FPL proposes to make the following modifications to the existing Program:

- Increase the Commercial High Efficiency DX HVAC Program maximum incentive from \$77 per kw to \$100 per kw.
- Allow water cooled DX heat pumps to use ground water along with closed loop heat exchangers as long as ARI certified temperatures and flows are maintained at the condensing unit.
- Reduce the average kw shift credit for thermal storage from 1 kw per ton to .9 kw per ton to account for the current efficiencies and the actual ratio of air cooled to water cooled equipment being installed in FPL's service territory.
- Increase the maximum thermal storage incentive from \$330 per kw to \$367 per kw.
- Require the commissioning of thermal storage systems by a Florida Professional Engineer to enhance the savings potential performance for the customer and to ensure consistent on-peak cooling load shift. A sealed Florida Professional Engineer's letter

stating that the thermal storage system is operating as designed will be required prior to issuing the last incentive payment and commissioning incentive.

FPL plans to make commercial and industrial customers aware of this program through dealers, distributors, contractors, other trade allies, appropriate advertising and promotion activities, as well as direct contact with potential participants by FPL personnel.

Description of Program Administration

All commercial and industrial customers are eligible for this program. The program applies to customers who are retrofitting/ replacing existing or installing new HVAC equipment. They must also comply with the participation rules and regulations specified in the FPL Program Standards.

To qualify, the commercial/industrial customer must submit equipment specifications to FPL. These specifications must meet or exceed FPL's Program Standards. FPL's Program Standards shall consist of both equipment and installation requirements. The Standards will be subject to periodic review and change based on factors such as equipment efficiencies, energy code, program results and operational considerations. If changed, they will be submitted to the Commission Staff for review as a change in the Program Standards.

The chiller and DX split/package electric equipment incentives are based on efficiency improvements above the Florida Energy Efficiency Code. New high efficiency chillers may include adjustable speed drives. Ventilation measures provide the opportunity to reduce kw by improving the HVAC system for eligible customers. All thermal energy storage systems must use electricity as the primary energy source. The systems must be designed and operated to reduce FPL's summer and winter system peaks. Before the installation of the thermal energy storage system, the cooling load to be shifted must regularly operate or be designed to operate during FPL's on-peak hours as defined by the current or any subsequent applicable time-of-use rate tariff approved by the Commission.

The incentive for DX split/package and chillers electric equipment will not exceed \$100 per kw and \$77 per kw, respectfully. The incentive for thermal energy storage will not exceed \$367 per kw. Incentives for thermal energy storage will include both rebates paid for installations and funding for other inducements such as additional design expenses and commissioning costs. The incentives for ventilation measures will remain at \$139 per kw. These incentives are based on cost-effectiveness analyses, an average participant's payback to be not less than 2 years, and the assumption the load being reduced is associated with equipment that operates between the hours of 3:00 P.M. and 6:00 P.M., weekdays, for the months of April through October.

FPL will determine the incentive amount based on:

- Heating and cooling equipment efficiency above the Florida Energy Efficiency Codes with a minimum threshold;
- kw or tons removed from FPL's summer peak period for thermal energy storage or;
- kw or tons reduced for rooftop duct sealing measures.

In order to calculate incentives, the customer will supply FPL with the equipment specifications. FPL will calculate the incentive based on the customer's equipment specifications and FPL Program Standards. All incentive payments will be tracked by a computer system. This system will record a history of incentive payments made to customers.

FPL will do random post installation inspections to verify the proper installation of equipment. The participating customer shall allow FPL, at FPL's discretion, to access, monitor and/or analyze the customer's system.

FPL will file Program Standards for this program. The Program Standards will be subject to periodic review and may change over time based on factors such as, but not limited to,

technological advances, operational needs, program results, application assumptions, and incentive amounts.

Projected Participation and Savings

The projected demand and energy savings for a typical installation are shown on Attachments B and C. The energy consumption and demand reduction projections are based on evaluation results.

The projected participation in this program and associated savings are shown on Attachments A, B and C. The projected participation is based upon FPL's Adoption of Numeric Conservation Goals Report, filed February 1, 1999.

Cost-Effectiveness Analysis

FPL has used the Commission approved cost-effectiveness methodologies required by Rule 25-17.008 to determine the cost-effectiveness of this program. These cost-effectiveness analyses can be found in Appendix A. These analyses show the following benefit-cost ratios: 1.63 Participants, 1.08 RIM, and 1.53 TRC for the Commercial/Industrial Heating, Ventilating and Air Conditioning program.

Program Monitoring and Evaluation

The impact of this program on demand and energy consumption will be evaluated over time by FPL. Data will be collected from non-participants in order to establish a non-DSM technology baseline. Participants' data will be compared against non-participants' data to establish usage patterns, demand impacts and to validate engineering assumptions.

FPL will utilize any or all three major impact evaluation analysis methods in a manner that most cost-effectively meets the overall impact evaluation objectives--engineering analysis, statistical billing analysis and on-site metering research. As these evaluations proceed, the components to

be analyzed and the periods for which data is available will increase, resulting in continual enhancements in the scope and accuracy of reported evaluation results.

Program Name: Commercial/Industrial Heating, Ventilating & Air Conditioning Program

Attachment A

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level % *
2000	696,495	482,803	17,482	3.62%
2001	711,330	461,059	10,375	6.04%
2002	726,481	440,318	10,383	8.68%
2003	741,955	420,531	10,407	11.57%
2004	757,759	401,655	10,235	14.66%
2005	773,899	383,646	10,072	17.97%
2006	790,383	366,463	9,918	21.52%
2007	807,218	350,068	9,771	25.32%
2008	824,412	334,423	9,633	29.39%
2009	841,972	319,494	9,501	33.73%

Note: Column a - The total summer kw demand reduction for all HVAC equipment of C/I customers.
 Column b - The total summer kw demand reduction capability of eligible HVAC equipment.
 Column c - The annual number of participants in the program expressed in summer kw demand reduction.
 * Does not reflect participation prior to 2000.

Attachment B – At the Meter

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	2,600	0.10	1.00	45,449,431	1,744	17,482
2001	1,178	0.21	1.00	12,221,950	2,201	10,375
2002	1,104	0.22	1.00	11,459,944	2,261	10,383
2003	1,031	0.22	1.00	10,734,011	2,323	10,407
2004	986	0.23	1.00	10,093,414	2,320	10,235
2005	942	0.23	1.00	9,486,362	2,316	10,072
2006	899	0.23	1.00	8,911,146	2,313	9,918
2007	856	0.24	1.00	8,366,071	2,310	9,771
2008	815	0.24	1.00	7,849,534	2,308	9,633
2009	775	0.24	1.00	7,360,017	2,305	9,501

Attachment C - At the Generator

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	2,796	0.11	1.10	48,880,868	1,916	19,213
2001	1,267	0.23	1.10	13,144,709	2,419	11,402
2002	1,187	0.24	1.10	12,325,171	2,485	11,411
2003	1,109	0.25	1.10	11,544,430	2,553	11,438
2004	1,061	0.25	1.10	10,855,468	2,549	11,248
2005	1,013	0.25	1.10	10,202,584	2,546	11,069
2006	966	0.26	1.10	9,583,939	2,542	10,900
2007	921	0.26	1.10	8,997,710	2,539	10,739
2008	876	0.26	1.10	8,442,174	2,536	10,586
2009	833	0.27	1.10	7,915,699	2,533	10,442

COMMERCIAL/INDUSTRIAL EFFICIENT LIGHTING PROGRAM

Program Description

The Commercial/Industrial Efficient Lighting (CIL) Program is designed to reduce FPL's commercial and industrial on-peak lighting loads and energy usage. This program encourages eligible commercial and industrial customers to install high efficiency, cost effective lighting measures at time of replacement.

Through the CIL program, FPL will provide incentives to customers, or their designees, for the installation of cost effective, high efficiency lighting retrofit measures. The CIL participating customer will also receive any energy and operating savings derived from the installation of the higher efficiency lighting measures.

The proposed Commercial/Industrial Efficient Lighting Program is basically unchanged from the existing program. The only substantive change to this program is to update the maximum cost-effective incentive from \$75 per kw to \$119 per kw.

FPL plans to make commercial and industrial customers aware of this program through dealers, distributors, contractors, retail outlets and other trade allies, as well as direct contact with potential participants by FPL personnel.

Description of Program Administration

The CIL Program will be available to commercial and industrial customers who are ready to receive service from FPL and whose facility is a completed building for which a Certificate of Occupancy, or equivalent approval for occupancy, has been issued. Participating customers must replace existing lighting measures (measures are units of qualifying lighting technologies -- i.e., ballast's, fluorescent and H.I.D. fixtures) with higher efficiency lighting measures that meet the technical requirements, are cost effective, and reduce on-peak summer loads. For customers with

facilities that have twenty (20) or less lighting fixtures (a self-contained combination of luminaire, lamp and, if necessary, ballast), all qualifying measures must be performed at the same time and included on the same application. For customers with more than twenty (20) lighting fixtures, multiple incentive applications may be submitted as long as a minimum of twenty (20) measures are installed at each application.

All proposed measures must meet minimum power quality specifications for power factor and total harmonic distortion established by FPL, which will be listed in the Program Standards. Product specific power quality ratings reflecting test results from an accredited independent testing facility must be provided. The lighting levels resulting from the installation of measures must meet or exceed standard levels recommended by the Illuminating Engineering Society of North America.

Installations may be performed by either the customer or a contractor. Installations must result in a net installed kw reduction, and the customer must provide assurance that the lighting fixtures for which lighting measures are provided an incentive will operate between the hours of 3:00 P.M. and 6:00 P.M., weekdays, for the months of April through October.

Incentives will be paid to customers, or their designees, and will be based upon the net installed kw reduction for specific measures. Measures will be aggregated into groups reflecting permanence and other factors, and incentives will not exceed an average of \$119 per summer peak kw reduced for all installations. Within cost effectiveness parameters, incentives will be adjusted over time in response to changing market conditions and emergence of new measures. Current incentive values will be listed in the approved Program Standards.

All installations shall be open to inspections before and after installation and prior to payment of incentives. Qualifying measures must be purchased and installed on or after the date the modified

program is approved. Proof of purchase and purchase price must be provided to FPL prior to an incentive being paid.

FPL will file Program Standards for this program. The Program Standards will be subject to periodic review and may change over time based on factors such as, but not limited to, technological advances, operational needs, program results, application assumptions, and incentive amounts.

Projected Participation and Savings

The projected demand and energy savings for a typical installation are shown on Attachments B and C. The energy consumption and demand reduction projections are based on evaluation results.

The projected participation in this program and associated savings are shown on Attachments A, B and C. The projected participation is based upon FPL's Adoption of Numeric Conservation Goals Report, filed February 1, 1999.

Cost-Effectiveness Analysis

FPL has used the Commission approved cost-effectiveness methodologies required by Rule 25-17.008 to determine the cost-effectiveness of this program. These cost-effectiveness analyses can be found in Appendix A. These analyses show the following benefit-cost ratios: 2.34 Participants, 1.06 RIM, and 1.98 TRC for the Commercial/Industrial Efficient Lighting program.

Program Monitoring and Evaluation

The impact of this program on demand and energy consumption will be evaluated over time by FPL. Data will be collected from non-participants in order to establish a non-DSM technology baseline. Participants' data will be compared against non-participants' data to establish usage patterns, demand impacts and to validate engineering assumptions.

FPL will utilize any or all three major impact evaluation analysis methods in a manner that most cost-effectively meets the overall impact evaluation objectives--engineering analysis, statistical billing analysis and on-site metering research. As these evaluations proceed, the components to be analyzed and the periods for which data is available will increase, resulting in continual enhancements in the scope and accuracy of reported evaluation results.

Program Name: Commercial/Industrial Efficient Lighting Program

Attachment A

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level % *
2000	764,864	426,054	4,634	1.09%
2001	781,156	409,618	2,871	1.83%
2002	797,794	393,873	3,051	2.68%
2003	814,787	378,787	3,743	3.77%
2004	832,142	364,331	4,203	5.08%
2005	849,867	350,475	4,945	6.69%
2006	867,969	337,192	4,724	8.35%
2007	886,457	324,456	4,512	10.07%
2008	905,338	312,244	4,312	11.85%
2009	924,622	300,531	4,121	13.68%

Note: Column a - The total summer kw demand reduction for all lighting equipment of C/I customers.
 Column b - The total summer kw demand reduction capability of eligible lighting equipment.
 Column c - The annual number of participants in the program expressed in summer kw demand reduction.
 * Does not reflect participation prior to 2000.

Attachment B – At the Meter

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	3,699	1.13	1.00	17,142,438	5,252	4,634
2001	3,713	1.13	1.00	10,660,789	3,256	2,871
2002	3,718	1.13	1.00	11,343,769	3,460	3,051
2003	3,724	1.13	1.00	13,937,802	4,245	3,743
2004	3,728	1.13	1.00	15,668,690	4,767	4,203
2005	3,733	1.13	1.00	18,460,234	5,609	4,945
2006	3,736	1.13	1.00	17,646,417	5,358	4,724
2007	3,738	1.13	1.00	16,869,394	5,119	4,512
2008	3,741	1.13	1.00	16,131,124	4,891	4,312
2009	3,744	1.13	1.00	15,427,555	4,675	4,121

Attachment C - At the Generator

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	3,979	1.25	1.10	18,436,694	5,772	5,093
2001	3,994	1.25	1.10	11,465,680	3,578	3,155
2002	3,998	1.25	1.10	12,200,225	3,803	3,353
2003	4,005	1.25	1.10	14,990,108	4,665	4,114
2004	4,010	1.25	1.10	16,851,678	5,239	4,619
2005	4,015	1.25	1.10	19,853,983	6,165	5,435
2006	4,018	1.25	1.10	18,978,723	5,889	5,191
2007	4,021	1.25	1.10	18,143,035	5,626	4,959
2008	4,024	1.25	1.10	17,349,025	5,376	4,739
2009	4,027	1.25	1.10	16,592,337	5,138	4,529

COMMERCIAL/INDUSTRIAL BUILDING ENVELOPE PROGRAM

Program Description

The Commercial/Industrial Building Envelope (CIBE) Program is designed to reduce FPL's commercial and industrial heating, ventilating, and air conditioning (HVAC) loads. This program will encourage eligible commercial and industrial customers to increase the efficiency of qualifying portions of their building's envelope, which will reduce HVAC energy consumption and demand.

This program will provide incentives to customers, or their designees, for the installation of cost-effective high-efficiency building envelope measures and products, such as window treatments, roof/ceiling insulation and reflective roof coatings. The CIBE participating customer will also receive all energy, demand, and operational savings from the installation of the higher efficiency measures.

FPL proposes to make the following modifications to the existing Program:

- The program incentive structure will change from a range not exceeding \$155 to \$288 per kw of summer demand reduction to a range not to exceed \$150 to \$320 per kw of summer demand reduction, depending on technology.
- Reflective roof coatings will be added as a qualifying technology

FPL plans to make commercial and industrial customers aware of this program through dealers, distributors, contractors, and other trade allies, as well as through direct contact with potential participants by FPL personnel.

Description of Program Administration

The CIBE program will be available to commercial and industrial customers who are currently receiving electric service from FPL and whose facility is a completed building for which a Certificate of Occupancy, or equivalent approval for occupancy, has been issued. Participating customers must either replace specific existing building envelope components with higher efficiency products, or enhance these components with higher efficiency retrofit measures.

All measures and products will be required to meet technical eligibility requirements, which will be detailed in the CIBE Program Standards. The Program Standards will be subject to periodic review and may be modified over time in response to factors such as, but not limited to, changing program delivery strategies, market needs, program evaluation results, and incentive amounts.

In order to qualify for the CIBE program, a customer must provide assurance that the portion of the building for which an incentive is being provided is conditioned by an HVAC system using electricity as its primary fuel source. This HVAC system must operate between the hours of 3:00 P.M. and 6:00 P.M., weekdays, for the months of April through October.

Products and measures which are required by or necessary to meet the requirements of any applicable federal, state, or local municipal building or energy codes are not eligible for CIBE program incentives. Eligible installations shall be open to inspections before and after installation for verification of qualifying criteria, as well as for monitoring and assessment of the impact of the installed measures and products. The Program Standards will detail all qualifying requirements for participation in the CIBE program.

The CIBE program incentives will be capped at an average incentive of \$303 per summer kw reduced, which is supported by the cost-effectiveness analyses shown in Appendix A. Incentive payments will be tracked in a computer database over the lifetime of the CIBE program. Within cost-effectiveness parameters, incentives may be adjusted over the program's lifetime in response

to program evaluation results, changing market conditions, and the emergence of new technologies.

Incentive amounts to the customer will be based upon the efficiency of existing building envelope components as well as the efficiency of the installed measures or products. CIBE program incentives for each measure or product will be limited to provide no less than a two-year payback on the incremental installation cost to the average participant. Incentive amounts for individual participants will be limited to the actual incremental installation cost of the building envelope measures or products.

Incentive certificates will be issued to qualifying customers prior to the installation of building envelope measures and products. It is expected that these certificates will be submitted by the customer to either the contractor or to FPL for payment of the incentive. Prior to payment of incentives, FPL will require proper documentation of all installations and will make the final determination as to eligibility and applicability.

Qualifying measures and products must be installed on or after the date the CIBE program is approved.

FPL will file Program Standards for this program. The Program Standards will be subject to periodic review and may change over time based on factors such as, but not limited to, technological advances, operational needs, program results, application assumptions, and incentive amounts.

Projected Participation and Savings

The projected demand and energy savings for a typical installation are shown on Attachments B and C. The energy consumption and demand reduction projections are based on evaluation results.

The projected participation in this program and associated savings are shown on Attachments A, B and C. The projected participation is based upon FPL's Adoption of Numeric Conservation Goals Report, filed February 1, 1999.

Cost-Effectiveness Analysis

FPL has used the Commission approved cost-effectiveness methodologies required by Rule 25-17.008 to determine the cost-effectiveness of this program. These cost-effectiveness analyses can be found in Appendix A. These analyses show the following benefit-cost ratios: 1.32 Participants, 1.08 RIM, and 1.23 TRC for the Commercial/Industrial Building Envelope program.

Program Monitoring and Evaluation

The impact of this program on demand and energy consumption will be evaluated over time by FPL. Data will be collected from non-participants in order to establish a non-DSM technology baseline. Participants' data will be compared against non-participants' data to establish usage patterns, demand impacts and to validate engineering assumptions.

FPL will utilize any or all three major impact evaluation analysis methods in a manner that most cost-effectively meets the overall impact evaluation objectives--engineering analysis, statistical billing analysis and on-site metering research. As these evaluations proceed, the components to be analyzed and the periods for which data is available will increase, resulting in continual enhancements in the scope and accuracy of reported evaluation results.

Program Name: Commercial/Industrial Building Envelope Program

Attachment A

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level % *
2000	1,328,466	651,588	5,100	0.78%
2001	1,356,762	641,765	3,766	1.38%
2002	1,385,662	632,171	3,734	1.99%
2003	1,415,176	622,795	3,702	2.62%
2004	1,445,319	613,631	3,671	3.25%
2005	1,476,105	604,672	3,640	3.91%
2006	1,507,546	595,913	3,609	4.57%
2007	1,539,656	587,348	3,579	5.24%
2008	1,572,451	578,972	3,549	5.93%
2009	1,605,944	570,781	3,519	6.63%

Note: Column a - The total summer kw demand reduction for building envelope technologies of C/I customers.
 Column b - The total summer kw demand reduction capability of eligible building envelope technologies.
 Column c - The annual number of participants in the program expressed in summer kw demand reduction.
 * Does not reflect participation prior to 2000.

Attachment B – At the Meter

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	1,437	0.11	1.00	7,327,048	559	5,100
2001	1,477	0.18	1.00	5,564,602	671	3,766
2002	1,476	0.18	1.00	5,512,897	667	3,734
2003	1,475	0.18	1.00	5,461,962	662	3,702
2004	1,474	0.18	1.00	5,411,778	657	3,671
2005	1,473	0.18	1.00	5,362,330	652	3,640
2006	1,472	0.18	1.00	5,313,602	648	3,609
2007	1,471	0.18	1.00	5,265,576	643	3,579
2008	1,470	0.18	1.00	5,218,237	639	3,549
2009	1,469	0.18	1.00	5,171,571	634	3,519

Attachment C - At the Generator

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	1,545	0.12	1.10	7,880,241	614	5,605
2001	1,589	0.20	1.10	5,984,731	738	4,139
2002	1,588	0.20	1.10	5,929,121	733	4,104
2003	1,587	0.20	1.10	5,874,340	727	4,069
2004	1,586	0.20	1.10	5,820,368	722	4,034
2005	1,585	0.20	1.10	5,767,187	717	4,000
2006	1,583	0.20	1.10	5,714,779	712	3,966
2007	1,582	0.20	1.10	5,663,127	707	3,933
2008	1,581	0.20	1.10	5,612,215	702	3,900
2009	1,580	0.20	1.10	5,562,025	697	3,868

BUSINESS CUSTOM INCENTIVE PROGRAM

Program Description

The Business Custom Incentive (BCI) Program is designed to encourage the implementation by FPL's commercial and industrial customers of unique energy conservation measures or projects not covered by other FPL programs, but which cost-effectively reduce or shift electric demand from FPL's system peak.

FPL plans to make commercial and industrial customers aware of this program through direct contact between FPL field representatives and FPL's commercial/industrial customers.

FPL currently operates the Business Custom Incentive Program. There are no modifications proposed for this program.

Description of Program Administration

The program is available to all of FPL's commercial and industrial customers. In order for a conservation measure or project to be eligible, it must not be covered by another of FPL's conservation programs, and it must reduce or shift at least 25 kw between the hours of 3:00 P.M. and 6:00 P.M., weekdays, for the months of April through October. The demand and energy savings attributable to the conservation project must be verifiable through monitoring. Both retrofit and new construction projects are eligible. In order to qualify for an incentive, the Rate Impact Measure (RIM) Test benefit-to-cost ratio of a project, including the incentive, must be at least 1.01. The project must also pass the Participants Test.

Incentives are paid based on the cost-effectiveness achieved under the RIM Test. To determine the incentive amount available, the project will be evaluated utilizing the assumptions of the current integrated resource plan, either as a replacement of a portion of existing DSM resources included in the resource plan, or as an addition of resources beyond the needs satisfied by DSM

in the current resource plan. If it is determined that the project is a replacement of some existing DSM resources, it will have, with the incentive, at least the same net benefits per kw under RIM as the competing DSM, as well as a minimum 1.01 benefit-to-cost ratio against the same generation resource deferred by the competing DSM. If the project is positioned as an addition, it will, with the incentive, have at least a 1.01 RIM benefit-to-cost ratio against the next required generation resource beyond the needs satisfied by DSM in the current resource plan. FPL will determine whether the project is a replacement or addition of resources based on all project and resource plan information available at the time.

In addition, the incentive amount shall not cause the customer's payback to be less than two years. The number and timing of payments toward the total incentive amount will be determined by FPL for each project on an individual basis.

Any customer receiving an incentive under this program must remain served by FPL for its electricity-related needs for at least five years from the date of payment of the incentive, or the customer shall refund the incentive amount in full to FPL. FPL will be solely responsible for determining the eligibility of any measure or project, performing the RIM and Participant cost-effectiveness tests of any measure or project, and determining the available incentive.

The program is not available for: operational or maintenance improvements that are not permanent, equipment eligible under other FPL programs (unless bundled with and related to equipment not eligible under another FPL program), equipment or measures which FPL is actively researching, fuel switching, power generation technologies, or wheeling of any type.

Projected Participation and Savings

FPL has incorporated into the Business Custom Incentive Program the projected DSM contributions of the off peak battery charging measures included in its Adoption of Numeric Conservation Goals Report. FPL anticipates measures other than these in the Program, but cannot

meaningfully quantify the projected contributions from these measures at this time. Therefore, the projections for the Business Custom Incentive Program are those for the off peak battery charging measures. These projections are shown in Attachment A, B and C.

Cost-Effectiveness Analysis

FPL has used the Commission approved cost-effectiveness methodologies required by Rule 25-17.008 to determine the cost-effectiveness of this program. These cost-effectiveness analyses can be found in Appendix A. The analyses for the off peak battery charging measures resulted in the following benefit-cost ratios: 1.67 Participants, 1.95 RIM, and 3.00 TRC. For other measures, FPL cannot predict at this time the demand or energy reduction profiles that will result, so cost effectiveness evaluations will be performed at the time such measures are proposed for participation in the program. Only measures which at least at 1.01 Rim and Participants tests ratios will qualify in the Program.

Program Monitoring and Evaluation

All BCI projects will be monitored. Monitoring will consist of one of two levels of activity based on FPL's determination:

- **High-Moderate confidence projects** - measures with which FPL has significant experience and/or confidence as to the performance characteristics. For these projects, FPL will require, at a minimum, an engineering analysis with relevant calculations. FPL, at its determination, may also require a feasibility study performed by an independent, registered professional engineer, and/or field monitoring of the project.
- **Innovative projects** - measures with which FPL has no significant experience or confidence with the performance characteristics. For these projects, FPL will require field monitoring/measurement of the project's performance.

The costs for all monitoring equipment and activities will be recognized in the cost-effectiveness determination for each project. FPL will maintain a database of the kw and kWh savings for participants in the program.

Program Name: Business Custom Incentive Program

Attachment A

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level % *
2000	23,760	2,970	80	2.69%
2001	23,760	2,890	125	7.09%
2002	23,760	2,765	150	12.84%
2003	23,760	2,615	125	18.36%
2004	23,760	2,490	150	25.30%
2005	23,760	2,340	125	32.26%
2006	23,760	2,215	150	40.86%
2007	23,760	2,065	125	49.88%
2008	23,760	1,940	150	60.82%
2009	23,760	1,790	125	72.91%

Note: Column a - The total summer kw demand reduction for battery charging customers.
 Column b - The total summer kw demand reduction of targeted battery charging customers.
 Column c - The annual number of participants in the program expressed in summer kw demand reduction.
 * Does not reflect participation prior to 2000.

Attachment B – At the Meter

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	0	0.09	1.00	0	7	80
2001	0	0.09	1.00	0	12	125
2002	0	0.09	1.00	0	14	150
2003	0	0.09	1.00	0	12	125
2004	0	0.09	1.00	0	14	150
2005	0	0.09	1.00	0	12	125
2006	0	0.09	1.00	0	14	150
2007	0	0.09	1.00	0	12	125
2008	0	0.09	1.00	0	14	150
2009	0	0.09	1.00	0	12	125

Attachment C - At the Generator

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	0	0.10	1.10	0	8	88
2001	0	0.10	1.10	0	13	137
2002	0	0.10	1.10	0	15	165
2003	0	0.10	1.10	0	13	137
2004	0	0.10	1.10	0	15	165
2005	0	0.10	1.10	0	13	137
2006	0	0.10	1.10	0	15	165
2007	0	0.10	1.10	0	13	137
2008	0	0.10	1.10	0	15	165
2009	0	0.10	1.10	0	13	137

BUSINESS ON CALL PROGRAM

Program Description

The Business On Call Program is designed primarily to reduce system peak demand, but will also reduce energy consumption. The Business On Call Program involves the installation of direct load control equipment on customers' direct expansion (DX), central air conditioners, allowing FPL to control customer loads on an as-needed basis. This is an existing program that FPL proposes to continue offering to General Service (GS) customers. In addition, FPL will also include General Service Demand (GSD) customers as well.

FPL plans to make commercial and industrial customers aware of this program through contractors, appropriate advertising and promotion activities, as well as direct contact with potential participants by FPL personnel.

Currently, the existing Business On Call program is available to all General Service (GS) customers that have a monthly demand billing of less than 20 kw. These customers are individually metered and have DX central air conditioners serving their facility. FPL is proposing to modify this program to include customers that have a monthly billing demand between 21 and 499 kw, FPL's General Service Demand (GSD) rate. The recently completed Demand Load Control R&D Project provided the required information to ensure that customers in the 21 to 499 kw range are good candidates for this program. The revised program will offer another group of FPL customers the opportunity to participate in the load control program. The customer will not only receive a credit each month during the offering, but will also contribute to the reduction of FPL's coincident peak demands. The customer incentives will remain the same as currently cost-effective. The revised Business On Call Program tariff sheets, Schedule GSL, are attached.

Description of Program Administration

The Business On Call Program will be available to commercial and industrial customers with a demand of 499 kw or less, are individually metered and have DX central air conditioners that can

be successfully interrupted by FPL when needed. A customer may sign-up if the facility has one or more DX central air conditioning units serving the facility. Customers who participate in the Program will be eligible based on three primary factors: whether the customer has the proper type of air conditioning equipment, whether their service characteristics (voltage, etc.) are compatible with existing load control equipment, and whether the customer receives service from a substation which has load control equipment installed.

Participants in the Business On Call Program will receive an incentive payment, in the form of a monthly credit, of \$2.00 per ton of air conditioning, per month. The tonnage will be based on the nameplate rating of the customer's air conditioning system and will be rounded to the nearest one-half ton. Once the customer signs up for the program, the installation request will be sent to a contractor for installation. Once the installation is completed, the contractor sends the paperwork to FPL, the installation is then entered into the Load Management Information System (LMIS), resulting in the activation of the equipment at the customer's facility. Upon installation and inspection of the load management equipment, the customer will receive a monthly credit on his/her electric bill.

The incentives will only be paid during the cooling months of April through October. FPL maintains an internal audit trail for all incentive payments by means of its LMIS system. This computer database maintains interview and installation information for each program participant as well as a history of all incentives paid.

FPL will file Program Standards for this program. The Program Standards will be subject to periodic review and may change over time based on factors such as, but not limited to, technological advances, operational needs, program results, application assumptions, and incentive amounts.

Projected Participation and Savings

The projected demand and energy savings for a typical installation are shown on Attachments B and C. The energy consumption and demand reduction projections are based on evaluation results.

The projected participation in this program and associated savings are shown on Attachments A, B and C. The projected participation is based upon FPL's Adoption of Numeric Conservation Goals Report, filed February 1, 1999.

Cost-Effectiveness Analysis

FPL has used the Commission approved cost-effectiveness methodologies required by Rule 25-17.008 to determine the cost-effectiveness of this program. These cost-effectiveness analyses can be found in Appendix A. These analyses show the following benefit-cost ratios: infinite Participants, 1.28 RIM, and 2.72 TRC for the Business On Call program.

Program Monitoring and Evaluation

The impact of this program on demand and energy consumption will be evaluated over time by FPL. Data will be collected from non-participants in order to establish a non-DSM technology baseline. Participants' data will be compared against non-participants' data to establish usage patterns, demand impacts and to validate engineering assumptions.

FPL will utilize any or all three major impact evaluation analysis methods in a manner that most cost-effectively meets the overall impact evaluation objectives--engineering analysis, statistical billing analysis and on-site metering research. As these evaluations proceed, the components to be analyzed and the periods for which data is available will increase, resulting in continual enhancements in the scope and accuracy of reported evaluation results.

RATE SCHEDULE GSL

GENERAL SERVICE LOAD MANAGEMENT PROGRAM
 (FPL "BUSINESS ON CALL" PROGRAM)

SCHEDULE: GSL

AVAILABLE:

Available only within the geographic areas served by the Company's Load Management system.

APPLICATION:

To customers receiving service under Rate Schedules GS-1 and GSD-1 who elect to participate in this program, who utilize direct expansion central electric air conditioning and have operating hours that include 3 p.m. to 5 p.m., a minimum of four weekdays per week.

SERVICE:

The same as specified in Rate Schedules GS-1 and GSD-1.

LIMITATION OF SERVICE:

The same as specified in Rate Schedules GS-1 and GSD-1. Central electric air conditioning equipment shall be interrupted at the option of the Company by means of load management equipment installed on the Customer's premises.

MONTHLY CREDIT:

Customers receiving service under this schedule will receive a credit on the monthly bill as follows:

<u>DEVICE</u>	<u>APPLICABILITY</u>	<u>CREDIT</u>
Central electric air conditioning	April - October	\$2 per ton of air conditioning

The total monthly credit shall not exceed 40 percent of the Rate Schedules GS-1 and GSD-1 non-fuel energy and (where applicable) base demand charges actually incurred for the month and no credit will be applied to reduce the minimum bill specified on Rate Schedules GS-1 and GSD-1.

The air conditioning tonnage will be calculated by dividing the name plate BTU rating by 12,000 BTUs per ton. The tonnage will then be rounded to the nearest half-ton to calculate the monthly credit amount.

INTERRUPTION SCHEDULE:

The Customer's participating central electric air conditioning equipment will be interrupted only during the following period, except under emergency conditions:

April 1 through October 31: 2 p.m. to 10 p.m.

Central electric air conditioning equipment may be interrupted an accumulated total of 15 minutes during any 30-minute period with a cumulative interruption time of up to 180 minutes per day.

The limitations on interruptions of central electric air conditioning equipment shall not apply during emergencies on the Company's system or to interruptions caused by force majeure or other causes beyond the control of the Company.

(Continued on Sheet No. 8.110)

GENERAL SERVICE LOAD MANAGEMENT PROGRAM
(FPL "BUSINESS ON CALL" PROGRAM)

SCHEDULE: GSL

AVAILABLE:

Available only within the geographic areas served by the Company's Load Management system.

APPLICATION:

To customers receiving service under Rate Schedules GS-1 and GSD-1 who elect to participate in this program, who utilize direct expansion central electric air conditioning and have operating hours that include 3 p.m. to 5 p.m., a minimum of four weekdays per week.

SERVICE:

The same as specified in Rate Schedules GS-1 and GSD-1.

LIMITATION OF SERVICE:

The same as specified in Rate Schedules GS-1 and GSD-1. Central electric air conditioning equipment shall be interrupted at the option of the Company by means of load management equipment installed on the Customer's premises.

MONTHLY CREDIT:

Customers receiving service under this schedule will receive a credit on the monthly bill as follows:

<u>DEVICE</u>	<u>APPLICABILITY</u>	<u>CREDIT</u>
Central electric air conditioning	April - October	\$2 per ton of air conditioning

The total monthly credit shall not exceed 40 percent of the Rate Schedules GS-1 and GSD-1 non-fuel energy and (where applicable) base demand charges actually incurred for the month and no credit will be applied to reduce the minimum bill specified on Rate Schedules GS-1 and GSD-1.

The air conditioning tonnage will be calculated by dividing the name plate BTU rating by 12,000 BTUs per ton. The tonnage will then be rounded to the nearest half-ton to calculate the monthly credit amount.

INTERRUPTION SCHEDULE:

The Customer's participating central electric air conditioning equipment will be interrupted only during the following period, except under emergency conditions:

April 1 through October 31: 2 p.m. to 10 p.m.

Central electric air conditioning equipment may be interrupted an accumulated total of 15 minutes during any 30-minute period with a cumulative interruption time of up to 180 minutes per day.

The limitations on interruptions of central electric air conditioning equipment shall not apply during emergencies on the Company's system or to interruptions caused by force majeure or other causes beyond the control of the Company.

(Continued on Sheet No. 8.110)

Program Name: Business On Call Program

Attachment A

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level % *
2000	420,366	406,854	3,030	0.74%
2001	429,320	412,778	4,585	1.84%
2002	438,465	417,338	3,668	2.70%
2003	447,804	423,009	3,668	3.53%
2004	457,342	428,879	3,668	4.34%
2005	467,084	434,953	3,668	5.12%
2006	477,033	441,234	2,751	5.67%
2007	487,193	448,643	2,751	6.19%
2008	497,571	456,270	2,751	6.69%
2009	508,169	464,117	1,376	6.88%

Note: Column a - The total summer kw demand reduction of controllable load attributable to C/I customers
 Column b - The total summer kw demand reduction of controllable load for eligible C/I customers.
 Column c - The annual number of participants in the program expressed in summer kw demand reduction.
 * Does not reflect participation prior to 2000.

Attachment B – At the Meter

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	126	0.00	1.00	381,416	0	3,030
2001	87	0.00	1.00	396,771	0	4,585
2002	89	0.00	1.00	326,436	0	3,668
2003	89	0.00	1.00	326,436	0	3,668
2004	89	0.00	1.00	326,436	0	3,668
2005	89	0.00	1.00	326,436	0	3,668
2006	93	0.00	1.00	256,102	0	2,751
2007	93	0.00	1.00	256,102	0	2,751
2008	93	0.00	1.00	256,102	0	2,751
2009	93	0.00	1.00	128,051	0	1,376

Attachment C - At the Generator

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	135	0.00	1.10	410,213	0	3,330
2001	93	0.00	1.10	426,727	0	5,039
2002	96	0.00	1.10	351,082	0	4,031
2003	96	0.00	1.10	351,082	0	4,031
2004	96	0.00	1.10	351,082	0	4,031
2005	96	0.00	1.10	351,082	0	4,031
2006	100	0.00	1.10	275,437	0	3,023
2007	100	0.00	1.10	275,437	0	3,023
2008	100	0.00	1.10	275,437	0	3,023
2009	100	0.00	1.10	137,719	0	1,512

COMMERCIAL/INDUSTRIAL DEMAND REDUCTION PROGRAM

Program Description

The Commercial/Industrial Demand Reduction program is designed to reduce coincident peak demand by controlling customer loads of 200 kw or greater during periods of extreme demand or capacity shortages. Participation in the program involves the installation of direct load control equipment on the customers' electrical switch gear to allow FPL to control customer loads. Customers in the program contract for a firm demand level which may not be exceeded during control periods. All other loads are subject to direct control by FPL. Participants receive advance notification of load control events via a FPL provided notification system installed at the customer's location. Participants in the program receive a monthly credit for allowing FPL to control their loads.

FPL will make eligible commercial and industrial customers aware of this program through direct contact with their FPL Account Managers.

Description of Program Administration

The Commercial/Industrial Demand Reduction Program will be available to customers served under Rate Schedules GSD-1, GSDDT-1, GSLD-1, GSLDT-1, GSLD-2, GSLDT-2, GSLD-3 and GSDDLT-3 that allow FPL to control at least 200 kw of their load. Customers may participate in this program by allowing FPL to directly control selected switch gear in the customer's facility or to transfer the load to the customer's standby generator.

Participants in the Commercial/Industrial Demand Reduction Program will receive a monthly incentive credit of \$4.75 per kw based on their average demand during a specified "controllable rating period" less their Firm Demand. The "controllable rating period" shall be those periods specified in the Commercial/Industrial Demand Reduction Rider, which are consistent with FPL's typical system peak periods. The incentive (credit) is applied to the customer's monthly

demand charges. The customer's Firm Demand is that level of demand not subject to direct load control by FPL.

The customer begins service on the Commercial/Industrial Demand Reduction Program after successfully demonstrating its load can be reduced to the Firm Demand during a not less than one hour load control test conducted and monitored by FPL.

Participants in the Commercial/Industrial Demand Reduction Program shall not have their non-firm load served on a firm service basis until service has been terminated under the Commercial/Industrial Demand Reduction rider.

The level of "Firm Demand" shall not be exceeded during the periods when FPL is controlling the customer's load. If the customer exceeds the "Firm Demand" during a period when FPL is controlling load, then the customer will be billed \$4.75 per kw for the excess kw above the contracted firm demand for the prior 60 months, or the number of months the customer has been billed under this rate schedule, which ever is less. A customer will not be penalized or rebilled twice for the same excess kw. The customer will also be billed a penalty charge of \$1.00 per kw of excess kw for each month of rebilling. However, if the cause for the customer's failure to meet its firm demand is a result of a) force majeure events, b) maintenance of generation equipment or switch gear necessary for the implementation of load control, which is performed at a pre-arranged time and date mutually agreeable to FPL and the customer, c) adding firm load that was not previously non-firm load to the customer's facility, d) an event affecting local, state, or national security, or e) an event whose nature requires that space launch activities be placed in the critical mode (requiring a closed-loop configuration of FPL's transmission system) as designated and documented by the NASA Test Director at Kennedy Space Center and/or the USAF Range Safety Officer at Cape Canaveral Air Force Station, the re-billing and penalty will not be imposed.

Compliance with Firm Demands is verified after each event on an individual customer basis. For those customers that exceed their Firm Demand level during a load control event, the causes for exceeding Firm Demand are investigated to determine if they meet allowed exclusions to the penalty or if they are to be penalized.

A "Continuity of Service Provision" is available which allows customers to continue using power during load control events when power is available from non-FPL providers.

Service under this rider requires a five-year termination notice, except in very specific circumstances set forth in the Rider. This termination notice ensures that non-firm load that is being deferred by the avoided unit is not placed back on the FPL system without giving FPL the ability to plan and respond to that load. Customers are allowed to exit the Commercial/Industrial Demand Reduction rider under certain conditions, but will be penalized for returning to Firm Service without meeting those conditions.

To establish initial qualification for service under this program, the customer must have had a demand during the summer "controllable rating period" (3:00 P.M. to 6:00 P.M., weekdays, April through October) for at least three of the previous twelve months of at least 200 kw greater than their Firm Demand. This prevents low load factor, seasonal customers from realizing program savings without providing the corresponding benefits.

Interconnection of the FPL control circuit and customer's energy management system is allowed under special circumstances where prevention of human intervention in control activities can be assured.

The proposed Commercial/Industrial Demand Reduction Rider and Customer Agreement are attached.

FPL will file Program Standards for this program. The Program Standards will be subject to periodic review and may change over time based on factors such as, but not limited to, technological advances, operational needs, program results, application assumptions, and incentive amounts.

Projected Participation and Savings

The projected demand and energy savings for a typical installation are shown on Attachments B and C. The types of customers that are potential candidates for this program include office buildings, water and sewer plants, hospitals, computer centers and industrial process customers such as steel mills. The energy consumption and demand reduction projections are based on FPL's experience with its other load control programs.

The projected participation in this program and associated savings are shown on Attachments A, B and C. The projected participation is based upon FPL's Adoption of Numeric Conservation Goals Report, filed February 1, 1999.

Cost-Effectiveness Analysis

FPL has used the Commission approved cost-effectiveness methodologies required by Rule 25-17.008 to determine the cost-effectiveness of this program. These cost-effectiveness analyses can be found in Appendix A. These analyses show the following benefit-cost ratios: infinite Participants, 1.13 RIM and 7.28 TRC for the Commercial/Industrial Demand Reduction program.

Program Monitoring and Evaluation

The system that is utilized to activate demand reductions is also used to monitor individual participant's performance during control/interruption periods. A check of individual participant's performance is done following each of these control/interruption periods. In addition, FPL continually monitors the status of the options through periodic reviews of program performance

indicators (no. of signups, etc.) . The information necessary to monitor these program performance indicators is maintained in computer and/or paper files.

**COMMERCIAL/INDUSTRIAL DEMAND REDUCTION RIDER
& CUSTOMER AGREEMENT**

FLORIDA POWER & LIGHT COMPANY**COMMERCIAL INDUSTRIAL DEMAND REDUCTION RIDER (CDR)
(OPTIONAL)**AVAILABLE:

In all territory served. Available to any commercial or industrial customer receiving service under Rate Schedules GSD-1, GSDT-1, GSLD-1, GSLDT-1, GSLD-2, GSLDT-2, GSLD-3, or GSLDT-3, through the execution of a Commercial Industrial Demand Reduction Agreement in which the load control provisions of this rider can feasibly be applied.

LIMITATION OF AVAILABILITY:

This rider may be modified or withdrawn subject to determinations made under Commission Rules 25-17.0021(4), F.A.C., Goals for Electric Utilities and 25-6.0438, F.A.C., Non-Firm Electric Service - Terms and Conditions or any other Commission determination.

APPLICATION:

For electric service provided to any commercial or industrial customer receiving service under Rate Schedule GSD-1, GSDT-1, GSLD-1, GSLDT-1, GSLD-2, GSLDT-2, GSLD-3, or GSLDT-3, who as a part of the Commercial Industrial Demand Reduction Agreement between the Customer and the Company, agrees to allow the Company to control at least 200 kW of the Customer's load during periods when the Company is controlling load. A Customer shall enter into a Commercial Industrial Reduction Demand Agreement with the Company to be eligible for this rider. To establish the initial qualification for this rider, the Customer must have had a Utility Controlled Demand during the summer Controllable Rating Period (April through October) for at least three out of seven (7) months of at least 200 kW greater than the Firm Demand level specified in Section 4 of the Commercial Industrial Demand Reduction Agreement. The Utility Controlled Demand shall not be served on a firm service basis until service has been terminated under this rider.

LIMITATION OF SERVICE:

Customers participating in the General Service Load Management Program (FPL "Business On Call" Program) are not eligible for this rider.

MONTHLY RATE:

All rates and charges under Rate Schedules GSD-1, GSDT-1, GSLD-1, GSLDT-1, GSLD-2, GSLD-3, GSLDT-3 shall apply. In addition, the applicable Monthly Administrative Adder and Utility Controlled Demand Credit shall apply.

MONTHLY ADMINISTRATIVE ADDER:

<u>Rate Schedule</u>	<u>Adder</u>
GSD-1	\$ 565.00
GSDT-1	\$ 558.50
GSLD-1, GSLDT-1	\$ 559.00
GSLD-2, GSLDT-2	\$ 430.00
GSLD-3, GSLDT-3	\$ 2,800.00

UTILITY CONTROLLED DEMAND CREDIT:

A monthly credit of \$ 4.75 per kW is allowed based on the Customer's Utility Controlled Demand.

UTILITY CONTROLLED DEMAND:

The Utility Controlled Demand for a month in which there are no load control events during the Controllable Rating Period shall be the sum of the Customer's kWh usage during the hours of the applicable Controllable Rating Period, divided by the total number of hours in the applicable Controllable Rating Period, less the Customer's Firm Demand.

In the event of Load Control occurring during the Controllable Rating Period, the Utility Controlled Demand shall be the sum of the Customer's kWh usage during the hours of the applicable Controllable Rating Period less the sum of the Customer's kWh usage during the load control period, divided by the number of non-load control hours occurring during the applicable Controllable Rating Period, less the Customer's Firm Demand.

(Continued on Sheet No. 8.681)

FLORIDA POWER & LIGHT COMPANY

(Continued from Sheet No. 8.680)

CONTROLLABLE RATING PERIODS:

November 1 through March 31: Mondays through Fridays during the hours from 6 a.m. to 9 a.m. excluding Thanksgiving Day, Christmas Day, and New Year's Day.

April 1 through October 31: Mondays through Fridays during the hours from 3 p.m. to 6 p.m. excluding Memorial Day, Independence Day, and Labor Day.

FIRM DEMAND:

The Customer's monthly Firm Demand shall be the lesser of the "Firm Demand" level specified in the Commercial Industrial Demand Reduction Agreement with the Company, or the Customer's maximum demand during the applicable Controllable Rating Period. The level of "Firm Demand" specified in the Commercial Industrial Demand Reduction Agreement shall not be exceeded during the periods when the Company is controlling the Customer's load.

LOAD CONTROL:Control Condition:

The Customer's controllable load served under this rider is subject to control when such control alleviates any emergency conditions or capacity shortages, either power supply or transmission, or whenever system load, actual or projected, would otherwise require the peaking operation of the Company's generators. Peaking operation entails taking base loaded units, cycling units or combustion turbines above the continuous rated output, which may overstress the generators.

Frequency: The Control Conditions will typically result in less than fifteen (15) control periods per year and will not exceed twenty-five (25) control periods per year. Typically, the Company will not initiate a control period within six (6) hours of a previous control period.

Notice: The Company will provide one (1) hour's advance notice or more to a Customer prior to controlling the Customer's controllable load. Typically, the Company will provide advance notice of four (4) hours or more prior to a control period.

Duration: The duration of a single period of load control will typically be three (3) hours and will not exceed six (6) hours.

In the event of an emergency, such as a Generating Capacity Emergency (see Definitions) or a major disturbance, greater frequency, less notice, or longer duration than listed above may occur. If such an emergency develops, the Customer will be given 15 minutes' notice. Less than 15 minutes' notice may only be given in the event that failure to do so would result in loss of power to firm service customers or the purchase of emergency power to serve firm service customers. The Customer agrees that the Company will not be liable for any damages or injuries that may occur as a result of providing no notice or less than one (1) hour's notice.

Customer Responsibility:

Upon the successful installation of the load control equipment, a test of this equipment will be conducted as specified in the Commercial Industrial Demand Reduction Demand Agreement. Testing will be conducted outside of the Controllable Rating Periods at a mutually agreeable time and date.

The Customer shall be responsible for providing and maintaining the appropriate equipment required to allow the Company to electrically control the Customer's load, as specified in the Commercial Industrial Demand Reduction Agreement.

The Company will control the controllable portion of the Customer's service for a one-hour period (excluding the Controllable Rating Periods) once per year for Company testing purposes on the first Wednesday in November or, if not possible, at a mutually agreeable time and date, if the Customer's load has not been successfully controlled during a load control event in the previous twelve (12) months. Testing purposes include the testing of the load control equipment to ensure that the load is able to be controlled within the agreed specifications.

LOAD CONTROL PERIOD:

All hours established by the Company during a monthly billing period in which:

1. the Customer's load is controlled, or
2. the Customer is billed pursuant to the Continuity of Service Provision.

(Continued on Sheet No. 8.682)

FLORIDA POWER & LIGHT COMPANY

(Continued from Sheet No. 8.681)

PROVISIONS FOR ENERGY USE DURING CONTROL PERIODS:

Customers notified of a load control event should not exceed their Firm Demand during periods when the Company is controlling load. However, electricity will be made available during control periods if the Customer's failure to meet its Firm Demand is a result of one of the following conditions:

1. Force Majeure events (see Definitions) which can be demonstrated to the satisfaction of the Company, or
2. maintenance of generation equipment necessary for the implementation of load control which is performed at a pre-arranged time and date mutually agreeable to the Company and the Customer (See Special Provisions), or
3. adding firm load that was not previously non-firm load to the Customer's facility, or
4. an event affecting local, state or national security, or
5. an event whose nature requires that space launch activities be placed in the critical mode (requiring a closed-loop configuration of FPL's transmission system) as designated and documented by the NASA Test Director at Kennedy Space Center and/or the USAF Range Safety Officer at Cape Canaveral Air Force Station.

The Customer's energy use (in excess of the Firm Demand) for the conditions listed above will be billed pursuant to the Continuity of Service Provision. For periods during which power under the Continuity of Service Provision is no longer available, the Customer will be billed, in addition to the normal charges provided hereunder, the greater of the Company's As-Available Energy cost, or the most expensive energy (calculated on a cents per kilowatt-hour basis) that FPL is purchasing or selling during that period, less the applicable class fuel charge. As-Available Energy cost is the cost calculated for Schedule COG-1 in accordance with FPSC Rule 25-17.0825, F.A.C.

If the Company determines that the Customer has utilized one or more of the exceptions above in an excessive manner, the Company will terminate service under this rider as described in TERM OF SERVICE.

If the Customer exceeds the Firm Demand during a period when the Company is controlling load for any reason other than those specified above, then the Customer will be:

1. billed a \$4.75 charge per kW of excess kW for the prior sixty (60) months or the number of months the Customer has been billed under this rider, whichever is less, and
2. billed a penalty charge of \$1.00 per kW of excess kW for each month of rebilling.

Excess kW for rebilling and penalty charges is determined by taking the difference between the Customer's kWh usage during the load control period divided by the number of hours in the load control period and the Customer's "Firm Demand". The Customer will not be rebilled or penalized twice for the same excess kW in the calculation described above.

(Continued on Sheet No. 8.683)

FLORIDA POWER & LIGHT COMPANY

(Continued from Sheet No. 8.682)

TERM OF SERVICE:

During the first year of service under this rider, the Customer will determine whether or not this rider is appropriate for the Customer and may request to exit the program subject to the Provisions for Early Termination. It is intended that the Company will continue to provide and the Customer will continue to take service under this rider for the life of the generating unit which has been avoided by the rider. There is, however, a five-year termination notice provision which will allow either the Customer or the Company to terminate service under this rider should there be circumstances under which the termination of the Customer's participation or the Company's offering of this rider is desired.

Service under this rider shall continue, subject to Limitation of Availability, until terminated by either the Company or the Customer upon written notice given at least five (5) years prior to termination.

The Company may terminate service under this rider at any time for the Customer's failure to comply with the terms and conditions of this rider or the Commercial Industrial Demand Reduction Agreement. Prior to any such termination, the Company shall notify the Customer at least ninety (90) days in advance and describe the Customer's failure to comply. The Company may then terminate service under this rider at the end of the 90-day notice period unless the Customer takes measures necessary to eliminate, to the Company's satisfaction, the compliance deficiencies described by the Company. Notwithstanding the foregoing, if, at any time during the 90-day period, the Customer either refuses or fails to initiate and pursue corrective action, the Company shall be entitled to suspend forthwith the monthly credits under this rider and bill the Customer under the otherwise applicable firm service rate schedule.

PROVISIONS FOR EARLY TERMINATION:

Termination of this rider, with less than five (5) years' written notice, for which the Customer would qualify, may be permitted if it can be shown that such termination is in the best interests of the Customer, the Company and the Company's other customers.

If the Customer no longer wishes to receive electric service in any form from the Company, or decides to cogenerate to serve all of the previously Utility Controlled Demand and to take interruptible standby service from the Company, the Customer may terminate the Commercial Industrial Demand Reduction Agreement by giving at least thirty (30) days' advance written notice to the Company.

If service under this rider is terminated for any reason, the Customer will not be rebilled as specified in Charges for Early Termination if:

- a. it has been demonstrated to the satisfaction of the Company that the impact of such transfer of service on the economic cost-effectiveness of the Company's Commercial Industrial Demand Reduction Rider is in the best interests of the Customer, the Company and the Company's other customers, or
- b. the Customer is required to terminate this rider as a result of Commission Rule 25-6.0438, F.A.C., or a Commission decision pursuant to this rule, or
- c. the termination of service under this rider is the result of either the Customer's ceasing operations at its facility (without continuing or establishing similar operations elsewhere in the Company's service area), or a decision by the Customer to cogenerate to serve all of the previously utility controlled load and to take interruptible standby service from the Company, or
- d. any other Customer(s) with demand reduction equivalent to, or greater than, that of the existing Customer(s) agree(s) to take service under this rider and the MW demand reduction commitment to the Company's Generation Expansion Plan has been met and the new replacement Customer(s) has (have) the equipment installed and is (are) available to perform load control, or
- e. FPL determines that the Customer's MW reduction is no longer needed in accordance with the FPL Numeric Commercial/Industrial Conservation Goals.

(Continued on Sheet No. 8.684)

FLORIDA POWER & LIGHT COMPANY

(Continued from Sheet No. 8.683)

In the event the Customer pays the Charges for Early Termination because no replacement Customer(s) is (are) available as specified in paragraph d. above, but the replacement Customer(s) does(do) become available within 12 months from the date of termination of service under this rider or FPL later determines that there is no need for the MW reduction in accordance with the FPL Numeric Commercial/Industrial Conservation Goals, then the Customer will be refunded all or part of the rebilling and penalty in proportion to the amount of MW obtained to replace the lost capacity less the additional cost incurred by the Company to serve those MW during any load control periods which may occur before the replacement Customer(s) became available.

Charges for Early Termination:

In the event that:

- a) service is terminated by the Company for any reason(s) specified in this section, or
- b) there is a termination of the Customer's existing service and, within twelve (12) months of such termination of service, the Company receives a request to re-establish service of similar character under a firm service or a curtailable service rate schedule, or under this rider with a shift from non-firm load to firm service,
 - i) at a different location in the Company's service area, or
 - ii) under a different name or different ownership, or
 - iii) under other circumstances whose effect would be to increase firm demand on the Company's system without the requisite five (5) years' advance written notice, or
- c) the Customer transfers the controllable portion of the Customer's load to "Firm Demand" or to a firm or a curtailable service rate schedule without providing at least five (5) years' advance written notice,

then the Customer will be:

1. rebilled \$ 4.75 per kW of Utility Controlled Demand for the shorter of (a) the most recent prior sixty (60) months during which the Customer was billed for service under this rider, or (b) the number of months the Customer has been billed under this rider, and
2. billed a penalty charge of \$1.00 per kW of Utility Controlled Demand times the number of months rebilled in No. 1 above.

SPECIAL PROVISIONS:

1. Control of the Customer's load shall be accomplished through the Company's load management systems by use of control circuits connected directly to the Customer's switching equipment or the Customer's load may be controlled by use of an energy management system where the firm demand level can be established or modified only by means of joint access by the Customer and the Company.
2. The Customer shall grant the Company reasonable access for installing, maintaining, inspecting, testing and/or removing Company-owned load control equipment.
3. It shall be the responsibility of the Customer to determine that all electrical equipment to be controlled is in good repair and working condition. The Company will not be responsible for the repair, maintenance or replacement of the Customer's electrical equipment.
4. The Company is not required to install load control equipment if the installation cannot be economically justified.
5. Credits under this rider will commence after the installation, inspection and successful testing of the load control equipment.
6. Maintenance of equipment (including generators) necessary for the implementation of load control will not be scheduled during periods where the Company projects that it would not be able to withstand the loss of its largest unit and continue to serve firm service customers.

(Continued on Sheet No. 8.685)

FLORIDA POWER & LIGHT COMPANY

(Continued from Sheet No. 8684)

CONTINUITY OF SERVICE PROVISION:

In order to minimize the frequency and duration of interruptions, the Company will attempt to obtain reasonably available additional capacity and/or energy during periods for which interruptions may be requested. The Company's obligation in this regard is no different than its obligation in general to purchase power to serve its Customers during a capacity shortage; in other words, the Company is not obligated to account for, or otherwise reflect in its generation planning and construction, the possibility of providing capacity and/or energy under this Continuity of Service Provision. Any non-firm customers so electing to receive capacity and/or energy which enable(s) the Company to continue service to the Customer's non-firm loads during these periods will be subject to the additional charges set forth below.

In the event a Customer elects not to have its non-firm load interrupted pursuant to this Rider, the Customer shall pay, in addition to the normal charges provided hereunder, a charge reflecting the additional costs incurred by the Company in continuing to provide service, less the applicable class fuel charge for the period during which the load would otherwise have been controlled (see Sheet No. 8.030). This incremental charge shall apply to the customer's non-firm load for all consumption above the Customer's Firm Demand during the time in which the non-firm load would otherwise have been controlled. If, for any reason during such period, this capacity and/or energy is (are) no longer available or cannot be accommodated by the Company's system, the terms of this Special Provision will cease to apply and interruptions will be required for the remainder of such period unless energy use is for one of the conditions outlined under "Provisions for Energy Use During Control Periods".

Any customer served under this rider may elect to minimize the interruptions through the procedure described above. The initial election must be made in the Commercial Industrial Demand Reduction Agreement. Any adjustment or change to the election must be provided to the Company with at least 24 hours' written notice (not including holidays and weekends) and must be by mutual agreement, in writing, between the Customer and the Company. In such case, the written notice will replace any prior election with regard to this Continuity of Service Provision.

RULES AND REGULATIONS:

Service under this rider is subject to orders of governmental bodies having jurisdiction and to the currently effective "General Rules and Regulations for Electric Service" on file with the Florida Public Service Commission. In case of conflict between any provision(s) of this rider and said "General Rules and Regulations for Electric Service", the provision(s) of this rider shall apply.

DEFINITIONS:

Generating Capacity Emergency:

A Generating Capacity Emergency exists when any one of the electric utilities in the state of Florida has inadequate generating capability, including purchased power, to supply its firm load obligations.

Force Majeure:

Force Majeure for the purposes of this rider means causes not within the reasonable control of the Customer affected and not caused by the negligence or lack of due diligence of the Customer. Such events or circumstances may include acts of God, strikes, lockouts or other labor disputes or difficulties, wars, blockades, insurrections, riots, environmental constraints lawfully imposed by Federal, State, or local governmental bodies, explosions, fires, floods, lightning, wind, accidents to equipment or machinery, or similar occurrences.

FLORIDA POWER & LIGHT COMPANY

COMMERCIAL INDUSTRIAL DEMAND REDUCTION RIDER AGREEMENT

This Agreement is made this _____ day of _____, _____, by and between _____ (hereinafter called the "Customer"), located at _____ in _____, Florida, and FLORIDA POWER & LIGHT COMPANY, a corporation organized under the laws of the State of Florida (hereinafter called the "Company").

WITNESSETH

For and in consideration of the mutual covenants and agreements expressed herein, the Company and the Customer agree as follows:

1. The Company agrees to furnish and the Customer agrees to take electric service subject to the terms and conditions of the Company's Commercial Industrial Demand Reduction Rider ("Rider CDR") as currently approved or as may be modified from time to time by the Florida Public Service Commission ("Commission"). The Customer understands and agrees that, whenever reference is made in this Agreement to Rider CDR, both parties intend to refer to Rider CDR as it may be modified from time to time. A copy of the Company's presently approved Rider CDR is attached hereto as Exhibit A, and Rider CDR is hereby made an integral part of this Agreement.
2. Service under Rider CDR shall continue, subject to Limitation of Availability, until terminated by either the Company or the Customer upon written notice given at least five (5) years prior to termination.
3. Service under Rider CDR will be subject to determinations made under Commission Rules 25-17.0021(4), F.A.C. Goals for Electric Utilities and 25-6.0438, F.A.C., Non-Firm Service -Terms and Conditions, or any other Commission determination(s).
4. The Customer agrees to not exceed a usage level of _____ kW ("Firm Demand") during the periods when the Company is controlling the Customer's service. If the Customer chooses to operate backup generation equipment in parallel with FPL, the Customer shall enter into an interconnection agreement with the Company prior to operating such equipment in parallel with the Company's electrical system. The "Firm Demand" level (as applicable) shall not be exceeded during periods when the Company is controlling load. Upon mutual agreement of the Company and the Customer, the Customer's "Firm Demand" may be subsequently raised or lowered, so long as the change in the "Firm Demand" level is not a result of a transfer of load from the controllable portion of the Customer's load. The Customer shall notify the Company, in writing, at least ninety (90) days prior to adding firm load.
5. Prior to the Customer's receipt of service under Rider CDR, the Customer must provide the Company access at any reasonable time to inspect any and all of the Customer's load control equipment, and must also have received approval from the Company that the load control equipment is satisfactory to effect control of the Customer's load. The Customer shall be responsible for meeting any applicable electrical code standards and legal requirements pertaining to the installation, maintenance and repair of the load control equipment. It is expressly understood that the initial approval and later inspections by the Company are not for the purpose of, and the Customer is not to rely upon any such inspection(s) for, determining whether the load control equipment has been adequately maintained or is in compliance with any applicable electrical code standards or legal requirements.

(Continued on Sheet No. 9.496)

FLORIDA POWER & LIGHT COMPANY

(Continued from Sheet No. 9.495)

6. The Customer agrees to be responsible for the determination that all electrical equipment to be controlled is in good repair and working condition. The Company shall not be responsible for the repair, maintenance or replacement of the Customer's equipment.
7. Within two (2) years of this Agreement, the Customer agrees to perform the necessary changes to allow control of a portion of the Customer's load. Should the Customer fail to complete the above work by the above-specified date, or should the Customer fail to begin taking service under Rider CDR during that year, this Agreement shall become null and void unless otherwise agreed by the Company.
8. Upon completion of the installation of the load control equipment, a test of this equipment will be conducted. Testing will be conducted outside of the Controllable Rating Periods, at a mutually agreeable time and date. Written notice of the test shall be provided to the Company at least five (5) business days in advance of the date of the test, and the Company shall be afforded the opportunity to witness the test. The test of the load control equipment will consist of a period of load control of not less than one hour. Effective upon the completion of the testing of the load control equipment, the Customer will agree to a "Firm Demand". Service under Rider CDR cannot commence prior to the installation of load control equipment and the successful completion of the test.
9. In order to minimize the frequency and duration of interruptions under the Commercial Industrial Demand Reduction Rider, the Company will attempt to obtain reasonably available additional capacity and/or energy under the Continuity of Service Provision in Rider CDR. The Customer elects/does not elect to continue taking service under the Continuity of Service Provision. Service will be provided only if capacity and/or energy can be obtained by the Company and can be transmitted and distributed to non-firm Customers without any impairment of the Company's system or service to firm Customers. The Customer may countermand the election specified above by providing written notice to the Company pursuant to the guidelines set forth in Rider CDR. The Company's obligations under this Section 9 are subject to the terms and conditions specifically set forth in Rider CDR.
10. The Company may terminate this Agreement at any time if the Customer's load control equipment fails to permit the Company to effect control of the Customer's load. Prior to any such termination, the Company shall notify the Customer at least ninety (90) days in advance and describe the failure or malfunction of the Customer's load control equipment. The Company may then terminate this Agreement at the end of the 90-day notice period unless the Customer takes measures necessary to remedy, to the Company's satisfaction, the deficiencies in the load control equipment. Notwithstanding the foregoing, if at any time during the 90-day period, the Customer either refuses or fails to initiate and pursue corrective action, the Company shall be entitled to suspend forthwith the monthly credit under Rider CDR, bill the Customer under the otherwise applicable firm service rate schedule, and to apply the rebilling and penalty provisions enumerated under "Charges for Early Termination" in Rider CDR.
11. The Customer agrees that the Company will not be liable for any damages or injuries that may occur as a result of control of electric service pursuant to the terms of Rider CDR by remote control or otherwise.
12. This Agreement supersedes all previous agreements and representations, either written or oral, heretofore made between the Company and the Customer with respect to matters herein contained.
13. This Agreement may not be assigned by the Customer without the prior written consent of the Company. The Customer shall, at a minimum, provide to the Company a copy of the articles of incorporation or partnership agreement of the proposed assignee, and a copy of such assignee's most recent annual report at the time an assignment is requested.
14. This Agreement is subject to the Company's "General Rules and Regulations for Electric Service" and the Rules of the Commission.

(Continued on Sheet No. 9.497)

FLORIDA POWER & LIGHT COMPANY

(Continued from Sheet No. 9.496)

IN WITNESS WHEREOF, the Customer and the Company have caused this Agreement to be duly executed as of the day and year first above written.

CUSTOMER (private)

Company: _____

Signed: _____

Name: _____

Title: _____

FLORIDA POWER & LIGHT COMPANY

Signed: _____

Name: _____

Title: _____

CUSTOMER (public)

Governmental Entity: _____

Signed: _____

Name: _____

Title: _____

Attest:

By: _____

Clerk/Deputy Clerk

Program Name: Commercial/Industrial Demand Reduction Program

Attachment A

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level %
2000	2,784,654	2,375,814	0	0.000%
2001	2,843,151	2,434,311	5,502	0.226%
2002	2,899,792	2,485,449	5,502	0.443%
2003	2,954,324	2,534,479	5,502	0.651%
2004	3,006,844	2,581,497	5,502	0.853%
2005	3,058,303	2,627,454	5,502	1.047%
2006	3,108,423	2,672,072	4,585	1.201%
2007	3,159,830	2,718,894	4,585	1.349%
2008	3,211,625	2,766,105	4,585	1.492%
2009	3,268,829	2,818,723	3,210	1.578%

Note: Column a - The total summer kw demand reduction of capability of C/I customers with loads greater than 200

kw.

Column b - The total summer kw demand reduction capability of eligible C/I customers.

Column c - The annual number of participants in the program expressed in summer kw demand reduction.

Attachment B – At the Meter

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	0	0.00	0.00	0	0	0
2001	48	1.00	1.00	262,005	5,502	5,502
2002	48	1.00	1.00	262,005	5,502	5,502
2003	48	1.00	1.00	262,005	5,502	5,502
2004	48	1.00	1.00	262,005	5,502	5,502
2005	48	1.00	1.00	262,005	5,502	5,502
2006	48	1.00	1.00	218,338	4,585	4,585
2007	48	1.00	1.00	218,338	4,585	4,585
2008	48	1.00	1.00	218,338	4,585	4,585
2009	48	1.00	1.00	152,836	3,210	3,210

Attachment C - At the Generator

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	0	0.00	0.00	0	0	0
2001	51	1.07	1.07	281,787	5,908	5,908
2002	51	1.07	1.07	281,787	5,908	5,908
2003	51	1.07	1.07	281,787	5,908	5,908
2004	51	1.07	1.07	281,787	5,908	5,908
2005	51	1.07	1.07	281,787	5,908	5,908
2006	51	1.07	1.07	234,822	4,923	4,923
2007	51	1.07	1.07	234,822	4,923	4,923
2008	51	1.07	1.07	234,822	4,923	4,923
2009	51	1.07	1.07	164,376	3,446	3,446

BUSINESS ENERGY EVALUATION

Program Description

The Business Energy Evaluation program is designed to encourage energy efficiency in commercial and industrial facilities by identifying DSM opportunities and providing recommendations to the customer. Energy efficiency encompasses analysis of all energy sources and customer energy-related productivity. Customer eligibility in FPL's other commercial and industrial programs will be determined and participation promoted through the evaluation.

There are no substantive changes to the existing Program.

The Business Energy Evaluation program will:

- Provide for different levels of evaluation complexity (there can be less complex and more complex levels).
- Allow for cost sharing of more complex evaluations by the customer and FPL. The standard level field evaluations will still be free.
- Allow for evaluations without an on-site visit. This could be accomplished via phone or Internet.
- Perform evaluations based on the needs of our commercial and industrial customers rather than having a goal.

FPL plans to make commercial and industrial customers aware of this program through advertising, trade allies, such as architects, engineers and educational systems. In addition, customers will have direct contact with FPL personnel.

Description of Program Administration

All commercial and industrial customers are eligible for this program whether they have existing facilities or are planning, expanding or renovating facilities in FPL's service territory. Customers are eligible for as many evaluations as necessary to encourage implementation of recommendations.

The program will be free of charge to eligible customers for standard level evaluations. For more complex evaluations, the customer and FPL may share in the cost. While on-site visits are encouraged, they are not necessary as long as the customer's evaluation needs are met.

It will be recommended to the customer that the evaluation be used as a tool to examine energy efficient opportunities in the customer's facility and to determine eligibility in all of FPL's other commercial and industrial DSM programs. However, in cases where the customer wants to focus on the implementation of one technology at a time, the evaluation is a less effective tool. Therefore, while the Business Energy Evaluation is encouraged, it is not a requirement for eligibility in the other FPL commercial and industrial programs. The eligibility requirements for the other programs will be determined consistent with their program guidelines.

FPL will file Program Standards for this program. The Program Standards will be subject to periodic review and may change over time based on factors such as, but not limited to, technological advances, operational needs, program results, and application assumptions.

Projected Participation and Savings

Electric demand and energy savings from implementing the Business Energy Evaluation recommendations will occur, but they will not be directly claimed through the Business Energy Evaluation program. Instead, some savings will be claimed through FPL's other commercial and industrial incentive programs. There should also be additional savings resulting from recommendations identified in the evaluation that are not addressed by FPL's programs.

Based on historical participation and current FPL program offerings, it is estimated that 5,000 evaluations will be performed per year. The actual participation will be market driven.

Cost-Effectiveness Analysis

Since FPL does not project savings for this program, a cost-effectiveness analysis is not directly performed for this program. Cost-effectiveness has been shown for other programs served by this program, and that approach avoids double counting benefits or attempting to quantify benefits beyond other programs.

The costs to administer the program are ultimately reflected in electric rates to the customer through the Energy Conservation Cost Recovery clause. Therefore, to reduce upward pressure on electric rates, all efforts will be made to keep the program costs to a minimum.

Program Monitoring and Evaluation

This program will be evaluated annually by the number of evaluations performed and the cost per evaluation. It will be indirectly evaluated for its effectiveness in providing leads for FPL's other commercial and industrial programs. A computerized database will be used to track and record the effectiveness of the evaluations.

Program Name: Business Energy Evaluation Program

Attachment A

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level % *
2000	430,477	430,477	5,000	1.2%
2001	439,520	439,520	5,000	2.3%
2002	448,276	448,276	5,000	3.3%
2003	456,706	456,706	5,000	4.4%
2004	464,825	464,825	5,000	5.4%
2005	472,780	472,780	5,000	6.3%
2006	480,528	480,528	5,000	7.3%
2007	488,475	488,475	5,000	8.2%
2008	496,482	496,482	5,000	9.1%
2009	505,325	505,325	5,000	9.9%

Note: Column a - The total number of commercial and industrial customers.
 Column b - The total number of eligible commercial and industrial customers.
 Column c - The annual number of participants in the program.
 * Does not reflect participation prior to 2000.

Attachment B – At the Meter

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	N/A	N/A	N/A	N/A	N/A	N/A
2001	N/A	N/A	N/A	N/A	N/A	N/A
2002	N/A	N/A	N/A	N/A	N/A	N/A
2003	N/A	N/A	N/A	N/A	N/A	N/A
2004	N/A	N/A	N/A	N/A	N/A	N/A
2005	N/A	N/A	N/A	N/A	N/A	N/A
2006	N/A	N/A	N/A	N/A	N/A	N/A
2007	N/A	N/A	N/A	N/A	N/A	N/A
2008	N/A	N/A	N/A	N/A	N/A	N/A
2009	N/A	N/A	N/A	N/A	N/A	N/A

Attachment C - At the Generator

Year	Per Customer KWh Reduction	Per Customer Winter kw Reduction	Per Customer Summer kw Reduction	Total Annual KWh Reduction	Total Annual Winter kw Reduction	Total Annual Summer kw Reduction
2000	N/A	N/A	N/A	N/A	N/A	N/A
2001	N/A	N/A	N/A	N/A	N/A	N/A
2002	N/A	N/A	N/A	N/A	N/A	N/A
2003	N/A	N/A	N/A	N/A	N/A	N/A
2004	N/A	N/A	N/A	N/A	N/A	N/A
2005	N/A	N/A	N/A	N/A	N/A	N/A
2006	N/A	N/A	N/A	N/A	N/A	N/A
2007	N/A	N/A	N/A	N/A	N/A	N/A
2008	N/A	N/A	N/A	N/A	N/A	N/A
2009	N/A	N/A	N/A	N/A	N/A	N/A

COGENERATION AND SMALL POWER PRODUCTION

Program Description

FPL's Cogeneration and Small Power Production program was established in order to implement and execute FPL's obligations to facilities defined as Qualifying Facilities ("QFs") under the Public Utility Regulatory Policies Act of 1978 ("PURPA") and Florida Public Service Commission rules. A QF may be classified as either a cogeneration facility ("Cogenerator") or a small power production facility ("SPP"). A Cogenerator is a facility which produces electric energy and forms of useful thermal energy (such as heat or steam) used for industrial, commercial, heating or cooling purposes, through the sequential use of energy. A SPP facility is one which is less than 80 MW and that produces electric energy using, as a primary source of fuel, biomass, waste, renewable resources or any combination thereof.

The Federal Energy Commission ("FERC") has adopted rules 18 CFR 292.01 et.al., which guide the states in their implementation of PURPA. The State of Florida has also enacted legislation relating to cogeneration and small power production facilities (F.S. §366.051 and §366.80 - 366.85). The FPSC has implemented these various mandates through the adoption of rules relating to the purchase of power and energy from QFs (F.A.C. Sections 25-17.080 et. al.).

The objectives of FPL's Cogeneration and Small power Production program are to comply with all regulatory requirements and applicable law relating to the purchase of energy and capacity from Cogenerators and SPPs; interconnect as necessary to accomplish purchases, sales, operation in parallel; transmit energy and capacity to another utility for purchase by that utility; and assist customers in the evaluation of potential cogeneration applications, including self-generation while minimizing costs to FPL's ratepayers and shareholders.

Description of Program Administration

FPL's Cogeneration and Small Power Production Program is intended to facilitate the installation of Cogenerators and SPPs and the administration of contracts with such facilities. The administration of FPL's program to comply with all regulatory requirements and applicable laws relating to the purchase of energy and capacity from Cogenerators and SPPs, includes activities associated with:

- interconnection,
- installation, inspection, calibration and maintenance of meters,
- administration of power billing and accounting processes,
- FPSC reporting,
- Contract negotiation,
- contract administration, including legal expenses resulting from litigation,
- facility inspections and audits,
- communications,
- operating coordination, and
- problem resolution.

Utility payments for as-available energy made to qualifying facilities pursuant to the utility's tariff are recoverable by the utility through the Commission's periodic review of fuel and purchased power. Utility payments to QFs for firm capacity and energy are also recoverable with FPSC approval. Pursuant to FPSC approval, FPL has recovered cogeneration and small power production program through its Energy Conservation Cost Recovery clause (ECCR) for years. In 1995, the FPSC approved the most recent version of FPL's Cogeneration and Small Power Production program as part of FPL's DSM plan.

Cost-Effectiveness Analysis

Since FPL does not project demand and energy savings for this program, a cost-effectiveness analysis is not directly performed for this program. The costs to administer the program are ultimately reflected in electric rates to the customer through the Energy Conservation Cost Recovery clause. Therefore, to reduce upward pressure on electric rates, all efforts will be made to keep the program costs to a minimum while at the same time protecting the welfare of all FPL ratepayers.

COMMERCIAL/INDUSTRIAL LOAD CONTROL

Program Description

The Commercial/Industrial Load Control (CILC) program is designed to reduce peak demand by controlling customer loads of 200 kw or greater during periods of extreme demand or capacity shortages. The permanent CILC program began in November 1990 after a multi-year trial project.

FPL makes eligible commercial and industrial customers aware of this program through direct contact with their FPL Account Managers.

Description of Program Administration

The CILC Program is available to existing CILC customers that allow FPL to control 200 kw or more of their load. Customers may participate by allowing FPL to control directly selected switch gear in the customer's facility or to transfer the load to the customer's standby generator.

The customer receives service under a lower rate in return for allowing FPL to control its load. The incentive is the difference between their prior rate and the CILC rate. The customer begins service on the CILC rate after successfully demonstrating its load can be reduced to the contracted Firm Demand during a one hour load control test conducted and monitored by FPL.

FPL provides advance notification of load control events via an FPL provided printer/alarm. Compliance with contracted Firm Demands is verified after each event on an individual customer basis. The causes of exceeding Firm Demand are investigated to determine if they meet allowed exclusions to the penalty or if they are to be penalized. A "Continuity of Service Provision" is available which allows customers to continue using power during load control events when power is available from non-FPL providers. Customers are allowed to exit CILC under certain conditions but will be penalized for returning to Firm Service without meeting those conditions.

Current Program Status

Pursuant to Order No. PSC-96-0468-FOF-EG, issued April 4, 1996, in Docket No. 960130-EG, the PSC granted FPL's request to limit the availability of its Commercial Industrial Load Control (CILC) program to existing customers and those which had entered into a CILC agreement as of March 19, 1996. Subsequently, on March 10, 1999, the Commission issued Order No. PSC-99-0505-PCO-EG in which it required customers under contract to take CILC service but not yet on the rate to initiate CILC service by December 31, 2000. Any customer who is not taking service under the CILC rate by December 31, 2000 will no longer be eligible for the CILC rate. FPL informed its customers of the December 31, 2000, deadline by letter. Although this program will continue after December 31, 2000, it will only be available for customers participating in it prior to December 31, 2000.

OFF PEAK BATTERY CHARGING PROGRAM

Current Program Status

When FPL originally filed the Off Peak Battery Charging Program as part of its demand side management portfolio, it was based on the assumption that without significant technological innovation, the primary market for this program was golf facilities. Based on this assumption, there was a clearly defined and limited target market. As FPL has penetrated this market, participation has slowly declined as eligible and interested customers have participated. Over the last two years, 1998 and 1999, annual participation has been approximately 150 kw.

Proposed Program Termination

While there are still potentially additional program participants, primarily from customer growth, the recent level of participation does not justify a full-scale DSM program and its associated administrative costs. For these reasons, FPL is requesting that upon approval of this Plan the Off Peak Battery Charging Program be terminated. All future applications related to this technology will be evaluated as part of the Business Custom Incentive Program.

SECTION IV - RESEARCH & DEVELOPMENT EFFORTS

FPL's DSM Plan contains research and development activities in addition to established programs. Historically, FPL has pursued DSM research and development activities through, not only a research program, Conservation Research and Development, but also individual research projects.

A. Research Overview

FPL's continuing research efforts include activities within and beyond FPL's DSM Plan. Within the plan FPL has one (1) research program and five (5) individual research and development projects. FPL's research program is its existing Conservation Research and Development Program, which FPL is proposing to continue. FPL's research and development projects include the following previously approved projects: Cool Communities and Commercial/Industrial New Construction. FPL is proposing the following new research and development projects:

- Green Energy,
- Photovoltaic, Research, Development and Education , and
- Low Income Weatherization Retrofit.

Outside of FPL's DSM Plan, FPL is actively pursuing its Commercial/Industrial Real Time Pricing research effort. Finally, FPL is proposing to terminate the Residential Thermal Energy Storage Project.

Historically, FPL has performed extensive DSM research and development, and FPL will continue such activities under this plan. Such efforts are an integral part of FPL's strategy to achieve the goals established for FPL in the recent conservation goals proceeding. These efforts will examine a wide variety of technologies, building on prior FPL research, where applicable, and expanding the research to new and promising technologies as they emerge.

B. Detailed Research Program and Project Descriptions

Conservation Research and Development (CRD) Program

FPL currently has an approved Conservation Research and Development Program. This program was originally approved by the Commission in November of 1990 as part of FPL's DSM Plan for the 90's. It has been updated several times since then, and FPL proposes to continue to use the very successful tool. The CRD Program has been used by FPL to research, and where appropriate, develop emerging DSM technologies. FPL has researched a wide variety of technologies under the CRD Program, and from that research it has been able to develop several new programs such as the Commercial/Industrial Building Envelope, Business On Call and Residential New Construction programs. FPL regularly reports in its true-up and projection filings for its ECCR clause the activities within the CRD Program.

The CRD Program has worked, serving FPL's customers well. It allows FPL to research emerging conservation technologies without always creating extensive research projects. Through CRD FPL can investigate new technologies and determine whether they should be incorporated into a program, further researched as a research project, or abandoned. If FPL is to continue to stay abreast of emerging DSM technologies and develop new programs, the CRD Program needs to be continued.

As part of this DSM Plan, FPL seeks to extend its CRD program beginning with the approval of this Plan and extending through December 31, 2002 with a spending cap of \$1,500,000 for the period. The Commission has previously extended FPL's CRD program through its approval of FPL's DSM Plan, Order No. PSC-98-1609-FOF-EG. FPL seeks to remove annual spending caps to increase its flexibility in making research and development expenditures without having to come to the Commission for intermediate changes. Aside from the proposed changes to the spending cap amount and period, FPL proposes no substantive change to the CRD Program.

Existing Research and Development Projects

The following are active research projects previously approved by the Commission and will continue as part of FPL's prior DSM Plans.

Cool Communities

Project Need and Objective

Cool Communities is a concept developed by American Forests to demonstrate the extent to which strategic tree planting and surface color lightening can cool ambient air temperature and impact energy consumption. Seven geographically diverse communities, including Miami-Dade County, Florida, were selected as model communities for this effort. Miami-Dade County is the only model community in a humid, tropical region.

American Forests designed guidelines for evaluating conditions in the model communities. At the local level, Cool Communities Local Advisory Committees were established in each of the model communities. The Local Advisory Committees were charged with the responsibility of implementing these guidelines in their respective communities. The South Miami Cool Communities Local Advisory Committee, which is chaired by the Metro-Dade Department of Environmental Resource Management, has included representatives from the Florida Division of Forestry, Metro-Dade Parks and Recreation, Dade County Public Schools, Florida International University's Environmental Studies and Architecture Departments, FPL, American Society of Landscape Architects, Fairchild Tropical Gardens, Roofing associations, Interfaith Coalition for Andrew Recovery Effort, and Trees For South Dade.

FPL has undertaken a research project to quantify the energy saving potential of cooling homes by lightening roof color and shading with strategically planted trees. This study will provide information to FPL and American Forests on average energy savings and suitable markets aimed at tree planting measures and light colored roof measures.

FPL's research project scientifically examines the energy and demand impact of Cool Communities in the context of Florida's conservation regulations, e.g. goals and approved methodologies, and in the context of FPL's accepted approach to demand-side management (DSM) evaluation. If the tree-planting and color-lightening fail cost effectiveness testing from the utility perspective, then FPL will recommend alternative mechanisms for promoting these measures in instances when they are still cost effective from the customer perspective. It is the objective of FPL to determine the true energy and demand impact of the Cool Communities Program, thereby enabling an informed decision on whether or not to financially support the program beyond the research stage.

Description of Research Plan

The Cool Communities research project consists of data gathering, statistical regression analysis, and economic evaluation. The project was envisioned to have three phases:

- 1) The objective of Phase I is to measure energy savings from light colored roofs and tree shade using readily available data. This will determine if aerial photographs, mail surveys, and utility billing information from customers in the two American Forests study groups are sufficient to develop estimates of demand and energy savings. Conclusions from Phase I are expected in January 2000.
- 2) Phase II is intended to assess the added value of gathering on-site information about the existing condition of roof color and tree shading at homes in the study group. The on-site measurements will supplement the mail survey and billing data analysis. This phase will also determine the necessity for a large scale load research data collection effort in Phase III. Conclusions from Phase II are expected in January 2000.
- 3) Phase III of the project is the load research phase. FPL decided to move slowly into this potentially expensive portion of the study. The purpose of this phase is to use load research

metering techniques if necessary in order to develop statistically valid savings estimates. This phase will begin in January 2000. Results from the first step of this phase are expected in March 2001.

The Cool communities R&D project began with Phase I in south Florida where the American Forests study groups were located. During Phase II, FPL decided to expand the research design with the addition of a control group randomly selected from among all FPL customers. Phase III will focus on the measures which showed the most potential in Phases I and II. Preliminary results indicate light colored roofs save approximately twice as much energy as shade from new trees. However, The data collected in Phases I and II were not sufficient to estimate the relative energy saving potential of different roof materials. Since previous research from other sources suggests white tile and white metal roofs are far superior to white, asphalt shingle roofs at reflecting the heat from the sun, an appropriate first step for Phase III is to assess the relative benefits of various roof materials in use in Florida.

FPL and FSEC have designed a research plan to simultaneously monitor energy use, electrical demand, and weather conditions at six identical new homes with different roof materials. The roof types to be studied are: dark asphalt shingle, white asphalt shingle, white metal, white concrete tile, white barrel tile, and red Spanish S-shaped tile. This information is needed to estimate the energy saving potential of changing the roof material and changing the shape of the roof tiles. As they become available, FPL will share research findings with interested local, state, and federal agencies.

Project Schedule and Cost

The total budget for the FPL's Cool Communities Research Project is \$550,000. By the end of 1999, project expenditures will have reached about \$350,000. For the year 2000, Phase III will begin when FPL plans to start a small-scale metered research project involving the simultaneous monitoring of six homes with different roof types. The cost of this step of Phase III is expected

to be about \$50,000 which includes \$35,000 for data collection and analysis by the Florida solar Energy Center (FSEC). FPL anticipates the Cool Communities Research Project will be completed March 2001.

Commercial/Industrial New Construction Research Project

Project Objective

The objective of this project is to identify cost-effective conservation opportunities in the commercial/industrial new construction market. If cost-effective opportunities are identified, the results of this effort may be used to design a new construction program (and other market intervention strategies), with the ultimate goal being to reduce building demand and energy use beyond that required by the Florida Energy Efficiency Code.

Project Description

FPL's Commercial New Construction Research Project is evaluating the impacts of potential measures, both individually and collectively. This evaluation will reveal which measures and groups of measures are viable for a possible program, and second, if these measures or groups of measures are cost-effective using the Commission approved methodology. Initially, an investigation of past and current new construction programs and projects is being performed, with successes and issues identified to assist in formulating a general direction for FPL's future efforts. The next step is the evaluation of potential measures includes (1) simulations of measures and their interactions by building type within Florida's three climate zones, and (2) field monitoring of actual installations. In addition, actual commercial buildings are being investigated through both energy surveys and a review of the original building design plans to assess the relationship between their actual performance and the operation predicted by the original design. This will facilitate the determination of the program's potential impacts. Building commissioning is being evaluated as a means of further assuring measure performance and quality of construction. Commissioning is a systematic process beginning in the design phase and continuing for at least one year after project completion to ensure that all building systems perform interactively according to the documented design intent and the owner's operational needs. It is believed that commissioning may lead to improved performance of building systems. All simulations and field monitoring take into consideration the various

commercial building types and the different Florida climate zones. Finally, the project may result in a recommended program design for future implementation.

Current Status

FPL originally envisioned that it would take some 30 months to conduct the Commercial/Industrial New Construction Research Project. However, FPL encountered delays in the project due to the selection of the contractor to perform the work and the negotiation of a contract that would allow FPL to terminate the Project at any point FPL determined that the Project was not cost-effective (One of the requirements in the order approving the Project was that "Florida Power & Light Company terminate the Commercial/Industrial (CI) New Construction research project if it is determined not to be cost-effective."). Consequently, in June 1999, FPL requested and was subsequently granted approval by the FPSC to extend the Project through December 2000, without any change to the approved expenditure cap of \$1,525,000. FPL stills anticipates completing the Project within the approved budget and time frame.

Residential Thermal Energy Storage Project

Project Description

This research project was originally approved in FPL's Demand Side Management Plan of the 90's. The intent of the effort was to determine the technical feasibility and residential customer acceptance of utilizing thermal energy storage space conditioning equipment. It was thought that this equipment could potentially remove customers' space cooling loads from FPL's summer peak demand periods. When this project was proposed, there were several prototype systems being developed by the major air conditioning equipment manufactures.

Current Status and Proposed Termination

After the initial product development efforts, the air conditioning manufactures moved away from this technology. Over the last several years, FPL has continued to monitor current developments, but it now does not see this technology having sufficient support to develop a market-ready, customer viable product. For these reasons, FPL is requesting that upon approval of this Plan the Residential Thermal Energy Storage Project be terminated. FPL will continue to monitor this technology through its Conservation Research and Development (CRD) Program.

FPL has spent approximately \$227,300 of an approved project budget of \$413,400.

Proposed Research and Development Projects

Green Energy Project

Project Technology

FPL has recently finished an R&D project addressing customer acceptance of green energy where donations were used as the funding mechanism for the purchase and installation of utility grid connected photovoltaic (PV) systems. This project raised in excess of \$89,500 and a 10.1 kW (dc) PV system has been constructed at FPL's Martin power plant site.

In an attempt to determine the customer acceptance of green pricing rates, FPL proposes to investigate and, if determined by FPL to be feasible, to design and implement a Green Energy Program.

Project Description

Under this program FPL would purchase electric energy generated from new renewable resources including solar-powered technologies, biomass energy, landfill methane, wind energy, low impact hydroelectric energy and/or other renewable resources. The Program would offer to meet all or part of a customer's load with generation from new renewable resources, with the remaining portion of that load being served by the Company's conventional supply. Participants will be residential (and possibly commercial) customers. Participants in this Program will be charged an additional charge calculated to recover no more than the incremental costs of this Program. Incremental costs are the sum of:

- Green Energy Program administration costs (program administration costs are the administrative costs associated with the delivery of the program; they would include but not be limited to personnel costs, marketing and promotion costs, materials and supplies, start-up costs and office costs for the new renewable energy) and

- the excess of total power production costs for new renewable energy (expressed in cents per kWh) over and above normally applicable charges (i.e., the fuel, purchased power capacity and energy, conservation, environmental cost recovery, and basic energy charges) which would have been charged by FPL for delivery of an equivalent amount of energy from conventional power supply resources.

Project Development and Analysis

The first step in the development of this Program will consist of research into customer acceptance of the concept as well as the availability of new renewable energy in Florida. As part of the Stipulation agreed to with the Legal Environmental Assistance Foundation (LEAF) in the most recent Goals Docket, FPL will provide LEAF and its consultants a timely opportunity to review and comment upon FPL's research and program design plans and procedures. However, FPL retains final control over the content and conduct of the research and program design.

First, FPL will conduct consumer research to determine:

- The preferences of its customers for new renewable energy.
- Customer willingness to pay the incremental costs associated with new renewable energy.
- The amounts of new renewable energy customers are willing to purchase and the acceptance of blended rate offerings.

Specifically, the consumer research will build upon the key lessons from FPL's just completed green energy research project and will determine customer preferences regarding energy offerings linked to renewable sources, including the perceived benefits and costs of these technologies.

The second step will be research to determine:

- The availability of new renewable energy sources and supplies within Florida (their availability by season, day of week, time of day, etc.)
- The terms and conditions, including prices and contract lengths, pursuant to which FPL may obtain the resources for the program participants
- The regulatory issues that may arise in offering a Green Energy Program.

FPL anticipates the total development and analysis phase of the project will be for a period of at least 36 months as follows:

- | | |
|------------------------------------------------------------------------|-----------|
| • Evaluate Renewable Sources/ Terms & Conditions/
Regulatory Issues | 6 Months |
| • Customer Research | 6 Months |
| • Program Development | 18 Months |
| • Program Roll Out | 6 Months |

Program Design

If FPL’s research shows that a sufficient number of customers are willing to pay the incremental costs associated with new renewable energy, under terms and conditions that correspond favorably with the availability and terms and conditions pursuant to which FPL can purchase new renewable energy and that there are no regulatory impediments, FPL will proceed with the design and implementation of the Green Energy Program.

The design of the Green Energy Program will contain marketing, public education and evaluation components. FPL will attempt to include the maximum amount of PV’s in the mix of options for customers, consistent with the results of the market and new product research.

Program implementation will commence with an initial offering. If the response to the initial offering reflects reasonable participation levels, consistent with those estimated by the market research, FPL will continue and expand the Program, so long as it remains viable. Viability is that sufficient numbers of customers are willing to pay the incremental costs associated with new renewable energy under terms and conditions that correspond favorably with the terms and conditions that FPL can purchase these resources. If the program is continued and expanded, FPL will have the goal of obtaining 10,000 participants by the end of 2003. When the Program reaches 10,000 participants, FPL will include at least 150 kW of PVs in its resource mix for customers in this Program. FPL will add PVs to its resource mix proportional to the 10,000 participant goal prior to reaching this goal if feasible. If the Program exceeds 10,000 participants, FPL will add PVs to its resource mix to maintain a ratio of at least .015 kW per participant.

Attachment I
Green Energy Project

Stage I Establish Research Parameters and Concepts Objectives:	Costs
Gather preliminary data; establish availability of renewable energy sources in Florida; avoid duplication of existing work and findings; and define more specific research objective and scope for project.	
1) Literature Search	
2) Industry Search	
3) Research Institute Work Search (EEI, FSEC, U of F, prior FPL R&D etc...)	\$75,000
Stage II Technical Evaluation Objectives:	
(Only Required If Renewable Resources are Available)	
Identify Feasibility, Risk and Operating Factors	
1) Determine availability of new projects	
2) Develop cost analysis	
3) Develop contract terms and conditions	\$100,000
Stage III Market Segment Research Objectives:	
1) Conduct Focus Groups among FPL customers	
2) Conduct Quantitative analysis to determine cost-effective market segments and confirm sales potential	\$175,000
Stage IV Develop Program Objectives:	
1) Develop and Execute Marketing Plan	
2) Develop Program Collateral Materials	
3) Advertise Program to FPL customers	
4) Develop renewable energy accounting system	
5) Revise billing system to accommodate Green Energy Pricing	\$350,000
 Total Project Cost	 \$700,000

Photovoltaic Research, Development and Education Project

Technology

Photovoltaic (PV) roof-tile systems are a relatively new technology which directly replaces existing roofing materials such as shingles and standing-rib roofing with photovoltaic materials which provide the same water proofing characteristics that conventional roofing materials. This proposed project is consistent with the Federal Government's Million Solar Roofs initiative. However, based on FPL's research to date, a primary hurdle to the physical installation of photovoltaic (PV) systems, whether roofing materials or flat plate collectors, is the lack of awareness, understanding and acceptance by local building officials. For the most part, these officials are unclear about how these systems work and how to address these systems as part of the building permitting and inspection process. This creates market barriers toward the use of this technology.

Project Description

The proposed R&D project will work with homebuilders to install five to ten PV roof systems in new single family homes. Each roof system will be approximately 2 kW (dc) each, resulting in 10 to 20 kW (dc) of PV arrays in total.

Project Monitoring and Analysis

FPL will monitor the installations to:

- Provide data to determine the durability of this technology and its impact on FPL's electric system.
- Collect demand and energy data to better understand the coincidence between PV roof tile system output and FPL's system peaks as well as the energy capabilities of roof tile PV systems.
- Collect data to assess the homeowner's financial benefit of PV roof tile systems.

FPL will develop and conduct educational workshops for the building departments that are active in FPL's service territory. These workshops will incorporate the results of the above-described FPL PV roof tile research project. The workshops will have the following objectives:

- Understanding of the various types of PV systems and supplemental systems
- General education on the design, construction and installation of PV systems
- Develop an understanding of the performance and reliability of PV systems
- PV perspectives of the various stakeholders including the Federal and State government, utilities, builders

To make these workshops relevant to the intended audience, FPL will seek participation by industry experts, such as the Florida Solar Energy Center, for the design and implementation of these events.

FPL anticipates the total development and analysis phase of the project will be for a period of at least 34-36 months, outlined as follows:

- | | |
|-------------------------------------------------|------------|
| • Site Selection/Installation/Customer Research | 6-8 Months |
| • Monitoring/Workshops for Building Officials | 24 Months |
| • Analysis and Report | 4 Months |

Cost Effectiveness

Based on the outcome of the monitoring portion of the research project, the cost effectiveness of the potential Photovoltaic Research, Development and Education Initiative would be determined using the Commission approved cost-effectiveness methodology. If the proposed program can be shown to be cost-effective under the Participant and RIM tests, the research program results may

be utilized for the development of a system-wide Photovoltaic Research and Development Initiative and presented to the Commission for approval.

Attachment I

Photovoltaic Research, Development and Education Project

Stage I Establish Research Parameters and Concepts Objectives:	Costs
Gather preliminary data; establish working relationship with local homebuilders; avoid duplication of existing work and findings; and define more specific research objective and scope for project.	
1) Literature Search	
2) Industry Search	
3) Research Institute Work Search (EEI, FSEC, U of F, prior FPL R&D etc...)	\$55,000
Stage II Technical Evaluation Objectives:	
Identify Feasibility, Risk and Operating Factors	
1) Install systems on 5-10 homes with approximately 2 kW (dc) systems	
2) Monitor homes to determine system output, power quality and consumption	
3) Determine legislative and regulatory barriers to develop program	
4) Develop cost evaluation of systems	\$145,000
Stage III Market Segment Research Objectives:	
1) Conduct Focus Groups among FPL customers	
2) Conduct Quantitative analysis to determine cost-effective market segments and confirm sales potential	\$125,000
Stage IV PV Workshops Objectives:	
1) Conduct Building Official Workshops	\$ 46,000
Stage V Analysis Objectives:	
1) Evaluate data from homes	
2) Develop cost evaluation	
3) Determine program viability to meet customer cost expectations	\$100,000
Total Project Cost	\$471,000

Low Income Weatherization Retrofit Project

Project Description

The proposed R&D will investigate cost-effective methods of increasing the energy efficiency of FPL's low income customers. The research project will address the needs of low income housing retrofits by providing monetary incentives to housing authorities (both weatherization agency providers, WAPS, and non-weatherization agency providers, non-WAPS) for individual homes they are retrofitting. These incentives will be used by the housing authorities to leverage their funds to increase the overall energy efficiency of homes they are retrofitting. FPL either will conduct a home energy survey, train housing authority employees to perform FPL home energy surveys, accept the NEAT audit (as supplemented to capture water heating recommendations not included in the NEAT audit), or approve similar FPL approved audits conducted by weatherization providers to determine the need for energy efficient retrofit measures for each home. FPL will design the project so as to minimize extra work for the retrofit housing authorities. The following energy end uses will be addressed as part of each audit:

- HVAC system,
- duct system,
- ceiling insulation,
- water heating,
- lighting, and
- reduced air infiltration.

The maximum potential incentive per home will reflect the incentives applicable to the DSM measures approved in FPL's new DSM Plan, plus incentives totaling a maximum \$300 per home for the following additional measures:

- HVAC maintenance - (\$30)

- High efficiency window/wall HVAC – (\$115 maximum)
- Duct system test cost - (\$30)
- Reduced air infiltration - (\$50)
- Water heating wrap - (\$25)
- Lighting - (\$50)

FPL will conduct this pilot program initially in six counties, with a minimum of 6 participating WAPs and 6 participating non-WAPs.

FPL anticipates the total development and analysis phase of the project will be for a period of at least 32 to 36 months, outlined as follows:

Site Selection/Installation	6-8 months
Monitoring	18 months
Analysis	4 months
Final Report and Recommendation	4 months

A total cost for the project is projected to be \$317,000. A breakdown of costs is shown on Attachment I.

Project Monitoring and Analysis

FPL will monitor the demand and energy impacts of this pilot in order to determine its cost-effectiveness and the proper vehicle for a full-scale program, if appropriate.

Cost Effectiveness

When at least 500 homes have been retrofitted, FPL will assess the cost-effectiveness of a potential program. During the assessment of cost-effectiveness, FPL will continue the Project. If FPL determines that a full-scale program is cost-effective, it will continue the Project while

approval of a full-scale program is pending. If FPL determines that a full-scale program cannot be offered cost-effectively, then FPL will terminate the Project.

Attachment I

Low Income Weatherization Retrofit Project

	Costs
Research Plan Development, Review, and Modification	\$40,000
1) Research consultant selection	
2) Research Plan development	
3) Work Plan updates	
Customer Selection	\$185,000
1) Agency selection and coordination	
2) Customer selection and screening	
3) Measure installation	
Evaluation	\$90,000
1) Installation of metering equipment	
2) Data collection	
3) Removal of metering equipment	
Analysis and Reporting	\$60,000
1) Energy/Demand impact analysis	
2) Cost-Effectiveness analysis	
3) Final recommendations	
4) Reporting	
Total Project R&D Cost	\$375,000

SECTION V - SUMMARY

The Commission established RIM based DSM goals for FPL. FPL's DSM Plan is designed to achieve these DSM goals. FPL's DSM Plan includes all currently identified cost-effective achievable potential under the Participants and RIM tests. It also envisions additional savings that may be achieved from additional cost-effective DSM potential to be found through FPL's research efforts. To realize those additional savings, FPL's DSM Plan includes research and development activities that will build on prior efforts, examine specific technologies and allow FPL to research emerging technologies.

All of the existing FPL DSM programs will be continued in some fashion, except for the Off Peak Battery Charging Program. Most programs have been enhanced by building on prior experience and the results of FPL's end-use monitoring and evaluation efforts. Many of the modifications should enhance customer participation. FPL is also proposing one new program.

FPL's research efforts will continue to be a key part of the overall DSM Plan. FPL proposes to continue its successful CRD program. In addition, two (2) current R&D projects will be continued, and three (3) additional R&D projects will be introduced. Outside the Plan, FPL will continue its Commercial/Industrial Real Time Pricing experiment.

FPL's DSM Plan is a well balanced, comprehensive plan that captures all presently known achievable potential that is cost-effective under the Participants and RIM tests and lays the groundwork for finding more potential. It should achieve all of FPL's conservation goals as approved by the Commission. In doing so it will capture significant amounts of DSM and help to keep customers' rates low.