Jessica Cano
Principal Attorney
Florida Power & Light Company
700 Universe Boulevard
Juno Beach, FL 33408-0420
(561) 304-5226
(561) 691-7135 (Facsimile)

March 30, 2010

VIA HAND DELIVERY

100155-EG

Ms. Ann Cole
Division of the Commission Clerk and
Administrative Services
Florida Public Service Commission
Betty Easley Conference Center
2540 Shumard Oak Boulevard, Room 110
Tallahassee, FL 32399-0850

Re: Petition for Approval of Florida Power & Light Company's Demand Side Management Plan

Dear Ms. Cole:

Enclosed for filing on behalf of Florida Power & Light Company ("FPL") are an original and 15 copies of the following:

(i) Petition for Approval of FPL's Demand Side Management Plan, and
(ii) FPL's Demand Side Management Plan, including Appendix A.

Also enclosed is a compact disc containing FPL's Petition in Microsoft Word format. Please contact me should you or your staff have any questions regarding this filing.

Sincerely,

jessica cano

Jessica Cano

COM ____
APA ____
ECR ____
GCL 2 Enclosures
RAD 13 + CD
SSC ____
ADM ____
OPC ____
CLK ____

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition for Approval of)
Florida Power & Light Company's)
Demand Side Management Plan)

Docket No. 100155-EG

Filed: March 30, 2010

PETITION FOR APPROVAL OF FLORIDA POWER & LIGHT COMPANY'S DEMAND SIDE MANAGEMENT PLAN

Florida Power & Light Company ("FPL"), pursuant to Section 366.82, Florida Statutes, Rules 25-17.0021 and 28-106.201, Florida Administrative Code ("F.A.C."), and Order No. PSC-09-0855-FOF-EG, petitions the Florida Public Service Commission ("Commission") to approve FPL's Demand Side Management ("DSM") Plan filed herewith, and to authorize FPL to recover through the Energy Conservation Cost Recovery ("ECCR") clause the reasonable and prudent expenditures associated with the implementation of its DSM Plan. In support of this petition FPL states as follows:

1. FPL is a corporation with headquarters at 700 Universe Boulevard, Juno Beach, Florida 33408. FPL is an investor-owned utility operating under the jurisdiction of this Commission pursuant to the provisions of Chapter 366, Florida Statutes. Any pleading, motion, notice, order or other document required to be served upon FPL or filed by any party to this proceeding should be served upon the following individuals:

R. Wade Litchfield, Esq.
VP of Regulatory Affairs
and Chief Regulatory Counsel
Florida Power & Light Co.
700 Universe Boulevard
Juno Beach, FL 33408
(561) 691-7101

Charles A. Guyton, Esq.
Squire Sanders & Dempsey LLP
215 South Monroe St., Ste 601
Tallahassee, FL 32301
(850) 222-2300

Jessica A. Cano, Esq.
Principal Attorney
Florida Power & Light Co.
700 Universe Blvd
Juno Beach, FL 33408
(561) 304-5226

2. FPL is subject to the Florida Energy Efficiency Conservation Act ("FEECA"), Sections 366.80-366.85 and 403.519, Florida Statutes. Pursuant to FEECA and the Commission rules implementing FEECA, FPL is required to file a DSM plan for Commission approval to meet the new conservation goals established for FPL by Order No. 09-0855-FOF-EG and is entitled to seek recovery of associated expenditures through the ECCR clause. FPL has a substantial interest in whether the Commission approves its DSM plan and authorizes cost recovery for plan implementation expenditures.

3. This Petition is being filed consistent with Rule 28-106.201, F.A.C. The agency affected is the Florida Public Service Commission, located at 2540 Shumard Oak Blvd, Tallahassee, FL 32399. This case does not involve reversal or modification of an agency decision or an agency's proposed action. Therefore, subparagraph (c) and portions of subparagraphs (e), (f) and (g) of Rule 28-106.201(2) are not applicable to this Petition. In compliance with subparagraph (d), FPL states that it is not known which, if any, of the issues of material fact set forth in the body of this Petition, or the DSM Plan filed herewith, may be disputed by others.

FPL's Existing DSM Plan

4. FPL has been implementing cost-effective DSM programs since 1978. FPL offers both conservation initiatives and load management. FPL's DSM efforts through 2009 have resulted in a cumulative Summer peak reduction of approximately 4,257 megawatts ("MW") at the generator and an estimated cumulative energy saving of approximately 51,056 gigawatt hours ("GWh") at the generator. Accounting for reserve margin requirements, FPL's DSM efforts through 2009 have eliminated the need to construct the equivalent of approximately 13 new 400 MW generating units.

5. FPL's last DSM Plan was approved by Order No. PSC-05-0162-PAA-EG, issued February 9, 2005. That plan consisted of seven residential programs, nine business programs, one Conservation Research and Development ("CRD") program, and three Research and Development ("R&D") programs. FPL's DSM Plan was subsequently modified in 2006 and 2007. FPL's programs were designed to meet its previously-approved DSM goals through 2014.

FPL's Proposed DSM Plan

6. FPL's proposed DSM Plan is described in detail in the attached DSM Plan Document and Appendix A thereto, both of which are incorporated herein by reference. The proposed plan is designed to meet the conservation goals established for FPL by the Commission in Order No. PSC-09-0855-FOF-EG, issued December 30, 2009. These conservation goals consist of the full achievable potential MW and GWh reductions from measures that passed the "unconstrained" (i.e., unrestricted by FPL's actual resource needs) Enhanced Total Resource Cost ("E-TRC") screening test plus MW and GWh reductions equivalent to the Technical Potential of certain residential measures which had been eliminated during the goals evaluation process to account for "free riders."[1] In addition, the Commission directed FPL to spend each year up to 10 percent of its average annual ECCR clause recovery amount over the previous five years on solar water heating and photovoltaic ("PV") pilot programs.

7. FPL's proposed DSM plan seeks to accomplish these goals while also attempting to mitigate the rate impacts caused by goals that are significantly higher than FPL's resource needs[2] and based in part on various DSM measures that passed the E-TRC cost-effectiveness screening test, but which did not pass the E-RIM cost-effectiveness screening test. The process

[1] FPL is required to account for free riders pursuant to Rule 25-17.0021, F.A.C.

[2] The total DSM Summer MW goals established by the Commission for FPL are approximately 225% higher than the amount of DSM that was projected in 2009 as necessary to meet 100% of FPL's remaining resource needs through 2019.

used by FPL to meet these somewhat competing objectives included: (i) applying the Commission's three approved cost-effectiveness screening tests to DSM measures; (ii) limiting the maximum incentive that will be paid by FPL's general body of customers to one which does not result in a participating customer payback that is quicker than two years (except for the proposed low income and solar programs where the two-year payback criterion was not used); (iii) utilizing FPL's linear programming model to help develop a portfolio of measures and participation levels that will meet the goals while minimizing customer rate impacts; and (iv) combining those measures into programs and subjecting each program to a final cost-effectiveness analysis.

8. FPL's proposed DSM Plan, excluding the solar pilot projects discussed below, includes three low income residential programs, eight residential programs, 12 business programs, and four R&D programs or projects. This includes a mix of modifying current programs by increasing incentives and/or adding new measures, adding new programs, and continuing some current programs. The three low income residential programs are specifically targeted to FPL's low income customers. These programs include incentives that were not limited by a two year payback criterion and measures that did not pass either the E-TRC or E-RIM cost-effectiveness screening test. FPL's proposed low income programs are discussed in detail in Section II of its DSM Plan.

9. To meet the Commission's goal for encouraging solar marketplace development, FPL is proposing seven solar water heating and PV programs. These programs are designed to educate customers about the benefits of adopting solar technologies, as well as increase the penetration of solar technologies in the low income and public school segments. FPL's solar pilot programs include Residential Solar Water Heating, Business Solar Water Heating,

Residential Solar Water Heating for Low Income New Construction, Residential PV, Business PV, Business PV for Schools, and a Solar Research and Demonstration project. With one exception, these programs do not pass the Commission approved cost-effectiveness screening tests, E-TRC or E-RIM. Additionally, the Residential PV Program does not pass the Participant Test, but FPL is offering it in order to meet the requirements of Order No. PSC-09-0855-FOF-EG.[3] FPL's proposed solar programs are discussed in detail in Section III of its DSM Plan.

10. FPL also proposes four R&D efforts. Specifically, FPL is proposing to continue its successful Conservation Research and Development ("CRD") program and to introduce three new R&D projects. The Commission's approval of goals for FPL which exceeds its full achievable potential makes FPL's R&D efforts important to achieving its goals.

11. An overview of FPL's DSM Plan can be found in Section I of the DSM Plan Document filed herewith. Descriptions of FPL's DSM programs can be found in Section II through Section VII. Appendix A to the DSM Plan Document shows program cost-effectiveness screening test results, using the Commission's approved cost-effectiveness methodology.

Costs and Rate Impacts of the Proposed DSM Plan

12. FPL projects that the DSM Plan costs recovered through the ECCR clause will be approximately $3.2 billion (nominal) over the ten year DSM plan horizon, which is approximately double that of its 2000-2009 ECCR expenditures. This reflects the fact that FPL is required to implement much more DSM than it has in the past decade. Over the ten year period, the ECCR bill impact varies from approximately $2.83 to $4.32 per month for a residential customer consuming 1,200 kWh. FPL has also estimated the approximate bill impacts when one considers both the increased ECCR charges and system benefits such as

[3] FPL respectfully maintains that DSM that is not cost-effective to participants should not be offered in a utility DSM program.

reduced fuel usage. Those total bill impacts range from $1.50 to $2.85 per month for a customer using 1200 kWhs, and are presented in Section I of the DSM Plan.

13. In addition, as a result of implementing the DSM Plan, FPL will not recover its currently-approved revenue requirements. FPL estimates that the unrecovered revenue requirements[4] associated with the full achievable potential E-TRC values, the added technical potential values, the low income programs, and the solar pilot programs will be approximately $1.1 billion (nominal) over the 10-year DSM Plan horizon. When the ECCR clause impacts and unrecovered revenue requirements are combined, the total 2010-2019 cost of meeting the new goals is approximately $4.3 billion (nominal).[5] The ECCR impacts and unrecovered revenue requirements associated with the DSM goals established by the Commission and FPL's proposed DSM Plan to meet those goals are provided in Section VIII of the DSM Plan.

Conclusion

14. FPL's DSM Plan is designed to achieve all the goals established by the Commission in Order No. PSC-09-0855-FOF-EG, while also attempting to minimize the rate impact of those goals, to the extent possible. FPL's DSM Plan will reduce the growth rate of weather-sensitive peak demand, reduce and control the growth rate of energy consumption, increase the conservation of expensive resources, and increase the efficiency of the electrical system. Additionally, FPL's DSM Plan is reasonably monitorable. FPL's monitoring efforts for each of its DSM programs and research projects are set forth in the detailed program and project summaries in FPL's DSM Plan. For all the foregoing reasons, FPL's DSM Plan should be approved.

---

[4] These revenue requirements do not include projected revenue requirements for fuel costs, storm-related expenditures, and gross receipts taxes.

[5] This amount does not include system benefits, such as fuel savings.

WHEREFORE, FPL respectfully requests that the Commission: (i) approve FPL's DSM Plan, a copy of which is filed with this petition; (ii) authorize FPL to recover reasonable and prudent expenditures associated with the implementation of its DSM Plan through the ECCR clause, and (iii) grant such other relief as may be appropriate.

Respectfully submitted,

Jessica A. Cano
Florida Power & Light Company
700 Universe Boulevard
Juno Beach, Florida 33408
(561) 304-5226

Charles A. Guyton
Squire Sanders & Dempsey, LLP
215 South Monroe Street, Suite 601
Tallahassee, Florida 32301
(850) 222-2300

Attorneys for Florida Power & Light Co.

By: Jessica Cano
Jessica A. Cano
Florida Bar No. 37372

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 100155-EG

DEMAND-SIDE MANAGEMENT PLAN OF FLORIDA POWER & LIGHT COMPANY FOR 2010-2019

PLAN DOCUMENT

MARCH 30, 2010

TABLE OF CONTENTS

INTRODUCTION 1

SECTION I – OVERVIEW 6

A. COMMISSION-ESTABLISHED GOALS 6
B. COMPOSITION OF PROPOSED DSM PLAN AND COMPARISON TO PREVIOUS PLAN 7
C. COST-EFFECTIVENESS ANALYSIS 11
D. COST AND CUSTOMER BILL IMPACTS 12
E. PROGRAM STANDARDS 13

SECTION II – RESIDENTIAL RESIDENTIAL LOW INCOME PORTFOLIO 14

A. OVERVIEW 14
B. DETAILED PROGRAM DESCRIPTIONS 17
1. Residential Low Income Weatherization 17
2. Residential Power Savers Energy Audit 19
3. Residential Power Savers Energy Efficiency 21

SECTION III – SOLAR PILOT PORTFOLIO 23

A. OVERVIEW 23
B. DETAILED PROGRAM DESCRIPTIONS 25
1. Residential Solar Water Heating Pilot 25
2. Residential Solar Water Heating (Low Income New Construction) Pilot 27
3. Business Solar Water Heating Pilot 29
4. Residential Photovoltaic Pilot 31
5. Business Photovoltaic Pilot 33
6. Business Photovoltaics for Schools Pilot 35

SECTION IV - RESIDENTIAL PORTFOLIO 40

A. OVERVIEW 40
B. DETAILED PROGRAM DESCRIPTIONS 42
1. Residential Home Energy Survey 42
2. Residential Air Conditioning 44
3. Residential Duct System Testing & Repair 47
4. Residential Building Envelope 49
5. Residential New Construction (BuildSmart®) 52
6. Residential Load Management (On Call) 54
7. Residential Air-Conditioning Tune-Up & Maintenance 56
8. Residential Refrigerator Replacement 58

SECTION V - BUSINESS PORTFOLIO 60

A. OVERVIEW 60
B. DETAILED PROGRAM DESCRIPTIONS 63
1. Business Energy Evaluation 63
2. Business Heating, Ventilating & Air-Conditioning 65
3. Business Lighting 68
4. Business Refrigeration 71
5. Business Building Envelope 74
6. Business Water Heating 76
7. Business Custom Incentive 78
8. Cogeneration & Small Power Production 80
9. Business On Call 82

10. Commercial/Industrial Demand Reduction *84*
11. Commercial/Industrial Load Control *86*
12. Business Motors *88*

SECTION VI – RESEARCH & DEVELOPMENT PORTFOLIO **90**

A. OVERVIEW **90**
B. DETAILED PROGRAM DESCRIPTIONS **92**
1. Conservation Research and Development *92*
2. Residential Two-Story Home Wind Washing Research Project *95*
3. Residential Proactive Energy Information Communications Research Project *99*
4. Business Building Retro-Commissioning Research Project *102*

SECTION VIII – ECCR COSTS & UNRECOVERED REVENUE REQUIREMENTS **132**

A. DSM PLAN COSTS **132**
B. ECCR CLAUSE IMPACT **133**
C. UNRECOVERED REVENUE REQUIREMENTS **134**

APPENDIX A – COST-EFFECTIVENESS ANALYSES

INTRODUCTION

Florida Power & Light Company (FPL) has been implementing cost-effective Demand Side Management (DSM) programs since 1978. These programs include both conservation initiatives and load management. FPL's DSM efforts through 2009 have resulted in a cumulative Summer peak reduction of approximately 4,257 Megawatts (MW) at the generator and an estimated cumulative energy saving of approximately 51,056 Gigawatt Hours (GWh) at the generator. Accounting for reserve margin requirements, FPL's DSM efforts through 2009 have eliminated the need to construct the equivalent of approximately 13 new 400 MW generating units. FPL has been recognized as a national leader in DSM as measured by the U.S. Department of Energy's Energy Information Administration data.

Pursuant to Florida Administrative Code (F.A.C.) Rule 25-17.0021, FPL is submitting a Demand Side Management Plan (DSM Plan or Plan) designed to meet the conservation goals established by the Florida Public Service Commission (FPSC or Commission) in Order No. FPSC-09-0855-FOF-EG. FPL's DSM Plan represents a comprehensive portfolio of 30 DSM programs. The DSM Plan consists of: a Residential Low Income Portfolio of three programs; a Solar Pilot Portfolio of seven programs; a Residential Portfolio of eight programs; and a Business Portfolio of 12 programs. Additionally, the Plan includes a Research & Development (R&D) Portfolio of four programs: a Conservation Research and Development (CRD) program; and three research and development (R&D) projects. The Commission's establishment of higher DSM goals for FPL makes FPL's R&D efforts important to FPL achieving its DSM goals. FPL's R&D projects and the continuation of the successful existing CRD program reflect FPL's commitment to find the savings necessary to achieve its goals by identifying emerging DSM potential. FPL

anticipates that the proposed programs and R&D efforts will allow FPL the opportunity to achieve its approved goals through the year 2019.

The Commission established FPL's DSM goals based on: (1) FPL's full Achievable Potential projection based on using the unconstrained (i.e., unrestricted by FPL's actual resource needs) Enhanced Total Resource Cost (E-TRC) cost-effectiveness screening test; plus (2) the incremental aggregate Technical Potential savings amounts associated with certain residential measures which had been eliminated during the goals evaluation process due to the Collaborative's utilization of a two-year payback criterion to minimize free ridership.[i] In addition, the Commission directed FPL to spend up to 10% each year of its average annual Energy Conservation Cost Recovery (ECCR) clause amount from the previous five years on solar water heating and photovoltaic (PV) pilot programs.

Over the years, FPL has built one of the largest, most successful DSM program in the nation and we remain committed to continuing to provide a variety of energy conservation programs to our customers. However, in formulating the current DSM Plan, FPL realized that meeting the recently mandated goals will be challenging for several reasons:

- The goals established for the 2010-2019 period are much larger than FPL's most recent Commission-approved goals. The cumulative GWh goals are almost 300% of FPL's most recent goals, and the cumulative summer MW goals are about 200% of FPL's most recent goals;
- FPL will be implementing programs in a relatively mature program market, where there has already been successful implementation and adoption of many measures;

- Both the existing and new programs must quickly ramp up and receive wide customer acceptance to achieve the early year goals;
- Given the establishment of goals at a level greater than FPL's resource needs, FPL has strived to minimize the resulting adverse customer rate impacts; and
- The goals are based on not only full Achievable Potential, but also a significant level of additional Technical Potential.

Given that the new DSM Plan will not be approved until well into 2010, achievement of the 2010 goals will be difficult, if not impossible, and this gap will carry forward to all cumulative goals. Despite these difficult issues, FPL remains committed to diligently pursue achieving these very challenging goals.

To meet these demanding goals, FPL performed a comprehensive assessment. FPL began by retaining ICF International, Inc., a well recognized and respected DSM consultant, to advise on program planning. With ICF International, Inc.'s assistance, FPL conducted a critical review of its existing portfolio, as well as those of other DSM leaders around the country, to ensure that the new Plan included all programs that would be appropriate and applicable to FPL's customers. In addition, FPL included measures that passed the E-TRC cost-effectiveness screening test but did not pass the Enhanced Rate Impact Measure (E-RIM) cost-effectiveness screening test, as well as other measures that were not cost-effective under either test. In fact, in one instance, to meet the mandates of the Commission's goals order, FPL is proposing a measure that is not cost-effective to participating customers.

Several guiding principles and findings emerged from FPL's assessment. First, in order to achieve each of the various individual DSM demand and energy savings goals for both Residential and Business segments, one or more of the annual goal values would have to be exceeded. Second, FPL's existing program structure has historically produced impressive results and provided a solid foundation to build upon. Therefore, program continuity, with some enhancements and modifications, was more desirable than starting with an entirely new set of program designs. Third, even with enhancements, the existing set of DSM programs would not be adequate to meet the goals, so several new programs would need to be added to both the Residential and Business segments. Fourth, injecting new programs into the Plan through R&D is still likely to be critical to meet the later year targets. Fifth, the inclusion of new programs and increased incentive payments to customers required to meet the goals will have the effect of increasing customer electric rates. Therefore, FPL worked to design a Plan which partially mitigates this incremental rate impact on customers.

FPL's proposed DSM Plan contains 30 programs incorporating the 18 existing programs from the last DSM Plan plus 12 new programs. Included are three programs targeted at low income residential customers (two of them new), and seven solar water heating and photovoltaic (PV) and renewable pilot programs. Additionally, FPL is proposing new R&D programs and projects, as well as continuation of its highly successful CRD program. The modifications to existing programs reflect increased participant incentives and additional measures.

The proposed DSM Plan offers a wide variety of programs and measures for its customers. It is a robust and comprehensive plan, but at the same time, is designed to minimize electric rate

impacts to FPL's customers. Customer rate impacts are summarized in Section I and ECCR and unrecovered revenue requirements are detailed in Section VIII.

This report contains eight Sections and an Appendix.

- **Section I** – Overview of FPL's DSM Plan, addressing how the Plan seeks to achieve FPL's goals, listing the programs and measures offered, and program characteristics
- **Section II** – Detailed description of the Residential Low Income Portfolio
- **Section III** – Detailed description of the Solar Pilot Portfolio
- **Section IV** – Detailed description of the Residential Portfolio
- **Section V** – Detailed description of the Business Portfolio
- **Section VI** – Detailed description of the R&D Portfolio
- **Section VII** – Annual projected estimates for the ten-year horizon period for: customers; penetration; kWh reductions and kW reductions (both at the meter and the generator)
- **Section VIII** – Description of the estimated ECCR clause impact, unrecovered revenue requirements, and total customer rate impact of the DSM Plan
- **Appendix A** – Program-level cost-effectiveness analyses

SECTION I – OVERVIEW

A. Commission-Established Goals

FPL has developed a comprehensive portfolio of DSM programs to achieve the goals established by Order No. FPSC-09-0855-FOF-EG. The goals for FPL are shown in Tables 1, 2 and 3 below.

Table 1
Summer MW Goals (at the Generator)

	Residential		Business		Total	
Year	Annual	Cum	Annual	Cum	Annual	Cum
2010	67.7	67.7	42.7	42.7	110.4	110.4
2011	79.7	147.4	62.5	105.2	142.2	252.6
2012	90.2	237.6	76.3	181.5	166.5	419.1
2013	98.5	336.1	81.3	262.8	179.8	598.9
2014	104.3	440.4	79.3	342.1	183.6	782.5
2015	100.7	541.1	71.5	413.6	172.2	954.7
2016	95.9	637.0	60.0	473.6	155.9	1,110.6
2017	91.4	728.4	48.7	522.3	140.1	1,250.7
2018	87.4	815.8	41.3	563.6	128.7	1,379.4
2019	83.3	899.1	35.0	598.6	118.3	1,497.7

Table 2
Winter MW Goals (at the Generator)

	Residential		Business		Total	
Year	Annual	Cum	Annual	Cum	Annual	Cum
2010	33.2	33.2	8.1	8.1	41.3	41.3
2011	42.4	75.6	9.9	18.0	52.3	93.6
2012	50.3	125.9	11.6	29.6	61.9	155.5
2013	56.3	182.2	13.1	42.7	69.4	224.9
2014	60.2	242.4	14.4	57.1	74.6	299.5
2015	55.9	298.3	15.1	72.2	71.0	370.5
2016	51.3	349.6	15.0	87.2	66.3	436.8
2017	47.0	396.6	14.1	101.3	61.1	497.9
2018	43.2	439.8	13.2	114.5	56.4	554.3
2019	39.4	479.2	12.0	126.5	51.4	605.7

Table 3
GWh Goals (at the Generator)

Year	Residential		Business		Total	
	Annual	Cum	Annual	Cum	Annual	Cum
2010	119.6	119.6	84.7	84.7	204.3	204.3
2011	145.8	265.4	149.4	234.1	295.2	499.5
2012	168.8	434.2	191.5	425.6	360.3	859.8
2013	186.7	620.9	202.7	628.3	389.4	1,249.2
2014	200.0	820.9	194.1	822.4	394.1	1,643.3
2015	193.0	1,013.9	167.5	989.9	360.5	2,003.8
2016	183.4	1,197.3	134.2	1,124.1	317.6	2,321.4
2017	174.2	1,371.5	104.8	1,228.9	279.0	2,600.4
2018	166.4	1,537.9	86.9	1,315.8	253.3	2,853.7
2019	157.5	1,695.4	71.0	1,386.8	228.5	3,082.2

B. Composition of Proposed DSM Plan and Comparison to Previous Plan

FPL's DSM Plan is designed to meet the goals established by the Commission based on the full Achievable Potential savings of measures that passed the E-TRC test plus demand and energy savings equal to the incremental aggregate Technical Potential from certain residential measures, which had been screened out to address free ridership. To meet these goals, FPL's DSM Plan captures identified DSM Achievable Potential and attempts to find additional cost-effective savings through R&D. At the Commission's direction, the Plan also makes special provisions for low income residential customers and to support the development of a solar market in Florida. The Plan is grouped into five comprehensive portfolios created by bundling 30 programs for Residential Low Income, Solar, Residential and Business, and four R&D projects. As with prior plans, FPL anticipates that the Plan could change over time due to program experience, measurement and evaluation, customer research, changes in FPL's system needs, and new technology options which may become available.

Residential Low Income Portfolio

The Commission encouraged FPL to develop programs which would help customers who may find it difficult to otherwise participate in DSM programs. FPL is proposing to add two new Low Income Programs specific to this market.

Table 4
Residential Low Income Portfolio Programs & Measures

Programs	Modified	New	Measures	New
1. Residential Low Income Weatherization	X		Air Conditioning Unit Maintenance	
			Reduced Air Infiltration	
			Room Air-Conditioner Replacement	
2. Residential Power Savers Energy Audit		X	Compact Flourescent Light Bulbs	X
			Faucet Aerators	X
			Low-Flow Showerhead	X
			Water Heater Pipe Insulation	X
3. Residential Power Savers Energy Efficiency		X	Room Air-Conditioner Replacement	X
			Refrigerator Replacement	X
			Ceiling Insulation	X
			HVAC Duct Repair	X
			Air-Conditioning Unit Maintenance	X
			Reduced Air Infiltration	X

Solar Pilot Portfolio

The Commission directed FPL to spend up to 10% each year of its average annual ECCR clause amount from the previous five years on solar water heating and PV. To comply, FPL is proposing to offer the following new pilot programs for both residential and business customers.

Table 5
Solar Pilot Portfolio Programs & Measures

Programs	Modified	New	Measures	New
1. Residential Solar Water Heating		X	Residential Solar Water Heating Systems	X
2. Residential Solar Water Heating (Low-Income New Construction)		X	Residential Solar Water Heating Systems	X
3. Business Solar Water Heating		X	Business Solar Water Heating	X
4. Residential Photovoltaics		X	Photovoltaic Systems	X
5. Business Photovoltiacs		X	Photovoltaic Systems	X
6. Business Photovoltaics for Schools		X	Photovoltaic Systems	X
7. Solar Research and Demonstration		X	Emerging Renewable Technologies	X

Residential and Business Portfolios

In order to meet the Commission-established goals, FPL has modified most of its existing programs and measures. Tables 6 and 7 below show FPL's proposed Residential and Business Portfolios and also identify any new programs or measures.

Table 6
Residential Portfolio Programs & Measures

Programs	Modified	New	Measures	New
1. **Residential Home Energy Survey**	X		Field Energy Survey	
			On-line Home Energy Survey	
			Phone Energy Survey	
2. **Residential Air-Conditioning**	X		Straight Cool Air-Conditioner	
			Heat Pump Air-Conditioner	
			Plenum Seal	
			Supplemental Unit Sizing Calculation	
			Electronically Commutated Motors (ECM) on an Air Handler Unit	
3. **Residential Duct System Testing and Repair**	X		Air-Conditioning Duct System Testing & Repair	
4. **Residential Building Envelope**	X		Ceiling Insulation	
			Reflective Roof Coating	
			Reflective Roof Replacement	
			Solar Window Screen	X
5. **Residential New Construction (BuildSmart®)**	X		Exceed Building Code Minimum Efficiency Requirement	
			EnergyStar® for New Homes	X
6. **Residential Load Management (On Call)**			Residential Load Management	
7. **Residential AC Tune-Up & Maintenance**		X	Air-Conditioner Tune-Up & Maintenance	X
8. **Residential Refrigerator Replacement**		X	High-Efficiency Refrigerator	X

Table 7
Business Portfolio Programs & Measures

Programs	Modified	New	Measures	New
1. Business Energy Evaluation			Field Energy Audit	
			Small Business On-line Energy Audit	
2. Business Heating, Ventilating, & Air-Conditioning	X		Chillers	
			Variable Frequency Drives (VFD) for Chillers	X
			Demand Control Ventilation (DCV) for HVAC Applications	
			Demand Control Ventilation (DCV) for Kitchen Hood Applications	
			Split/Packaged Direct Expansion (DX)	
			Electronically Commutated Motors (ECM) for DX	
			Energy Recovery Ventilation (ERV)	
			Thermal Energy Storage (TES)	
3. Business Lighting	X		Compact Flourescent Lamps (CFL)	
			Pulse Start Metal Halide (PSMH) Lighting	
			Premium Linear Flourescent Lamps with High Efficiency Electronic Ballasts	
			Light-Emitting Diode (LED) Exit Signs	X
4. Business Refrigeration	X		Anti-sweat Heat Controls	
			Hot Gas Reclaim on Freezer Doors	
			Special Doors with Low or No Anti-sweat Heat	
			Compressor Variable Frequency Drive (VFD) Retrofit	X
			Evaporator Fan Controller for Medium -Temperature Walk-in Coolers	X
			Electronically Commutated Motors (ECM)	X
			Oversized Air-Cooled Condensers	X
5. Business Building Envelope	X		Ceiling Insulation	
			Reflective Roofing	
			Roof Insulation	
			Window Treatment	
6. Business Water Heating	X		Heat Pump Water Heater	
			Heat Recovery Unit	
7. Business Custom Incentive			Miscellaneous Measures Not Directly Offered in Existing Programs	
8. Cogeneration & Small Power Production			Cogeneration & Small Power Production Projects	
9. Business On-Call			Small/Medium Business Load Management	
10. Commercial/Industrial Demand Reduction			Large Commercial/Industrial Load Management	
11. Commercial/Industrial Load Control (Closed)			Large Commercial/Industrial Load Management	
12. Business Motors		X	Variable Frequency Drives (VFD) for HVAC Applications	X

Research and Development (R&D) Portfolio

Because FPL's goals exceed even the projected Achievable Potential value based on the E-TRC cost-effectiveness screening test, R&D efforts are vital if FPL is to meet its DSM goals. Therefore, FPL is proposing continuing its successful CRD program and adding several new

R&D projects (as shown in Table 8 below). Other as-yet unidentified concepts may also evolve into research projects in the future.

Table 8
R&D Programs and Projects

Programs and Projects	Modified	New
1. Conservation Research & Development		
2. Residential Two-Story Home Wind Washing		X
3. Residential Proactive Energy Communications Research		X
4. Business Building Retro-Commissioning		X

C. Cost-Effectiveness Analysis

The Commission-established cost-effectiveness methodology, required by Rule 25-17.008 F.A.C., to determine the cost-effectiveness of DSM programs include the following three cost-effectiveness tests: (1) the Total Resource Cost (TRC) test; (2) the Rate Impact Measure (RIM) test; and (3) the Participant test. Consistent with the Commission's decision in the DSM goals proceeding, both the TRC and RIM tests were enhanced by FPL to account for projected environmental compliance costs associated with three types of air emissions: nitrogen oxides (NO_x), sulfur dioxide (SO_2) and carbon dioxide (CO_2). These enhanced tests are referred to herein as the E-TRC and E-RIM tests. The results for each program under the three tests are summarized in Table 9. The individual program cost-effectiveness analyses can be found in Appendix A.

Table 9
Cost-Effectiveness Screening Test Results

Programs	E-TRC	E-RIM	Participant
Residential Low Income Portfolio			
1. Residential Low Income Weatherization	1.80	0.90	2.98
2. Residential Power Savers Energy Audit	3.62	0.77	22.33
3. Residential Power Savers Energy Efficiency	1.75	0.90	2.61
Solar Pilot Portfolio			
1. Residential Solar Water Heating	0.73	0.78	1.55
2. Residential Solar Water Heating (Low Income New Construction)	0.48	0.33	Infinite
3. Business Solar Water Heating	1.30	1.00	1.87
4. Residential Photovoltaics	0.18	0.69	0.69
5. Business Photovoltaics	0.23	0.04	6.74
6. Business Photovoltaics for Schools	0.17	0.15	Infinite
7. Solar Research and Demonstration	N/A	N/A	N/A
Residential Portfolio			
1. Residential Home Energy Survey	N/A	N/A	N/A
2. Residential Air-Conditioning	1.60	1.08	1.82
3. Residential Duct System Testing & Repair	2.90	1.26	3.40
4. Residential Building Envelope	1.33	1.11	1.47
5. Residential New Construction (BuildSmart®)	2.81	1.26	3.00
6. Residential Load Management (On Call)	6.41	2.81	Infinite
7. Residential Air-Conditioning Tune-Up & Maintenance	2.29	1.08	3.26
8. Residential Refrigerator Replacement	1.11	0.72	2.13
Business Portfolio			
1. Business Energy Evaluation	N/A	N/A	N/A
2. Business Heating, Ventilating & Air-Conditioning	3.17	1.04	3.56
3. Business Lighting	4.30	1.20	4.20
4. Business Refrigeration	4.12	1.10	4.94
5. Business Building Envelope	1.57	1.04	1.69
6. Business Water Heating	2.89	1.01	3.43
7. Business Custom Incentive	N/A	N/A	N/A
8. Cogeneration & Small Power Production	N/A	N/A	N/A
9. Business On Call	7.70	3.23	Infinite
10. Commercial/Industrial Demand Reduction	88.80	3.10	Infinite
11. Commercial/Industrial Load Control (Closed)	N/A	N/A	N/A
12. Business Motors	6.75	1.24	6.61

D. Cost and Customer Bill Impacts

Cost – For 2010-2019, the ECCR cost required to meet the Commission-established goals is estimated to be approximately $3.2 billion[ii]. This is about $1.6 billion (or 100%) more than FPL's 2000-2009 ECCR expenditure level. In addition, FPL has also estimated that its unrecovered revenue requirements (non-fuel) over the same period will be approximately $1.1

billion. A detailed explanation of both the ECCR costs and the unrecovered revenue requirements is provided in Section VIII.

Customer Bill Impact – FPL also has estimated that the total incremental monthly bill increase as compared to a Supply-Only scenario. In the first five years, the incremental bill impact for a customer using 1,200 kWh per month would range from $1.50 - $2.85. This reflects the increased ECCR cost net of any projected system benefits such as avoided fuel costs. This incremental increase is made up of the following components:

- Unconstrained Achievable Potential – $0.62 - $1.89
- Incremental Technical Potential – $0.83 - $0.69
- Residential Low Income – $0.01 - $0.13
- Solar Pilot – $0.04 - $0.15

E. Program Standards

FPL will file Program Standards for all programs within the timeframe specified by the Commission in the Final Order approving an FPL DSM Plan, which FPL respectfully requests should be no less than 60 days. The Program Standards will contain the specifics regarding each program's operations. These 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. All program participants must comply with the requirements specified in the Program Standards.

SECTION II – RESIDENTIAL LOW INCOME PORTFOLIO

A. Overview

Low income customers are eligible to participate in all of FPL's Residential DSM programs. Nonetheless, FPL is focusing on enhancing the availability of DSM measures to this customer segment. FPL's DSM Plan incorporates a portfolio specifically for FPL's low income customers comprised of three programs. Included are one existing but modified program and two new programs. This comprehensive portfolio will utilize multiple channels to inform customers about the benefits of adopting energy efficiency measures.

Table 10

Residential Low Income Portfolio Programs & Measures

Programs	Modified	New	Measures	New
1. Residential Low Income Weatherization	X		Air Conditioning Unit Maintenance	
			Reduced Air Infiltration	
			Room Air-Conditioner Replacement	
2. Residential Power Savers Energy Audit		X	Compact Flourescent Light Bulbs	X
			Faucet Aerators	X
			Low-Flow Showerhead	X
			Water Heater Pipe Insulation	X
3. Residential Power Savers Energy Efficiency		X	Room Air-Conditioner Replacement	X
			Refrigerator Replacement	X
			Ceiling Insulation	X
			HVAC Duct Repair	X
			Air-Conditioning Unit Maintenance	X
			Reduced Air Infiltration	X

Even though this portfolio contains measures that did not pass either the E-TRC or E-RIM cost-effectiveness screening tests, FPL is proposing to include it in the DSM Plan. FPL is also proposing to incur and recover up to the full cost of each measure in order to address the financial constraints of customers in this market segment. The projected cost for delivering this portfolio from 2010 to 2019 is about $93 million, of which $80 million or 86% will be spent on surveys, energy efficient equipment, and installations. Program management and delivery will

require about $2.4 million or 2.5%, and customer education and marketing will require the remaining 11%, or about $10 million.

This section includes narratives for each of the low income programs and provides a general description of the individual programs' objectives, features, and administration. The program description for Residential Low Income Weatherization will also contain a list of the proposed modifications to the existing program. Additional specifics on each program and its operations will be provided in FPL's Program Standards to be filed after the DSM Plan is approved.

All of the programs included in the Low Income Portfolio have one primary objective – to inform and assist FPL's low income customers to improve their energy efficiency and reduce their overall "energy cost burden." This "energy cost burden" refers to the overall percentage of household income that is allocated in energy expenditures. FPL's Low Income Portfolio addresses the major drivers of these customers' energy consumption. This portfolio's program mix is designed to better address the needs of the low income customer by complementing and leveraging the U.S. Department of Energy initiatives for weatherization, partnering with existing community-based organizations to assist in informing the low income segment of the population on energy efficiency issues, and in overcoming economic barriers to implementation with an aggressive direct installation approach.

Below are definitions of certain terms used throughout the program narratives.

- **Existing Customers** – refers to FPL customers of record who have a certificate of occupancy.

– **New Construction Customers** – refers to FPL customers of record who do not have a certificate of occupancy.

– **All Customers** – refers to both Existing and New Construction customers.

– **Maximum Incentive** – for measures where there are multiple incentive levels depending on one or more dimensions/parameters (e.g., Seasonal Energy Efficiency Ratio (SEER) levels, rate classes, customer group participation, building type, etc.), the value shown represents the weighted average of these various incentive maximums.

B. Detailed Program Descriptions

1. Residential Low Income Weatherization

Start Date – March, 2005
Last Modified – May, 2006

Description

The Residential Low Income Weatherization Program is designed to reduce energy consumption and growth of coincidental peak demand by partnering with government and non-profit agencies to assist eligible low income FPL residential customers to reduce the cost of heating and cooling their homes. The program employs a combination of energy audits and incentives for room air conditioners, central air-conditioning maintenance and reduced air infiltration.

Eligibility – The Florida Department of Community Affairs (DCA) and designees that implement FPL-approved energy audits and install this program's energy efficiency measures for FPL low income customers are eligible for incentives. FPL will monitor participation, and in the event that there is more participation than expected, FPL will reevaluate as appropriate.

Cost-Effectiveness – The cost-effectiveness test results are as follows: E-TRC = 1.80; E-RIM = 0.90, Participant = 2.98 (see Appendix A for FPL's cost-effectiveness analyses).

Incentive Determination – FPL will issue incentives based on the results of an energy audit. Incentives will be paid to the DCA and its designees. Even though this program contains measures that did not pass either the E-TRC or E-RIM cost-effectiveness screening tests, FPL is proposing to include these measures in the program. This is to address the needs of low income customers. Incentives for the individual measures in this program will be set up to full participant cost, regardless of the length of time to payback.

Proposed Changes

FPL is revising the maximum incentives by measures as follows:

- Air-conditioning unit maintenance from $45 per participant to $190 per participant.
- Reduced air infiltration from $60 per participant to $75 per participant.
- Room air conditioner replacement from $25 per participant to $350 per participant.

Operations and Administration

Marketing Channels – The measures in this program are marketed to the DCA and its designees to encourage energy conservation through the installation of qualifying measures. The primary marketing channel will be direct contact by FPL personnel. This channel will be supported, as appropriate, by promotional activities and other marketing tactics.

Post Installation Inspections – In order to ensure compliance with Program Standards, FPL will, at a minimum, perform inspections on installations as required by the F.A.C. The participating customer shall allow FPL to access, monitor, and analyze the installation as required.

Measurement & Evaluation – FPL will evaluate the energy and demand impacts through the use of engineering modeling analyses. This modeling will be calibrated with statistical billing analyses.

2. Residential Power Savers Energy Audit

Start Date – New
Last Modified – N/A

Description

The Residential Power Savers Energy Audit Program is designed to reduce energy consumption and growth of coincident peak demand by offering home energy audits and an energy efficiency kit to customers. The home energy audit is a walk through audit and the energy efficiency kit includes compact fluorescent light bulbs, faucet aerators, low flow shower heads and water heater pipe insulation.

Eligibility – FPL residential customers who are eligible for financial assistance from federally-funded programs are eligible. Income eligibility is verified by federal grantees or their designees. FPL will monitor participation, and in the event that there is more participation than expected, FPL will reevaluate as appropriate.

Cost-Effectiveness – Neither the peak load reduction nor the energy savings that result from the home energy audit program are claimed; therefore, the cost-effectiveness tests are not applicable. For the energy efficiency kit, the cost-effectiveness test results are as follows: E-TRC=3.62; E-RIM=0.77; Participant = 22.33 (see Appendix A for FPL's cost-effectiveness analyses).

Incentive Determination – This program passed the E-TRC and the Participant tests. FPL is proposing to include this program as part of its DSM Plan to address the needs of low income customers. Incentives for the individual measures in this program will be set up to full participant cost, regardless of the length of time to payback.

Operations & Administration

Marketing Channels – The measures in this program will be marketed to residential customers using multiple channels. The primary marketing channels will be direct contact by FPL personnel and partnerships with governmental agencies, community-based organizations, faith-based organizations, and Low-Income Home Energy Assistance Program (LIHEAP) agencies. These channels will be supported, as appropriate, by promotional activities and other marketing tactics.

Training – Installation, safety, and sensitivity training may be required for FPL Energy Management Consultants, other related FPL Staff, and FPL Designees.

Post Installation Inspections – In order to ensure compliance with Program Standards, FPL will, at a minimum, perform inspections on installations as required by the F.A.C. The participating customer shall allow FPL to access, monitor, and analyze their installation as required.

Measurement & Evaluation – Demand and energy savings are not claimed for the home energy audit. For the energy efficiency kit, FPL will evaluate the energy and demand impacts through the use of engineering modeling analyses. This modeling will be calibrated with statistical billing analyses.

3. Residential Power Savers Energy Efficiency

Start Date – New
Last Modified – N/A

Description

The Residential Power Savers Energy Efficiency Program is designed to reduce energy consumption and growth of coincident peak demand by encouraging customers to implement recommendations resulting from the Residential Power Savers Energy Audit or other FPL-approved home energy audit. The measures included are: room air-conditioner replacement, refrigerator replacement, ceiling insulation, air-conditioning duct repair, air-conditioning unit maintenance and reduced air infiltration.

Eligibility – FPL residential customers who are eligible for financial assistance from federally-funded programs are eligible. Income eligibility is verified by federal grantees or their designees. FPL will monitor participation, and in the event that there is more participation than expected, FPL will reevaluate as appropriate.

Cost-Effectiveness – The cost-effectiveness test results are as follows: E-TRC = 1.75; E-RIM = 0.90; Participant = 2.61 (see Appendix A for FPL's cost-effectiveness analyses).

Incentive Determination – This program passed the E-TRC and the Participant tests. FPL is proposing to include this program as part of its DSM Plan to address the needs of low income customers. Incentives for the individual measures in this program will be set up to full participant cost, regardless of the length of time to payback.

Operations & Administration

Marketing Channels – The measures in this program will be marketed to residential customers using multiple channels. The primary marketing channels will be direct contact

by FPL personnel and partnerships with governmental agencies, community-based organizations, faith-based organizations, and Low-Income Home Energy Assistance Program (LIHEAP) agencies. These channels will be supported, as appropriate, by promotional activities and other marketing tactics.

Training – Installation, safety, and sensitivity training may be required for FPL Energy Management Consultants, other related FPL Staff, and FPL designees.

Post Installation Inspections – In order to ensure compliance with Program Standards, FPL will, at a minimum, perform inspections on installations as required by the F.A.C. The participating customer shall allow FPL to access, monitor, and analyze their installation as required.

Measurement & Evaluation – FPL will evaluate the energy and demand impacts through the use of engineering modeling analyses. This modeling will be calibrated with statistical billing analyses and periodic field metering data collected from participants.

SECTION III – SOLAR PILOT PORTFOLIO

A. Overview

FPL's DSM Plan incorporates a new series of solar pilot programs comprised of seven programs. This comprehensive portfolio is designed to inform customers about the benefits of adopting solar technologies, as well as increase the penetration of solar technologies in the Low Income and Public School segments. Participation in this portfolio will be monitored and limited to ensure FPL does not exceed its annual spending cap.

Table 11

Solar Pilot Portfolio Programs & Measures

Programs	Modified	New	Measures	New
1. Residential Solar Water Heating		X	Residential Solar Water Heating Systems	X
2. Residential Solar Water Heating (Low-Income New Construction)		X	Residential Solar Water Heating Systems	X
3. Business Solar Water Heating		X	Business Solar Water Heating	X
4. Residential Photovoltaics		X	Photovoltaic Systems	X
5. Business Photovoltiacs		X	Photovoltaic Systems	X
6. Business Photovoltaics for Schools		X	Photovoltaic Systems	X
7. Solar Research and Demonstration		X	Emerging Renewable Technologies	X

With one exception, the programs in this portfolio do not pass the E-RIM or E-TRC cost-effectiveness screening tests. In another instance, the program offered is not even cost-effective to the participant, i.e., does not pass the Participant's test. The projected costs for this portfolio are projected to be approximately $69 million over the five-year pilot period from 2010 through 2014. The portfolio has been optimized so that 80% of the total expenses will be for incentive and direct installation costs. Program management and delivery will require approximately 16% and customer education and marketing will require the remaining 4%.

This section includes narratives for each of the programs and provides a general description of the individual programs' objectives, features, and administration. Additional specifics on each

program and its operations will be provided in FPL's Program Standards to be filed after the DSM Plan is approved.

Below are definitions of certain terms used throughout the program narratives.

- **Existing Customers** – refers to FPL customers of record who have a certificate of occupancy.
- **New Construction Customers** – refers to FPL customers of record who do not have a certificate of occupancy.
- **All Customers** – refers to both Existing and New Construction customers.

B. Detailed Program Descriptions

1. Residential Solar Water Heating Pilot

Start Date – New
Last Modified – N/A

Description

The Residential Solar Water Heating Pilot Program is designed to reduce energy consumption and growth of coincident peak demand by encouraging customers to install solar water heating systems in residential homes. The primary components of an eligible solar water heating system include: a solar collector, mounting hardware, an 80 gallon water retention tank and associated plumbing, controls and sensors.

Eligibility – Existing FPL residential customers are eligible.

Cost-Effectiveness – The cost-effectiveness test results are as follows: E-TRC = 0.73; E-RIM = 0.78; Participant = 1.55 (see Appendix A for FPL's cost-effectiveness analyses).

Incentive Determination – This program did not pass the E-TRC or E-RIM cost-effectiveness screening tests. FPL will offer up to a maximum of $1,000 per installed solar water heating system. The incentives will be paid to customers or their designees.

Operations & Administration

Marketing Channels – As a pilot program, FPL will create awareness and inform the general public regarding solar water heating. The primary marketing channels will be: FPL's Home Energy Audit and trade allies such as solar contractors, dealers and distributors. These channels will be supported, as appropriate, by demonstration projects, promotional activities and other marketing tactics

Post-Installation Inspections – In order to ensure compliance with Program Standards, FPL will, at a minimum, perform inspections on the installations as required by the F.A.C. The participating customer shall allow FPL to access, monitor, and analyze the customer's system as required.

Measurement & Evaluation -- FPL will evaluate the energy and demand impacts through the use of engineering modeling analyses. This modeling will be calibrated with on-site metering research in a manner that most cost-effectively meets the overall impact evaluation objectives. For a statistically valid sample of residential solar water heating installations, FPL will analyze hourly household hot water energy impacts and engineering and system design variations by metering actual hot water production by the solar systems. FPL will monitor the installed costs of solar water heating systems over the life of the pilot program to determine the long-term impacts of FPL incentives on the market price of solar water heating systems.

2. Residential Solar Water Heating (Low Income New Construction) Pilot

Start Date – New
Last Modified – N/A

Description

The Residential Solar for Low Income New Construction (LINC) Pilot Program is designed to reduce energy consumption and growth of coincident peak demand, increase the efficiency of low income housing, and demonstrate the practical application of solar water heating in residential new construction by providing solar water heating systems to selected low income housing developments throughout the FPL territory. The primary components of eligible solar water heating systems include: a solar collector, mounting hardware, an 80 gallon water retention tank, and associated plumbing, controls, and sensors.

Eligibility – New and existing FPL residential houses being constructed or refurbished specifically for low income customers that are identified and selected by non-profit low income housing organizations will be eligible.

Cost-Effectiveness – The cost-effectiveness test results are as follows: E-TRC = 0.48; E-RIM = 0.33; Participant = infinite (see Appendix A for FPL's cost-effectiveness analyses).

Incentive Determination – This program did not pass the E-TRC or E-RIM cost-effectiveness screening tests. The selected houses will receive an installed solar water heating system.

Operations & Administration

Marketing Channels – As a pilot program, FPL will create awareness and inform the general public regarding solar water heating. The primary marketing channels will be: The selected low income new construction housing agencies and trade allies such as solar

contractors, dealers, and distributors. These channels will be supported, as appropriate, by promotional activities and other marketing tactics

Post-Installation Inspections – In order to ensure compliance with Program Standards, FPL will perform inspections on 100% of the installations. The participating customer shall allow FPL to access, monitor, and analyze the customer's system as required.

Measurement & Evaluation -- FPL will evaluate the energy and demand impacts through the use of engineering modeling analyses. This modeling will be calibrated with on-site metering research in a manner that most cost-effectively meets the overall impact evaluation objectives. For a statistically valid sample of residential solar water heating installations, FPL will analyze hourly household hot water energy impacts, engineering and system design variations by metering actual hot water production by the solar systems and total usage by installation in BTU's. FPL will monitor the installed costs of solar water heating systems over the life of the pilot program to determine the long-term impacts of FPL incentives on the market price of solar water heating systems.

3. Business Solar Water Heating Pilot

Start Date – New
Last Modified – N/A

Description

The Business Solar Water Heating Pilot Program is designed to reduce energy consumption and growth of coincident peak demand by encouraging customers to install solar water heating systems in businesses. The primary components of eligible solar water heating systems include: solar collectors, mounting hardware, a water retention tank, and associated plumbing, controls, and sensors.

Eligibility – Existing FPL Business customers will be eligible.

Cost-Effectiveness – The cost-effectiveness test results are as follows: E-TRC = 1.30; E-RIM = 1.00; Participant = 1.87 (see Appendix A for FPL's cost-effectiveness analyses).

Incentive Determination – The measures included in this program passed the FPSC approved cost-effectiveness screening tests. FPL will offer up to a maximum of $30 per 1,000 BTUh/day of the maximum rated output of the installed solar water heating system. The incentives will be paid to customers, or their designees.

Operations & Administration

Marketing Channels – This program will be marketed to a wide variety of business customers. Therefore, different channels will be emphasized depending upon the nature of the customer's facilities. The primary marketing channels will be: FPL's Business Energy Evaluation program and trade allies such as solar contractors, dealers, and distributors. These channels will be supported, as appropriate, by demonstration projects, promotional activities and other marketing tactics

Post-Installation Inspections – In order to ensure compliance with Program Standards, FPL will, at a minimum, perform inspections on the installations as required by the F.A.C. The participating customer shall allow FPL to access, monitor, and analyze the customer's system as required.

Measurement & Evaluation – FPL will evaluate the energy and demand impacts through the use of engineering modeling analyses. This modeling will be calibrated with on-site metering research in a manner that most cost-effectively meets the overall impact evaluation objectives. For a statistically valid sample of Business solar water heating installations, FPL will analyze: hourly business hot water energy impacts, engineering and system design variations and their impact on energy and demand; analyze the solar water heating billing impacts to business customers while analyzing the data based on building type and process based usage; and also plan to meter the actual solar hot water delivered from the solar installation. FPL will monitor the installed costs of solar water heating systems over the life of the pilot program to determine the long-term impacts of FPL incentives on the market price of solar water heating systems.

4. Residential Photovoltaic Pilot

Start Date – New
Last Modified – N/A

Description

The Residential Photovoltaic Pilot Program is designed to reduce energy consumption and growth of coincident peak demand by encouraging customers to install photovoltaic systems in residential homes. The primary components of eligible photovoltaic systems include: various photovoltaic panels, mounting hardware, electric inverter, cabling, a disconnect device for systems greater than 10 kW direct current (dc) and optional backup battery systems.

Eligibility – Existing FPL residential customers are eligible.

Cost-Effectiveness – The cost-effectiveness test results are as follows: E-TRC = 0.18; E-RIM = 0.69; Participant = 0.69 (see Appendix A for FPL's cost-effectiveness analyses).

Incentive Determination – This measure did not pass any of the cost-effectiveness screening tests and will not be cost-effective to participating customers. FPL will offer up to a maximum incentive of $2,000 per the rated kWdc of the installed photovoltaic panels. The incentives will be paid to customers or their designees.

Operations & Administration

Marketing Channels – Through this pilot program, FPL will create awareness and inform the general public regarding photovoltaic systems. The primary marketing channels will be: FPL's Home Energy Audit and trade allies such as solar contractors, dealers, and distributors. These channels will be supported, as appropriate, by demonstration projects, promotional activities and other marketing tactics.

Post-Installation Inspections – In order to ensure compliance with Program Standards, FPL will, at a minimum, perform inspections on the installations as required by the F.A.C. The participating customer shall allow FPL to access, monitor, and analyze the customer's system as required.

Measurement & Evaluation – FPL will evaluate the energy and demand impacts through the use of engineering modeling analyses. This modeling will be calibrated with on-site metering research in a manner that most cost-effectively meets the overall impact evaluation objectives. For a statistically valid sample of residential photovoltaic installations, FPL will analyze hourly system energy production impacts of the system and the PV billing impacts to households. FPL will monitor the installed costs of solar water heating systems over the life of the pilot program to determine the long-term impacts of FPL incentives on the market price of solar water heating systems.

5. Business Photovoltaic Pilot

Start Date – New
Last Modified – N/A

Description

The Business Photovoltaic Pilot Program is designed to reduce energy consumption and growth of coincident peak demand by encouraging customers to install photovoltaic systems. The primary components of eligible photovoltaic systems includes: PV modules, mounting hardware, electric inverters, optional battery systems, associated cabling, and a disconnect device for systems greater than 10 kWdc.

Eligibility – Existing FPL business customers will be eligible.

Cost-Effectiveness – The cost-effectiveness test results are as follows: E-TRC = 0.23; E-RIM = 0.04; Participant = 6.74 (see Appendix A for FPL's cost-effectiveness analyses).

Incentive Determination – This program only passed the Participant cost-effectiveness screening test. FPL will offer up to a maximum incentive of $2,000 per the rated kWdc of the installed photovoltaic panels. The incentives will be paid to customers or their designees.

Operations & Administration

Marketing Channels – This program will be marketed to a wide variety of business customers. Therefore, different channels will be emphasized depending upon the nature of the customer's facilities. Overall, the primary channels will be: FPL's Business Energy Evaluation program, and trade allies such as solar contractors, dealers, and distributors. These channels will be supported, as appropriate, by demonstration projects, promotional activities and other marketing tactics.

Post-Installation Inspections – In order to ensure compliance with Program Standards, FPL will, at a minimum, perform inspections on the installations as required by the F.A.C. The participating customer shall allow FPL to access, monitor, and analyze the customer's system as required.

Measurement & Evaluation – FPL will evaluate the energy and demand impacts through the use of engineering modeling analyses. This modeling will be calibrated with on-site metering research in a manner that most cost-effectively meets the overall impact evaluation objectives. For a statistically valid sample of business PV installations, FPL will: analyze individual business PV hourly energy and demand impacts, engineering and system design variations and their impact on energy and demand; analyze the PV billing impacts to business customers while analyzing the data based on system size and configurations; and plan to meter the actual energy delivered by the PV installation. FPL will monitor the installed costs of solar water heating systems over the life of the pilot program to determine the long-term impacts of FPL incentives on the market price of solar water heating systems.

6. Business Photovoltaics for Schools Pilot

Start Date – New
Last Modified – N/A

Description

The Photovoltaic for Schools Pilot Program is designed to reduce energy consumption and growth of coincident peak demand and demonstrate and educate future generations on the practical application of photovoltaic by providing PV systems and educational materials for selected schools in all public school districts throughout the FPL territory. The primary components that will be offered per installed system include: photovoltaic panels, with inverter, mounting hardware, controls, and sensors; classroom educational materials; system monitoring and comparison tools; and, training for teachers and facility personnel.

Eligibility – Existing public schools served by FPL will be eligible.

Cost-Effectiveness – The cost-effectiveness test results are as follows: E-TRC = 0.17; E-RIM = 0.15; Participant = infinite (see Appendix A for FPL's cost-effectiveness analyses).

Incentive Determination – This program only passed the Participant test. The selected schools will receive an installed PV system.

Operations & Administration

Marketing Channels – Through this pilot program, FPL will create awareness and inform the general public regarding photovoltaic systems. The primary marketing channels will be the public school districts served by FPL, the selected schools, and trade allies such as solar contractors, dealers, distributors, and other educational facilities. These channels will be supported, as appropriate, by promotional activities and other marketing tactics.

Ownership of System – FPL will install, own, and maintain the PV systems for a period of 5 years from the in-service date. FPL will transfer ownership of the PV system to the appropriate school district at the end of the 5 year period.

Post-Installation Inspections – In order to ensure compliance with Program Standards, FPL will inspect 100% of the installations. The participating customer shall allow FPL to access, monitor, and analyze the customer's system as required.

Measurement & Evaluation – FPL will evaluate the energy and demand impacts though the use of on-site metering research for each installed system. FPL will monitor the installed costs of solar water heating systems over the life of the pilot program to determine the long-term impacts of FPL incentives on the market price of solar water heating systems.

7. Renewable Research and Demonstration Project

Start Date – New
Last Modified – N/A

Project Purpose – FPL is proposing to conduct a series of demonstration and renewable technology research projects to increase awareness of solar technologies and to understand and quantify the energy effectiveness of emerging renewable technologies and their applications. FPL is proposing to accomplish this through three primary activities: partnering with universities and technical centers to increase the accessibility to renewable technology education for contractors, building officials, FPL personnel, and the general public; installing small scale solar technologies at public non-profit and government facilities which can accommodate educational displays and materials; and, partnering with universities to test new applications and new emerging renewable energy technologies in order to quantify benefits to customers and establish energy performance profiles.

Background –FPL, along with the State of Florida Solar Energy Rebates and Federal Tax Credits, will hopefully expand the current solar market, drawing in new providers from the licensed pool of electricians and plumbers. These beneficial additions to the solar market will need applicable technical training in order to ensure quality cost-effective installations. Under this project, FPL is proposing to work directly with universities and technical centers to host training classes and seminars.

In addition to contractor training, FPL intends to study new solar technology. Solar water heating and PV systems dominate the renewable technology industry and there are new

applications and combinations of technologies that may maximize the energy utilization from the solar energy received. These include direct current air-conditioning units, absorption chillers, energy storage technologies, and solar assisted air-conditioning. FPL is proposing to study the energy and demand and customer impacts of these technologies in Florida's climate to determine the applicability to our customers.

Project Description and Administration – FPL's Renewable Research and Demonstration Project will assist the company in expanding its solar outreach by executing three distinct components: demonstration projects; educational grants; and, research of emerging renewable technologies.

Demonstration Projects– On an annual basis, FPL is proposing to identify appropriate public non-profit or governmental facilities which can host the installation of small scale photovoltaic or solar water heating systems with accompanying instructional displays and educational materials. The placement of these systems, along with associated monitoring equipment to encourage interaction, will serve as a working demonstration for all who visit the host facility. FPL plans to select appropriate facilities throughout its service territory.

Educational Grants- FPL is proposing to partner with an educational facility or contractor to increase the availability and accessibility of technical training for those people most critical to the facilitation of solar adoption such as, municipal inspectors, solar contractors, utility employees and others. In addition, these trainers would conduct solar seminars for the general public at selected locations throughout FPL's service territory.

Research – FPL will partner with universities throughout the state to research emerging renewable technologies via short term projects. FPL will conduct periodic Request for Proposals (RFP) to identify specific research projects and award projects based on unique applications of solar technologies and new enhancements to renewable technologies.

Proposed Schedule and Budget – FPL is proposing a cap of $2,500,000 for the Renewable Research and Demonstration project from the approval date of this plan through the proposed expiration date of December 31, 2015, which will include all educational, equipment, monitoring and research expenses.

SECTION IV - RESIDENTIAL PORTFOLIO

A. Overview

FPL's DSM Plan incorporates a wide array of residential programs comprised of eight programs. Included are six existing programs, five of which have been modified, and two new programs. This comprehensive portfolio is designed to minimize electric rate impacts to FPL's customers to the extent possible while still meeting the required goals.

Table 12

Residential Portfolio Programs & Measures

Programs	Modified	New	Measures	New
1. Residential Home Energy Survey	X		Field Energy Survey	
			On-line Home Energy Survey	
			Phone Energy Survey	
2. Residential Air-Conditioning	X		Straight Cool Air-Conditioner	
			Heat Pump Air-Conditioner	
			Plenum Seal	
			Supplemental Unit Sizing Calculation	
			Electronically Commutated Motors (ECM) on an Air Handler Unit	
3. Residential Duct System Testing and Repair	X		Air-Conditioning Duct System Testing & Repair	
4. Residential Building Envelope	X		Ceiling Insulation	
			Reflective Roof Coating	
			Reflective Roof Replacement	
			Solar Window Screen	X
5. Residential New Construction (BuildSmart®)	X		Exceed Building Code Minimum Efficiency Requirement	
			ENERGY STAR® for New Homes	X
6. Residential Load Management (On Call)			Residential Load Management	
7. Residential AC Tune-Up & Maintenance		X	Air-Conditioner Tune-Up & Maintenance	X
8. Residential Refrigerator Replacement		X	High-Efficiency Refrigerator	X

This section includes narratives for each of the programs and provides a general description of the individual programs' objectives, features, and administration. Existing programs will also contain a list of the proposed modifications. Additional specifics on each program and its operations will be provided in FPL's Program Standards to be filed after the DSM Plan is approved.

All of the programs included in the portfolio have two primary objectives – to reduce energy consumption and growth of coincident peak demand. The portfolio addresses the major drivers of a customer's energy consumption. The portfolio's program mix is designed to address the diversity of FPL's customer types and their needs by adding programs and measures, increasing financial incentives, and making a larger investment in customer awareness through additional education and marketing efforts. An increase in education and marketing is necessary if FPL is to meet the new goals established by the Commission.

Below are definitions of certain terms used throughout the program narratives.

- **Existing Customers** – refers to FPL customers of record who have a certificate of occupancy.
- **New Construction Customers** – refers to FPL customers of record who do not have a certificate of occupancy.
- **All Customers** – refers to both Existing and New Construction customers.
- **Maximum Incentive** – for measures where there are multiple incentive levels depending on one or more dimensions/parameters (e.g., Seasonal Energy Efficiency Ratio (SEER) levels, rate classes, customer group participation, building type, etc.), the value shown represents the weighted average of these various incentive maximums.

B. Detailed Program Descriptions

1. Residential Home Energy Survey

Start Date – January, 1981
Last Modified – March, 2005

Description

The Residential Home Energy Survey Program, formerly known as the Residential Conservation Service Program, is designed to reduce energy consumption and growth of coincident peak demand by offering home energy surveys to customers. This objective is accomplished by educating customers on energy efficiency and encouraging customers to perform recommended practices and measures, even if they are not included in FPL's DSM Plan. The energy survey is also used to identify customers for other residential incentive programs dependant upon survey findings. There are three types of home energy surveys available: Home Energy Survey, which is a walk-through survey performed by an FPL representative in the customer's home; Phone Energy Survey, which is performed by an FPL representative with information provided by the customer over the phone; and, Online Home Energy Survey, which is performed by the customer using an FPL provided online survey.

Eligibility – All FPL residential customers will be eligible.

Cost-Effectiveness – Demand and energy savings are not claimed for this program, so cost-effectiveness is inapplicable.

Incentive Determination – The energy survey helps to determine which practices and measures are most appropriate for a particular dwelling, and which measures may qualify for FPL incentives from other residential incentive programs.

Proposed Changes

It is proposed that the program name be changed from Residential Conservation Service Program to Residential Home Energy Survey Program to more accurately reflect the purpose of the program.

Operations & Administration

Marketing Channels – This program is marketed to all residential customers using multiple channels. The primary marketing channels will be television, radio, print, websites and direct marketing tactics.

Measurement & Evaluation – Demand and energy savings are not claimed for this program because this program is an education and audit program.

2. Residential Air Conditioning

Start Date – October, 1990
Last Modified – July, 2006

Description

The Residential Air Conditioning Program is designed to reduce energy consumption and growth of coincident peak demand by encouraging customers to install high-efficiency central air conditioning (AC) systems. The primary types of eligible AC systems include: straight cool and heat pumps.

Eligibility – Existing FPL residential customers will be eligible. FPL will monitor participation, and in the event that FPL's incentives combined with federal and state incentives encourage more participation than expected, FPL will reevaluate as appropriate.

Cost-Effectiveness – The cost-effectiveness test results are as follows: E-TRC = 1.60; E-RIM = 1.08; Participant = 1.82 (see Appendix A for FPL's cost-effectiveness analyses).

Incentive Determination – This program passed the E-TRC and/or E-RIM test, and the Participant test, with a maximum incentive set to provide customers with a payback of not less than two years on their incremental costs.

- AC System Incentive – FPL will calculate the incentive based on the type, size and differential in efficiency of the unit installed versus the State Energy Efficiency Code minimums. Incentives will be paid to customers or their designees.
- Optional Equipment or Service Upgrade Incentives – FPL provides these types of incentives for: sealing the plenums; installing an Electronically Commutated Motor (ECM) in the air-handler; or performing a supplemental unit sizing calculation validated by FPL. Incentives for these optional upgrades will be provided to the contractor.

Proposed Changes

FPL is revising the maximum incentives by measures as follows:

- Straight Cool AC units – from $1,429 to $1,995 per summer kW.
- Heat Pump AC units – from $1,643 to $1,921 per summer kW.
- ECM – from $208 to $238 per summer kW.
- Supplemental Verified Sizing Calculations – from $272 to $563 per summer kW.
- Plenum Seal – from $309 to $611 per summer kW.

Operation & Administration

Marketing Channels – The measures in this program are marketed to all existing residential customers using multiple channels. The primary marketing channels will be: FPL's Residential Home Energy Survey Program; contractors; dealers; and distributors. These channels will be supported, as appropriate, by promotional activities and other marketing tactics.

Post Installation Inspections – In order to ensure compliance with the Program Standards, FPL will, at a minimum, perform inspections on installations as required by the F.A.C. The participating customer shall allow FPL to access, monitor and analyze their installation as required.

Measurement & Evaluation – FPL will evaluate the energy and demand impacts through the use of engineering modeling analyses. This modeling will be calibrated using both periodic field metering data and statistical billing analysis from participants. These analyses will also be used to capture savings erosion from behavioral factors such as

"rebound," which can result if, for example, a customer sets the new, more efficient, system at a lower temperature.

3. Residential Duct System Testing & Repair

Start Date – August, 1991
Last Modified – March, 2005

Description

The Residential Duct System Testing & Repair Program is designed to reduce energy consumption and growth of coincident peak demand by encouraging customers to repair air leaks identified in air-conditioning duct systems.

Eligibility – Existing FPL residential customers in homes with an electric central air-conditioning system will be eligible.

Cost-Effectiveness – The cost-effectiveness test results are as follows: E-TRC = 2.90; E-RIM = 1.26; Participant = 3.40 (see Appendix A for FPL's cost-effectiveness analyses).

Incentive Determination – This program passed the E-TRC, E-RIM, and Participant tests with the maximum incentive set to provide customers with a payback of not less than two years on their incremental cost. Incentives will be paid to customers or their designees. Duct tests must be performed by an FPL authorized duct tester using diagnostic tools designed to assist in locating air leaks in air-conditioning duct systems. FPL will calculate the incentives based on the amount of repairs identified in the duct test.

Proposed Changes

FPL is revising the maximum incentive from $466 to $905 per summer kW.

Operation & Administration

Marketing Channels – The measures in this program are marketed to all residential customers in existing homes using multiple channels. The primary marketing channels will

be FPL's Residential Home Energy Survey program and contractors. These channels will be supported, as appropriate, by promotional activities and other marketing tactics.

Post Installation Inspections – In order to ensure compliance with the Program Standards, FPL will, at a minimum, perform inspections on the customer's system as required by the F.A.C. The participating customer shall allow FPL to access, monitor and analyze their system as required.

Measurement & Evaluation – FPL will evaluate the energy and demand impacts through the use of engineering modeling analyses. This modeling will be calibrated using both periodic field metering data and statistical billing analysis from participants. These analyses will also be used to capture savings erosion from behavioral factors such as "rebound," which can result if, for example, a customer sets the thermostat at a lower temperature.

4. Residential Building Envelope

Start Date – January, 1981
Last Modified – September, 2006

Description

The Residential Building Envelope Program is designed to reduce energy consumption and growth of coincident peak demand by encouraging customers to improve the thermal efficiency of the building structure. The measures included are: ceiling insulation; reflective roof replacement or coating; and, solar window screen.

Eligibility – Existing FPL residential customers with whole house electric air-conditioning will be eligible. FPL will monitor participation, and in the event that FPL's incentives combined with federal and state incentives encourage more participation than expected, FPL will reevaluate as appropriate.

Cost-Effectiveness – The cost-effectiveness test results are as follows: E-TRC = 1.33; E-RIM = 1.11; Participant = 1.47 (see Appendix A for FPL's cost-effectiveness analyses).

Incentive Determination – This program passed the E-TRC and/or E-RIM test(s), and the Participant test with the maximum incentive set to provide customers with a payback of not less than two years on their incremental costs. Incentives will be paid to customers or their designees. FPL will calculate each individual incentive based on the differential in equivalent summer coincident peak kW savings below the baseline for the following installed measures:

- Ceiling Insulation Incentive – square footage of attic over conditioned space.
- Reflective Roof Coating Incentive – square footage of roof over conditioned space.
- Reflective Roof Replacement Incentive – square footage of roof over conditioned space.

- Solar Window Screen Incentive – square footage of window screen installed.

Proposed changes

FPL is adding one new measure with the following maximum incentive:

- Solar Window Screen – $309 per summer kW.

FPL is revising the maximum incentive by measures as follows:

- Ceiling Insulation – from $1,676 to $1,877 per summer kW.
- Reflective Roof Coating – from $1,518 to $1,367 per summer kW.
- Reflective Roof Replacement – from $706 to $773 per summer kW.

Operation & Administration

Marketing Channels – The measures in this program are marketed to existing residential customers using multiple channels. The primary marketing channels will be FPL's Residential Home Energy Survey Program, contractors, dealers and distributors. These channels will be supported, as appropriate, by promotional activities and other marketing tactics.

Post-Installation Inspections – In order to ensure compliance with Program Standards, FPL will, at a minimum, perform inspections on installations as required by the F.A.C. The participating customer shall allow FPL to access, monitor, and analyze their installation as required.

Measurement & Evaluation – FPL will evaluate the energy and demand impacts through the use of engineering modeling analyses. This modeling will be calibrated using both

periodic field metering data and statistical billing analysis from participants. These analyses will also be used to capture savings erosion from behavioral factors such as "rebound," which can result if, for example, a customer lowers the air-conditioning thermostat setting in the home once the measures are installed.

5. Residential New Construction (BuildSmart®)

Start Date – February, 1996
Last Modified – January, 2009

Description

The Residential New Construction Program (BuildSmart®) is designed to reduce energy consumption and growth of coincident peak demand through the design and construction of energy-efficient homes. The program will encourage builders and developers to achieve the ENERGY STAR® qualification.

Eligibility – All builders, developers and owner-builders of a new home in FPL's service area will be eligible.

Cost-Effectiveness – The cost-effectiveness test results are as follows: E-TRC = 2.81; E-RIM = 1.26; Participant = 3.00 (see Appendix A for FPL's cost-effectiveness analyses).

Incentive Determination – This program passed the E-TRC, E-RIM and the Participant tests with the maximum incentive set to provide customers with a payback of not less than two years on their incremental construction cost. Incentives will be paid to builders, developers, owner-builders or their designees. FPL will calculate the incentive based on the energy code compliance score of the home being at least 10% better than the score required by the Florida Energy Efficiency Code for Building Construction.

Proposed changes

FPL is adding a maximum incentive of $1,286 per summer kW.

Operation & Administration

Marketing Channels – This program is marketed to builders, developers, owner-builders and potential home buyers. The primary marketing channels will be direct contact with potential participants by FPL personnel, builders, developers and trade organizations. These channels will be supported, as appropriate, by promotional activities and other marketing tactics.

Post-Installation Inspections – In order to ensure compliance with Program Standards, FPL will, at a minimum, perform inspections on constructions as required by the F.A.C. The participating customer shall allow FPL to access, monitor, and analyze their construction as required.

Measurement & Evaluation – FPL will evaluate the energy and demand impacts through the use of engineering modeling analyses. This modeling will be calibrated with statistical billing analyses and periodic field metering data collected from participants. The EnergyGauge software will continue to be used to certify that the homes meet the higher BuildSmart standards.

6. Residential Load Management (On Call)

Start Date – July, 1986
Last Modified – September, 2006

Description

The On Call program is a voluntary program primarily used to reduce the summer and winter coincident peak demand and energy by turning off customers' appliances for varying durations. Load control equipment is installed at selected customer end-use equipment, allowing FPL to control these loads.

Eligibility – All eligible FPL residential customers served under Rate Schedule RS-1. Participation in this program may be limited due to system load shape analysis issues and/or achievement of the DSM Goals.

Cost - Effectiveness – The cost-effectiveness test results are as follows: E-TRC = 6.41; E-RIM = 2.81, Participant = infinite (see appendix A for FPL's cost-effectiveness analyses).

Incentive Determination – This program passed the E-TRC, E-RIM, and Participant test based on FPL's cost-effectiveness analyses. Customers receive an incentive payment, in the form of a monthly credit on their bill as specified in the Residential Load Control Program tariff sheet, No. 8.217, Schedule RLP. The incentive amount is dependent on the control cycle and appliances, selected by the customer, which are connected to the load control equipment installed. These appliances include central air-conditioning, central electric heating, electric water heaters and pool pumps.

Proposed Changes

FPL is proposing no change to this program.

Operation & Administration

Marketing Channels – This program is marketed to all residential customers. The primary marketing channels will be FPL's Residential Home Energy Survey program, direct mail, and radio. These channels will also be supported, as appropriate, by promotional activities and other marketing tactics.

Post Installation Inspections – In order to ensure compliance with Program Standards, FPL will, at a minimum, perform inspections on the installations as required by the F.A.C. The participating customer shall allow FPL to access, monitor and analyze the load control equipment installation.

Measurement & Evaluation – FPL will evaluate the energy and demand impacts through the use of engineering modeling analyses. This modeling will be calibrated with periodic field metering from participants.

7. Residential Air-Conditioning Tune-Up & Maintenance

Start Date – New
Last Modified – N/A

Description

The Residential Air-Conditioning (AC) Tune-up & Maintenance Program is a new program designed to reduce energy consumption and growth of coincident peak demand attributable to central AC equipment by encouraging customers to have an AC unit tune-up and maintenance performed.

Eligibility – Existing FPL residential customers with an electric central air-conditioning system will be eligible.

Cost-Effectiveness – The cost-effectiveness test results are as follows: E-TRC = 2.29; E-RIM = 1.08; Participant = 3.26 (see Appendix A for FPL's cost-effectiveness analyses).

Incentives Determination – The measures included in this program passed the E-TRC, E-RIM and the Participant tests with the maximum incentive set to provide customers with a payback of not less than two years on their incremental cost. Incentives will be paid to customers, or their designees, and are based on improved operating efficiency when an AC tune-up is performed. Incentive will be provided on a per AC unit basis up to a maximum incentive of $609 per summer kW.

Operation & Administration

Marketing Channels – The measures in this program are marketed to all residential customers in existing homes using multiple channels. The primary marketing channels will

be FPL's Residential Home Energy Survey Program and contractors. These channels will be supported, as appropriate, by promotional activities and other direct marketing tactics.

Post Installation Inspections – In order to ensure compliance with the Program Standards, FPL will, at a minimum, perform inspections on the customer's system as required by the F.A.C. The participating customer shall allow FPL to access, monitor and analyze their system as required.

Measurement & Evaluation – FPL will evaluate the energy and demand impacts through the use of engineering modeling analyses. This modeling will be calibrated using both periodic field metering data and statistical billing analysis from participants.

8. Residential Refrigerator Replacement

Start Date – New
Last Modified – N/A

Description

The Residential Refrigerator Replacement Program is designed to reduce energy consumption and growth of coincident peak demand by encouraging customers to install high-efficiency ENERGY STAR® refrigerators.

Eligibility – All FPL residential customers will be eligible.

Cost-Effectiveness – The cost-effectiveness test results are as follows: E-TRC = 1.11; E-RIM = 0.72; Participant = 2.13 (see Appendix A for FPL's cost-effectiveness analysis).

Incentive Determination – This program passed the E-TRC and Participant tests with the maximum incentive set to provide customers with a payback of not less than two years on their incremental costs. Incentives will be paid to customers or their designees for ENERGY STAR® refrigerators that are 20% more efficient than the Department of Energy Appliance Standards program code. The incentive will be provided on a per qualifying refrigerator basis up to a maximum incentive of $2,354 per summer kW, or approximately $50- $75 per participant.

Operations & Administration

Marketing Channels – The measures in this program will be marketed to all residential customers using multiple channels. The primary marketing channels will be: FPL's Residential Home Energy Survey; direct contact by FPL personnel; and, appliance retail

stores. These channels will be supported, as appropriate, by promotional activities and other marketing tactics.

Post Installation Inspections – In order to ensure compliance with Program Standards, FPL will, at a minimum, perform inspections as required by the F.A.C. The participating customer shall allow FPL to access, monitor, and analyze the customer's unit as required.

Measurement & Evaluation – FPL will evaluate the energy and demand impacts through the use of engineering modeling analyses.

SECTION V - BUSINESS PORTFOLIO

A. Overview

FPL's DSM Plan incorporates a wide array of Business Programs comprised of 12 programs. Included are 11 existing programs, five of which have been modified, and one new program.

Table 13

Business Portfolio Programs & Measures

Programs	Modified	New	Measures	New
1. Business Energy Evaluation			Field Energy Audit	
			Small Business On-line Energy Audit	
2. Business Heating, Ventilating, & Air-Conditioning	X		Chillers	
			Variable Frequency Drives (VFD) for Chillers	X
			Demand Control Ventilation (DCV) for HVAC Applications	
			Demand Control Ventilation (DCV) for Kitchen Hood Applications	
			Split/Packaged Direct Expansion (DX)	
			Electronically Commutated Motors (ECM) for DX	
			Energy Recovery Ventilation (ERV)	
			Thermal Energy Storage (TES)	
3. Business Lighting	X		Compact Flourescent Lamps (CFL)	
			Pulse Start Metal Halide (PSMH) Lighting	
			Premium Linear Flourescent Lamps with High Efficiency Electronic Ballasts	
			Light-Emitting Diode (LED) Exit Signs	X
4. Business Refrigeration	X		Anti-sweat Heat Controls	
			Hot Gas Reclaim on Freezer Doors	
			Special Doors with Low or No Anti-sweat Heat	
			Compressor Variable Frequency Drive (VFD) Retrofit	X
			Evaporator Fan Controller for Medium -Temperature Walk-in Coolers	X
			Electronically Commutated Motors (ECM)	X
			Oversized Air-Cooled Condensers	X
5. Business Building Envelope	X		Ceiling Insulation	
			Reflective Roofing	
			Roof Insulation	
			Window Treatment	
6. Business Water Heating	X		Heat Pump Water Heater	
			Heat Recovery Unit	
7. Business Custom Incentive			Miscellaneous Measures Not Directly Offered in Existing Programs	
8. Cogeneration & Small Power Production			Cogeneration & Small Power Production Projects	
9. Business On-Call			Small/Medium Business Load Management	
10. Commercial/Industrial Demand Reduction			Large Commercial/Industrial Load Management	
11. Commercial/Industrial Load Control (Closed)			Large Commercial/Industrial Load Management	
12. Business Motors		X	Variable Frequency Drives (VFD) for HVAC Applications	X

This comprehensive portfolio is designed to minimize electric rate impacts to FPL's customers to the extent possible while still meeting the required goals. This section includes narratives for each of the programs and provides a general description of the individual programs' objectives, features, and administration. Existing programs will also contain a list of the proposed modifications. Additional specifics on each program and its operations will be provided in FPL's Program Standards to be filed after the DSM Plan approval.

All of the programs included in the portfolio have two primary objectives – to reduce energy consumption and growth of coincident peak demand. The portfolio addresses 100% of the drivers of a customer's energy consumption. FPL has enhanced its portfolio to ensure it provides benefits to all Business customer segments, including those that are hard to reach (e.g., small businesses). To further ensure unique, customer-specific, or innovative situations are also addressed, FPL offers the Business Custom Incentive program.

Below are definitions of certain terms used throughout the program narratives.

- **Existing Customers** – refers to FPL customers of record who have a certificate of occupancy.
- **New Construction Customers** – refers to FPL customers of record who do not have a certificate of occupancy.
- **All Customers** – refers to both Existing and New Construction customers.
- **Maximum Incentive** – for measures where there are multiple incentive levels depending on one or more dimensions/parameters (e.g., efficiency levels, rate classes, customer group

participation, building type, etc.), the value shown represents the weighted average of these various incentive maximums.

B. Detailed Program Descriptions

1. Business Energy Evaluation

Start Date – October, 1990
Last Modified – March, 2005

Description

The Business Energy Evaluation (BEE) Program is designed to reduce energy consumption and growth of coincident peak demand by offering energy audits (BEEs) to business customers. This objective is accomplished by educating customers on energy efficiency and encouraging customers to perform recommended practices and measures. The BEE is also used to qualify customers for other business incentive programs dependent upon audit findings. There are two types of BEEs available: the in-field BEE, which is an energy audit performed by an FPL representative in the customer's facility; and the online BEE (OBEE), which is performed by the customer using an FPL-provided OBEE survey.

Eligibility – All FPL business customers will be eligible.

Cost-Effectiveness – Demand and energy savings are not claimed for this program, thus cost-effectiveness is inapplicable.

Incentive Determination – The BEE helps to determine which practices and measures are most appropriate for a particular facility and which measures may qualify for FPL incentives from other business incentive programs.

Proposed Changes

FPL is proposing no changes to this program.

Operations & Administration

Marketing Channels – The measures in this program are marketed to a wide variety of business customers. Therefore, different marketing channels will be emphasized depending upon the nature of the customer's facilities. The primary marketing channels will be FPL personnel, contractors, and energy services companies. These channels will be supported, as appropriate, by promotional activities and advertising.

Post-Installation Inspections – No post-installation inspection is required.

Measurement & Evaluation – Demand and energy savings are not claimed for this program because this program is an educationally based audit program.

2. Business Heating, Ventilating & Air-Conditioning

Start Date – February, 1990
Last Modified – July, 2006

Description

The Business Heating, Ventilating & Air-Conditioning (HVAC) Program is designed to reduce energy consumption and growth of coincident peak demand by encouraging customers to install high-efficiency HVAC systems. The primary types of eligible HVAC systems include: thermal energy storage (TES); chillers; split/packaged direct expansion (DX); electronically commutated motor (ECM) for DX; energy recovery ventilator (ERV); demand control ventilation (DCV) for both HVAC and kitchen hood applications; and, variable frequency drives (VFD) for chillers.

Eligibility – All FPL business customers will be eligible.

Cost-Effectiveness – The cost-effectiveness test results are as follows: E-TRC = 3.17; E-RIM = 1.04; Participant = 3.56 (see Appendix A for FPL's cost-effectiveness analyses).

Incentive Determination – This program passed the E-TRC and/or E-RIM test(s), and the Participant test with a maximum incentive set to provide customers with a payback of not less than two years on their incremental costs. The incentives will be paid to customers, or their designees, and in certain cases, designers. FPL will calculate each individual incentive based on the differential between the customer-provided equipment specifications and the equivalent summer coincident peak kW baselines as derived from:

- TES – cooling tons removed.
- Chillers and DX – ASHRAE 90.1.
- ECM for DX – tons of DX equipment.

- ERV – cubic feet per minute of exhaust air.
- DCV:
  - HVAC applications – number of sensors.
  - Kitchen hood applications – hood square footage.
- VFD for chillers – size of chiller motor.

Proposed Changes

FPL is adding one new measure with a maximum incentive as follows:

- VFD for chillers – $472 per summer kW.

FPL is revising the maximum incentives for measures as follows:

- TES – from $898 to $1,195 per summer kW.
- Chillers – from $99 to $574 per summer kW.
- DX – from $168 to $1,156 per summer kW.
- ECM for DX – from $102 to $808 per summer kW.
- ERV – from $417 to $3,323 per summer kW.
- DCV for HVAC applications – from $627 to $3,536 per summer kW.
- DCV for kitchen hood applications – from $627 to $2,027 per summer kW.

Operations & Administration

Marketing Channels – The measures in this program are marketed to a wide variety of business customers. Therefore, different marketing channels will be emphasized depending upon the nature of the customer's facilities. The primary marketing channels will be: FPL's Business Energy Evaluation Program; architectural and engineering firms; contractors; and, energy services companies. These channels will be supported, as appropriate, by promotional activities and other marketing tactics.

Post-Installation Inspections – In order to ensure compliance with Program Standards, FPL will, at a minimum, perform inspections on the installations as required by the F.A.C. The participating customer shall allow FPL to access, monitor, and analyze the customer's system as required.

Measurement & Evaluation – FPL will evaluate the energy and demand impacts through the use of engineering modeling analyses. This modeling will be calibrated with periodic field metering data collected from participants.

3. Business Lighting

Start Date – June, 1984
Last Modified – September, 2006

Description

The Business Lighting Program is designed to reduce energy consumption and growth of coincident peak demand by encouraging customers to install high-efficiency lighting systems. The primary types of eligible lighting systems include premium linear fluorescents with high efficiency electronic ballasts, compact fluorescent lights (CFL), pulse-start metal halides (PSMH), and light-emitting diode (LED) exit signs.

Eligibility – All FPL business customers will be eligible.

Cost-Effectiveness – The cost-effectiveness test results are as follows: E-TRC = 4.30; E-RIM = 1.20; Participant = 4.20 (see Appendix A for FPL's cost-effectiveness analyses).

Incentive Determination – This program passed the E-TRC, E-RIM and Participant tests with a maximum incentive set to provide customers with a payback of not less than two years on their incremental costs. The incentives will be paid to customers, or their designees, and in certain cases designers. FPL will calculate each individual incentive based on the differential between the customer-provided equipment specifications and the equivalent summer coincident peak kW baselines as derived from:

- Premium linear fluorescents with high efficiency electronic ballasts – total fixture wattage
- CFL – number of lamps
- PSMH – total fixture wattage
- LED exit signs – number of signs

Proposed Changes

FPL is expanding eligibility of this program to include new construction customers.

FPL is adding one new measure with a maximum incentive as follows:

- LED exit signs – $101 per summer kW

FPL is revising the maximum incentives for measures as follows:

- Premium linear fluorescents with high efficiency electronic ballasts – from $132 to $478 per summer kW
- CFL – from $132 to $349 per summer kW
- PSMH – from $132 to $297 per summer kW

Operations & Administration

Marketing Channels – The measures in this program are marketed to a wide variety of business customers. Therefore, different marketing channels will be emphasized depending upon the nature of the customer's facilities. The primary marketing channels will be: FPL's Business Energy Evaluation Program; architectural and engineering firms; contractors; and energy services companies. These channels will be supported, as appropriate, by promotional activities and other marketing tactics.

Post-Installation Inspections – In order to ensure compliance with Program Standards, FPL will, at a minimum, perform inspections on the installations as required by the F.A.C. The participating customer shall allow FPL to access, monitor, and analyze the customer's system as required.

Measurement & Evaluation – FPL will evaluate the energy and demand impacts through the use of engineering analyses, statistical billing, and periodic field metering data collected from participants.

4. Business Refrigeration

Start Date – May, 2006
Last Modified – September, 2006

Description

The Business Refrigeration Program is designed to reduce energy consumption and growth of coincident peak demand by encouraging customers to install high-efficiency refrigeration systems. The primary types of eligible refrigeration systems include anti-sweat heat controls, special doors with low or no anti-sweat heat, hot gas reclaim on freezer doors, compressor variable frequency drive (VFD) retrofit, oversized air cooled condensers, electronically commutated motors (ECM), and evaporator fan controller for medium temperature (MT) walk-in coolers.

Eligibility – All FPL business customers will be eligible.

Cost-Effectiveness – The cost-effectiveness test results are as follows: E-TRC = 4.12; E-RIM = 1.10; Participant = 4.94 (see Appendix A for FPL's cost-effectiveness analyses).

Incentive Determination – This program passed the E-TRC and/or E-RIM test(s), and the Participant test with a maximum incentive set to provide customers with a two-year payback on their incremental costs. The incentives will be paid to customers, or their designees, and in certain cases designers. FPL will calculate each individual incentive based on the differential between the customer-provided equipment specifications and the equivalent summer coincident peak kW baselines as derived from:

- Anti-sweat heat controls – number of display doors, door rails, or case frames
- Special doors with low or no anti-sweat heat – number of display doors, door rails, or case frames
- Hot gas reclaim on freezer doors – number of freezer doors

- Compressor VFD retrofit – size of the compressor motor
- Oversized air cooled condensers – size of the compressor motor
- ECM – number of display doors, door rails, or case frames
- Evaporator fan controller for MT walk-in coolers – size of the compressor motor

Proposed Changes

FPL is adding four new measures with maximum incentives as follows:

- Compressor VFD retrofit – $910 per summer kW.
- Oversized air cooled condenser – $347 per summer kW.
- ECM – $808 per summer kW.
- Evaporator fan controller MT walk-in coolers – $812 per summer kW.

FPL is revising the maximum incentives for measures as follows:

- Anti-sweat heat controls – from $80 to $230 per summer kW.
- Special doors with low or no anti-sweat heat – from $80 to $754 per summer kW.
- Hot gas reclaim – from $80 to $1,374 per summer kW.

Operations & Administration

Marketing Channels – The measures in this program are marketed to a wide variety of business customers. Therefore, different marketing channels will be emphasized depending upon the nature of the customer's facilities. The primary marketing channels will be: FPL's Business Energy Evaluation Program; architectural and engineering firms;

contractors; and distributors. These channels will be supported, as appropriate, by promotional activities and other marketing tactics.

Post-Installation Inspections – In order to ensure compliance with Program Standards, FPL will, at a minimum, perform inspections on the installations as required by the F.A.C. The participating customer shall allow FPL to access, monitor, and analyze the customer's system as required.

Measurement & Evaluation – FPL will evaluate the energy and demand impacts through the use of engineering modeling analyses. This modeling will be calibrated with periodic field metering data collected from participants.

5. Business Building Envelope

Start Date – June, 1995
Last Modified – September, 2006

Description

The Business Building Envelope Program is designed to reduce energy consumption and growth of coincident peak demand by encouraging customers to install eligible building envelope measures. The primary types of eligible building envelope measures include ceiling insulation, roof insulation, window treatment, and reflective roofing.

Eligibility – Existing FPL business customers will be eligible. FPL will monitor participation, and in the event that FPL's incentives combined with federal and state incentives encourages more participation than expected, FPL will reevaluate as appropriate.

Cost-Effectiveness – The cost-effectiveness test results are as follows: E-TRC = 1.57; E-RIM = 1.04; Participant = 1.69 (see Appendix A for FPL's cost-effectiveness analyses).

Incentive Determination – This program passed the E-TRC, E-RIM and Participant tests with a maximum incentive set to provide customers with a payback of not less than two years on their incremental costs. The incentives will be paid to customers or their designees. FPL will calculate each individual incentive based on the differential between the customer-provided equipment specifications and the equivalent summer coincident peak kW baselines as derived from:

- Ceiling insulation – square footage of insulation
- Roof insulation – square footage of insulation
- Window treatment – square footage of window treatment
- Reflective roofing – square footage of reflective roof measure

Proposed Changes

FPL is revising the maximum incentives by measures as follows:

- Ceiling insulation – from $185 to $527 per summer kW
- Roof insulation – from $219 to $641 per summer kW
- Window treatment – from $429 to $979 per summer kW
- Reflective roofing – from $579 to $1,487 per summer kW

Operations & Administration

Marketing Channels – The measures in this program are marketed to a wide variety of business customers. Therefore, different marketing channels will be emphasized depending upon the nature of the customer's facilities. The primary marketing channels will be: FPL's Business Energy Evaluation Program and contractors. These channels will be supported, as appropriate, by promotional activities and other marketing tactics.

Post-Installation Inspections – In order to ensure compliance with Program Standards, FPL will, at a minimum, perform inspections on the installations as required by the F.A.C. The participating customer shall allow FPL to access, monitor, and analyze the customer's system as required.

Measurement & Evaluation – FPL will evaluate the energy and demand impacts through the use of engineering analyses, statistical billing, and periodic field metering data collected from participants.

6. Business Water Heating

Start Date – May, 2006
Last Modified – September, 2006

Description

The Business Water Heating Program is designed to reduce energy consumption and growth of coincident peak demand by encouraging customers to install high-efficiency water heating systems. The primary types of eligible water heating systems include heat recovery units (HRU) and heat pump water heaters (HPWH).

Eligibility – All FPL business customers will be eligible.

Cost-Effectiveness – The cost-effectiveness test results are as follows: E-TRC = 2.89; E-RIM = 1.01; Participant = 3.43 (see Appendix A for FPL's cost-effectiveness analyses).

Incentive Determination – This program passed the E-TRC and/or E-RIM test(s) and the Participant test with a maximum incentive set to provide customers with a two-year payback on their incremental costs. The incentives will be paid to customers, or their designees, or designers. FPL will calculate each individual incentive based on the differential between the customer-provided equipment specifications and the equivalent summer coincident peak kW baselines as derived from:

- HRU – cooling equipment capacity
- HPWH – cooling equipment capacity

Proposed Changes

FPL is revising the maximum incentives by measures as follows:

- HRU – from $881 to $2,832 per summer kW

- HPWH – from $881 to $1,413 per summer kW

Operations & Administration

Marketing Channels – The measures in this program are marketed to a wide variety of business customers. Therefore, different marketing channels will be emphasized depending upon the nature of the customer's facilities. The primary marketing channels will be: FPL's Business Energy Evaluation Program; architectural and engineering firms; contractors; and distributors. These channels will be supported, as appropriate, by promotional activities and other marketing tactics.

Post-Installation Inspections – In order to ensure compliance with Program Standards, FPL will, at a minimum, perform inspections on the installations as required by the F.A.C. The participating customer shall allow FPL to access, monitor, and analyze the customer's system as required.

Measurement & Evaluation – FPL will evaluate the energy and demand impacts through the use of engineering modeling analyses. This modeling will be calibrated with periodic field metering data collected from participants.

7. Business Custom Incentive

Start Date – April, 1993
Last Modified – March, 2005

Description

The Business Custom Incentive (BCI) Program is designed to reduce energy consumption and growth of coincident peak demand by encouraging customers to install unique high-efficiency systems not covered by other FPL DSM programs. The primary types of custom measures include process improvement changes, process controls, efficient machinery, and other measures unique to industrial processes or business customers.

Eligibility – All FPL business customers will be eligible.

Cost-Effectiveness – A program level cost-effectiveness run cannot be performed because each BCI is tailored to the specific project of each customer. A customer specific cost-effectiveness run is conducted before each BCI is approved by FPL.

Incentive Determination – All measures included in this program will be evaluated using all three cost-effectiveness tests; E-TRC, E-RIM, and Participant, with a maximum incentive set to provide customers with a payback of not less than two years on their incremental costs. The incentives will be paid to customers or their designees. FPL will calculate each individual incentive based on the differential between the customer-provided equipment specifications and the equivalent summer coincident peak kW for the specific technology under consideration. BCI does not include incentives for (a) operational or maintenance improvements that are not permanent, (b) equipment or measures that FPL is actively researching, fuel switching, power generation technology, or (c) wheeling of any type.

Proposed Changes

FPL is proposing no changes to this program.

Operations & Administration

Marketing Channels – The measures in this program are marketed to a wide variety of business customers. Therefore, different marketing channels will be emphasized depending upon the nature of the customer's facilities. The primary marketing channel will be FPL's Business Energy Evaluation Program. This channel will be supported, as appropriate, by promotional activities and other marketing tactics.

Post-Installation Inspections – In order to ensure compliance with Program Standards, FPL will, at a minimum, perform inspections on the installations as required by the F.A.C. The participating customer shall allow FPL to access, monitor, and analyze the customer's system as required.

Measurement & Evaluation – BCI projects will be monitored to verify demand and energy savings to the appropriate level by one or more of the following methods: engineering analysis with relevant calculations, feasibility study performed by an independent registered professional engineer, field monitoring, billing analysis, or lab testing.

8. Cogeneration & Small Power Production

Start Date – March, 1981
Last Modified – March, 2005

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 (QF) under the Public Utility Regulatory Policies Act of 1978 (PURPA) and FPSC 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. An 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 guides 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 Commission 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.

Proposed Changes

FPL is proposing no changes to this program.

Operations & 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 QFs pursuant to the utility's tariff are recoverable by the utility through the FPSC's periodic review of its fuel and purchased power costs. Utility payments to QFs for firm capacity and energy are also similarly reviewed and recovered by the utility with FPSC approval. In addition, pursuant to FPSC approval, FPL has historically recovered its Cogeneration and Small Power Production Program costs through its ECCR clause.

9. Business On Call

Start Date – June, 1995
Last Modified – September, 2006

Description

The Business On Call Program, also referred to as the General Service Load Management Program, is a voluntary program primarily used to reduce the summer and winter coincident peak demand and energy by turning off customers' direct expansion central electric air-conditioning units. Load control equipment is installed at selected customer end-use equipment, allowing FPL to control these loads.

Eligibility – All FPL business customers served under FPL Rate Schedules GS-1 and GSD-1 will be eligible. Participation in this program may be limited due to system load shape analysis issues and/or achievement of the DSM Goals.

Cost - Effectiveness – The cost-effectiveness test results are as follows: E-TRC = 7.70; E-RIM = 3.23, Participants = infinite (see appendix A for FPL's cost-effectiveness analyses).

Incentive Determination – This program passed the E-TRC, E-RIM, and Participant tests based on FPL's cost-effectiveness analyses. Customers receive an incentive payment, in the form of a monthly credit on their bill, as specified in the General Service Program tariff sheet, No. 8.109, Schedule GSL. The incentive amount is dependent on the air-conditioning tonnage signed up by the customer, which is connected to the load control equipment.

Proposed Changes

FPL is proposing no changes to this program.

Operations & Administration

Marketing Channels – The primary marketing channel will be FPL's Business Energy Evaluation. This channel will also be supported, as appropriate, by promotional activities and other marketing tactics.

Post Installation Inspection – In order to ensure compliance with Program Standards, FPL will, at a minimum, perform inspections on the installations as required by the F.A.C. The participating customer shall allow FPL to access, monitor and analyze the customer's installation of load control equipment.

Measurement & Evaluation – FPL will evaluate the energy and demand impacts through the use of engineering modeling analyses. This modeling will be calibrated with periodic field metering data collected from participants.

10. Commercial/Industrial Demand Reduction

Start Date – May, 2000
Last Modified – March, 2005

Description

The Commercial/Industrial Demand Reduction (CDR) Program, also referred to as the Commercial/Industrial Demand Reduction Rider, is designed to reduce the growth of coincident peak demand by controlling customer loads of 200 kW or greater during periods of extreme demand, capacity shortages, or system emergencies. Participation in this program involves the installation of direct load control equipment to allow FPL to control customer loads.

Eligibility – All business customers served under FPL Rate Schedules GSD-1, GSDT-1, GSLD-1, GSLDT-1, GSLD-2, GSLDT-2, GSLD-3, GSLDT-3, HLFT-1, HLFT-2, HLFT-3 that allow FPL to control at least 200 kW of their electrical load as specified on the CDR Rider, tariff sheet No. 8.680 will be eligible. Participation in this program may be limited due to system load shape analysis issues and/or achievement of the DSM Goals.

Cost-Effectiveness – The cost-effectiveness test results are as follows: E-TRC = 88.80; E-RIM = 3.10; Participant = infinite (see Appendix A for FPL's cost-effectiveness analyses).

Incentive Determination – This program passed the E-TRC, E-RIM and Participant tests based on FPL's cost-effectiveness analysis. Customers receive an incentive payment in the form of a credit on their monthly bills. FPL will calculate all incentives based on the customer's average demand during controllable rating periods less the customer's contracted firm demand as specified in the CDR Rider tariff sheets No. 8.680 and No. 8.681.

Proposed Changes

FPL is proposing no changes to this program.

Operations & Administration

Marketing Channels – This program will be marketed to business customers with demands of 200 kW or greater. The primary marketing channel will be the Business Energy Evaluation. This channel will be supported, as appropriate, by promotional activities and other marketing tactics.

Post-Installation Inspections – FPL will either inspect all or a random sample to verify proper installation of the load control equipment. The participating customer shall allow FPL to access, monitor, and analyze the customer's system as required.

Measurement & Evaluation – FPL will evaluate participants' performance during controllable rating periods and load control events using onsite metering equipment.

11. Commercial/Industrial Load Control

Start Date – October, 1990
Last Modified – March, 2005

Description

The Commercial/Industrial Load Control (CILC) Program is designed to reduce the growth of coincident peak demand by controlling customer loads of 200 kW or greater during periods of extreme demand, capacity shortages, or system emergencies. Participation in this program involves the installation of direct load control equipment to allow FPL to control customer loads.

Eligibility – The Commercial Industrial Load Control (CILC) Program was closed to new participants as of December 31, 2000. It is available to existing CILC customers who had entered into a CILC agreement as of March 19, 1996, and allow FPL to control at least 200 kW of their electrical load as specified on the CILC tariff sheet No.8.650.

Cost-Effectiveness – Not Applicable

Incentive Determination – Participants in the CILC Program receive service under a lower rate in return for allowing FPL to control its load. FPL will calculate all incentives based on the customer's maximum demand, on-peak demand, and the contracted firm demand as specified in the CILC tariff sheets No. 8.651 through No. 8.655.

Proposed Changes

FPL is proposing no changes to this program.

Operations & Administration

Marketing Channels – This program is closed to new participants.

Post-Installation Inspections – FPL will either inspect all or a random sample to verify proper installation of the load control equipment. The participating customer shall allow FPL to access, monitor, and analyze the customer's system as required.

Measurement & Evaluation – FPL will evaluate participants' performance during controllable rating periods and load control events using onsite metering equipment.

12. Business Motors

Start Date – New
Last Modified – N/A

Description

The Business Motors Program is designed to reduce energy consumption and growth of coincident peak demand by encouraging customers to improve their motor efficiency primarily through the use of variable frequency drives (VFD).

Eligibility – All FPL business customers will be eligible.

Cost-Effectiveness – The cost-effectiveness test results are as follows: E-TRC = 6.75; E-RIM = 1.24; Participant = 6.61 (see Appendix A for FPL's cost-effectiveness analyses).

Incentive Determination – The measure included in this program passed the E-TRC, E-RIM and Participant tests with a maximum incentive set to provide customers with a two-year payback on their incremental costs. The incentives will be paid to customers, or their designees, and in certain cases designers. FPL will calculate each individual incentive based on the differential between the customer-provided equipment specifications and the equivalent summer coincident peak kW baselines as derived from:

- VFD – size of motor

Proposed Changes

FPL is offering a new measure with maximum incentive as follows:

- VFD for HVAC applications – $64 per summer kW

Operations & Administration

Marketing Channels – The measures in this program are marketed to a wide variety of business customers. Therefore, different marketing channels will be emphasized depending upon the nature of the customer's facilities. The primary marketing channels will be: FPL's Business Energy Evaluation Program, architectural and engineering firms, contractors, distributors, and energy services companies. These channels will be supported, as appropriate, by promotional activities and other marketing tactics.

Post-Installation Inspections – In order to ensure compliance with Program Standards, FPL will, at a minimum, perform inspections on the installations as required by the F.A.C. The participating customer shall allow FPL to access, monitor, and analyze the customer's system as required.

Measurement & Evaluation – FPL will evaluate the energy and demand impacts through the use of engineering modeling analyses. This modeling will be calibrated with periodic field metering data collected from participants.

SECTION VI – RESEARCH & DEVELOPMENT PORTFOLIO

A. Overview

FPL's DSM Plan incorporates a series of projects focused on identifying and evaluating energy efficiency technologies with the objective of subsequently developing any appropriate technologies into programs. FPL's R&D portfolio is comprised of one existing program and three new research projects. These programs and projects are designed to conduct scientifically sound analyses in a fiscally efficient manner.

Table 14

R&D Programs & Projects

Programs and Projects	Modified	New
1. Conservation Research & Development		
2. Residential Two-Story Home Wind Washing		X
3. Residential Proactive Energy Communications Research		X
4. Business Building Retro-Commissioning		X

This section includes narratives for each of the programs and projects and provides a general description of the individual programs and projects' objectives, features, and administration. Independent empirical research and assessments of energy efficiency and demand response technologies and practices are essential to provide accurate assessments of cost-effectiveness and applicability for possible inclusion in FPL's DSM Plan. These programs and projects accomplish this objective by focusing on three primary areas: first, the identification of emerging technology trends and products; second, the scientific evaluation of the effect of these technologies on energy consumption, coincident peak demand and customer economics in FPL's climate areas; and third, the development of these technologies into new cost-effective FPL

programs. FPL maximizes the use of these research funds by, whenever possible, collaborating with other utilities, the U.S. Department of Energy and other independent research organizations to conduct joint studies. In addition to potential new programs, the analyses conducted serve to provide FPL's customers with accurate assessments on technology performance.

B. Detailed Program Descriptions

1. Conservation Research and Development

Start Date – November, 1990
Last Modified – March, 2005

Project Purpose – FPL is proposing to continue its existing Conservation Research and Development (CRD) Program. The purpose of the CRD Program is to identify new energy efficient technologies, evaluate and quantify their impacts on energy, demand and customers and where appropriate, develop emerging technologies into DSM programs. 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.

Background – FPL currently has an approved CRD Program that is scheduled to end on December 31, 2010. Since its initial approval, this program has been updated several times, and FPL is proposing to continue to use this very successful tool.

FPL has researched a wide variety of technologies under its current CRD Program, including commercial technologies such as: intelligent kitchen exhaust hoods; air conditioners with an integral desiccant wheel for much higher moisture removal; smart air-conditioning controls which optimize compressor run time; efficiency measures for stand-alone refrigerated cases; and occupancy sensors for hotel/motel air conditioners. Residential technologies tested included:

efficient options for homes of seasonal customers during the unoccupied months; new super high efficiency central heat pumps and air conditioners with SEER ratings of 22.5-24.0; outside air infiltration between floors of two-story home; efficient two-speed, variable-speed, and solar swimming pool pumps; and a lower cost, more reliable, add-on heat pump water heater. Some of the technologies examined have already resulted in additions to existing programs. Other measures are being evaluated for possible development into incentive programs or customer recommendations. Since its initiation, the CRD program has performed research on 27 different technologies, which has resulted in six technologies being incorporated into FPL's DSM portfolio as new features in existing programs and dedicated DSM programs.

FPL has partnered with Florida based universities to focus CRD technology evaluations to scientifically quantify the performance of increased energy efficiency demand reduction and energy efficiency measures. The research projects are typically conducted either in laboratory settings or in the field. If a technology is weather-sensitive, FPL requires testing under the climate conditions unique to our service area to obtain accurate savings estimates for our customers. All results are weather normalized and weighted for FPL's regional population distribution.

Over the past five years, FPL has tripled the number of Florida universities which have performed research under the CRD Program. FPL has also partnered with universities by offering to fund the energy monitoring portion of several efficiency-related university research applications for federal and state grants. In the past two years, FPL has also very successfully leveraged CRD dollars by co-funding with the U.S. Department of Energy efficiency research

projects which are relevant to Florida. FPL plans to expand this partnership further in the coming years to take advantage of the increased energy efficiency funding coming out of Washington.

Project Description and Administration – FPL will continue to partner with universities throughout the state to research emerging energy efficiency and demand response technologies via short term projects. FPL will conduct annual RFP's to identify specific research projects and award projects based on unique applications relevant to FPL's customers.

Proposed Schedule and Budget – As part of this DSM Plan, FPL seeks to extend its CRD program through December 31, 2015. This would coincide with the year in which the next DSM Plan is scheduled to be filed and approved. FPL requests approval to spend up to $3,000,000 for the period from the approval date of this plan through the proposed expiration date of December 31, 2015. Aside from the proposed changes to the expiration date and spending cap, FPL requests no other change to the CRD Program.

2. Residential Two-Story Home Wind Washing Research Project

Start Date – New
Last Modified – N/A

Project Purpose – FPL is proposing to conduct a research project to measure the effects on energy consumption and the growth of coincident peak demand from inspecting and repairing two story homes which have air spaces between floors open to infiltration of outside air between the first and second stories. This research project will provide the data essential for evaluating this practice as a permanent component of the company's DSM plan.

Background – Over the past two decades, residential home construction in Florida has changed from simple one-story ranch style homes to include more architecturally complex two-story models. Consequently, there is an additional ceiling and another floor separated by an air space which is often one foot or more in height. Wind driven outside air, or "wind washing," has been identified as a significant problem for cooling and heating in two story homes, if outside air can get in between the first floor ceiling and the floor of the second story.

Energy consumption, electrical demand requirements, indoor humidity, and comfort are all negatively affected when the spaces between floors are not sealed or insulated from attic or overhangs which are vented to the outdoors. Wind blowing into attic vents can push hot attic air into the inter-story floor cavity bypassing the typical thermal boundaries of the building and causing considerable heat transfer through the floor and ceiling. As a result, heating and cooling requirements can tax or even exceed the capacity of the AC system.

Before the feasibility of a wide-scale retrofit program can be evaluated, FPL would like to have a larger sample of homes to base estimates of the energy and demand savings opportunities that exist from repairing homes with attic configurations which allow air flow between floors. A large sample research project would also provide a broader assessment of the types of architectural designs which create the potential for energy losses from wind washing. In the process, FPL will learn how to quickly recognize homes that need repairs. Additionally, FPL might learn of other repair materials that are effective and easy to install to prevent wind washing.

FPL is proposing to conduct a study to research the effect of sealing off the un-insulated space between floors of two-story homes from outside air temperatures from adjoining attics and overhangs. Through FPL's Conservation Research and Development (CRD) Program, FPL obtained preliminary data indicating that sealing these spaces could result in annual cooling energy savings of 15% and summer demand reductions of over 12%. This research study will expand on the preliminary work by increasing the number of homes studied in order to have statistically valid samples in east, west and south geographic areas of FPL's territory.

Wind-washing problems can be found in the literature primarily regarding insulating floor truss spaces to prevent pipes from freezing in cold climates. However, energy loss and retrofit savings opportunities in hot and humid climates had not been studied before FPL co-funded a wind washing research project with the U.S. Department of Energy under the Building America Program in 2009.

Project Description and Administration – FPL is proposing to provide to approximately 500 two-story homes, across the three geographic research regions, a free inspection in order to find instances of building construction which allows significant outside air infiltration between the first and second floors of the home. For 100 homes where problems are detected, FPL will make repairs and immediately begin continuously monitoring the energy use of the central cooling and heating system (experimental group). During the same time period, energy use monitoring will begin on another 100 homes with significant outside air infiltration between floors, but the repairs on this second set of homes will be delayed for one year (control group). This will allow the unrepaired homes to serve as a comparison group for the repaired homes under the same weather conditions.

The research contractor will solicit volunteers for the study from the population of owners of two story homes in FPL's service area. Recruitment and inspection will continue until the quota of 200 homes requiring repair is met. The research contractor will also perform all the repairs as part of the contract.

Research Project Monitoring – FPL will collect relevant energy use information by collecting outdoor temperature, indoor temperature, indoor relative humidity, and central AC energy consumption data at least every 15 minutes for at least 12 months after the last data recorders are installed and all repairs have been completed for the experimental group.

FPL will conduct a statistical billing analysis between the groups of homes which were repaired versus homes for which repairs were delayed one year. This will be conducted in each of the

three FPL geographic regions and also as a whole for the FPL service territory. A twelve month data collection period, beginning with completion of the last repair, will be used in order to capture the fall, winter, spring, and following summer seasons. Hourly weather for a typical meteorological year (TMY) will be used in conjunction with the statistical regression equations developed from the field data to estimate the annual energy savings and peak hour demand reduction for the hottest day in August for each region. Using regional weights provided by FPL, the average annual energy savings and August peak hour demand reduction for the entire FPL service territory will be estimated.

Proposed Schedule and Budget – FPL is proposing a research project period of three years that will include: 12 months of metered data collection; 12 months for participant recruitment, onsite audits, monitoring equipment installation, and repairs in 100 homes; 12 months will be allowed for monitoring equipment removal, statistical analysis and report preparation.

Projected project costs for the initial home qualification audits are expected to be $200 for each of the 500 homes audited. The costs for all of the repairs for each of the 100 experimental group homes and 100 control group homes is expected to be $2,000 per home. The expected cost for the 12 month data monitoring, statistical analysis and reporting of the 200 metered homes is $200,000. The total overall budget estimated for the project is $700,000.

Following the research study, FPL will evaluate the results and will make a determination to extend the research project, stop any further evaluation or develop and apply for an FPL DSM program.

3. Residential Proactive Energy Information Communications Research Project

Start Date – New
Last Modified – N/A

Project Purpose - FPL is proposing to conduct a research project to measure the effects on energy consumption and coincident peak demand over time when providing customers proactive periodic personalized energy reports and tips. This research project will provide the data essential for evaluating this practice as a permanent component of the company's DSM plan.

Background – In an age when most information is distributed by the internet, only 31% of FPL households utilize informational websites to obtain product information even though 59% have an email address. These percentages drop significantly when looking at the Low Income segment of the population, with only 17% of low income households accessing product informational websites and 37% having email addresses. Mass communication of energy conservation information is not sufficient to achieve large-scale energy conservation. FPL must also engage and motivate customers through communications delivered through traditional channels such as the U.S. Mail.

The research pilot proposed by FPL employs the latest in behavioral research and communication to achieve customer engagement in conservation. The approach uses normative social messages, targeted tips and positive reinforcement.

- Normative social messages compare the participant's energy use to those of neighboring households who use energy more efficiently and to all households in the comparison

neighborhood. Such comparisons have demonstrated high potential to engage people to do better.

- Target tips provide the participant with a limited number of immediately actionable suggestions to improve their energy performance. The tips are also sensitive to occupant home ownership and income status, avoiding frustrating renters with suggestions requiring capital improvements or low-income customers with suggesting involving premium-priced efficient appliances.
- Positive reinforcement delivered in subsequent reports helps to sustain new conservation habits, encourages additional conservation behaviors and communications successful and effective practices among friends.

The proposed research seeks to quantify the immediate energy conservation behavioral changes and their effect on energy consumption as well as the persistence of these behavioral changes over time.

Project Description and Administration - To understand the consumer acceptance and the subsequent effect on their energy consumption from this approach to energy education and engagement, FPL will provide 50,000 homes throughout the FPL service territory with free, periodic energy use reports. Homes will be randomly selected within the low income and general residential population. Continued participation to receive the reports will be voluntary; customers who do not wish to continue to receive reports will be able to opt-out.

Research Project Monitoring – FPL will collect billing data and other statistical methods to quantify impacts on energy and coincident peak demand and how that may change over three years. The project will also collect data on customer satisfaction, conservation behaviors adopted and attitudes towards future participation in such programs.

Proposed Schedule and Budget – FPL is proposing an initial research project schedule of four years for initial set-up and preparation with vendor, customer selection, and data monitoring of participating customers, analysis and reporting. FPL will provide a report at the end of the four-year period.

Projected project costs for the project include initial IT systems integration and set-up, quarterly reports, data measurement, analysis and satisfaction research. The total estimated maximum budget for the project is $2,000,000.

Following the research study, FPL will evaluate the results and will make a determination to extend the research project, stop any further evaluation or develop and apply for a FPL DSM program.

4. Business Building Retro-Commissioning Research Project

Start Date – New
Last Modified – N/A

Project Purpose - FPL is proposing to conduct a research project to measure the effects on energy consumption and the growth of coincident peak demand from Building Retro-Commissioning (BRC). BRC is a process of investigating, analyzing, and optimizing the performance of existing building systems. This research project will provide the data essential for evaluating this practice as a permanent component of the company's DSM plan. This program is unique in that it targets optimizing performance of existing energy consuming systems as compared with other energy and demand saving programs which focus on system replacements or additions.

Background - High efficiency equipment must be maintained and operated in the most efficient manner if consistent savings are to be realized over time. By providing the customer with assistance on smaller operating and maintenance issues and detailed engineering directions on larger more complex energy savings strategies, this BRC has the potential to maximize the available energy savings from already existing DSM and conservation measures.

In the publication titled "Building Commissioning, A Golden Opportunity for Reducing Energy Costs and Greenhouse Gas Emissions", by Evan Mills, Ph.D., Lawrence Berkeley National Laboratory Berkeley (LBL), CA, the Lawrence Berkley Lab study found that buildings that completed BRC realized approximately 15% increase in whole building energy savings and 7% in demand savings.

Project Description and Administration – Under this proposal, FPL will provide BRC analysis on 30 pilot businesses of various segment types, sizes, and differing operating characteristics. Engineering firms specializing in Building Retro-Commissioning will be contracted to conduct a BRC analysis of these pilot facilities and implement appropriate recommendations. Effectiveness will be measured by utility peak hour electrical demand reduction expressed in kW and estimated annual energy savings expressed in kWh per square foot.

Project Monitoring – The project will include appropriate metering and other statistical methods necessary to verify the resultant coincident peak kW and kWh savings from the participants. The time period for data collection will be 12 months before and 12 months after the BRC. The project will also collect data on customer satisfaction, conservation behaviors adopted, and attitudes towards willingness to maintain recommended routine procedures, and interest in future participation in such programs.

Proposed Schedule and Budget - FPL is proposing an initial pilot period of 24 months. The projected cost will average $0.30 per square foot per premise to deliver BRC services plus $150,000 for the site selections, analyses, and report preparations. The total estimated pilot budget would be capped at $1,050,000.

Following the research study, FPL will evaluate the results and will make a determination to extend the research project, stop any further evaluation, or develop and apply for an FPL DSM program.

SECTION VII – PROJECTED PROGRAM ESTIMATES

Program Name: Residential Low Income Weatherization

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Participants	(d) Cumulative Penetration Level %[1]
2010	4,010,837	693,875	1,000	0%
2011	4,056,428	700,762	1,000	0%
2012	4,141,910	714,550	1,000	0%
2013	4,226,978	728,267	1,000	1%
2014	4,311,223	741,842	1,000	1%
2015	4,394,802	755,301	1,000	1%
2016	4,477,937	768,683	1,000	1%
2017	4,560,569	781,978	1,000	1%
2018	4,642,575	795,166	1,000	1%
2019	4,720,827	807,703	1,000	1%

Notes: Column a - The total number of customers in residential rate class

Column b - The total number of residential customers eligible for one or more applicable program measures

Column d - Column c cumulative / Column b

[1] Cumulative Penetration Level addresses participants in 2010 and beyond.

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
2010	734	0.00	0.35	734,167	2	346
2011	734	0.00	0.35	734,167	2	346
2012	734	0.00	0.35	734,167	2	346
2013	734	0.00	0.35	734,167	2	346
2014	734	0.00	0.35	734,167	2	346
2015	734	0.00	0.35	734,167	2	346
2016	734	0.00	0.35	734,167	2	346
2017	734	0.00	0.35	734,167	2	346
2018	734	0.00	0.35	734,167	2	346
2019	734	0.00	0.35	734,167	2	346

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
2010	789	0.00	0.38	788,588	2	378
2011	789	0.00	0.38	788,588	2	378
2012	789	0.00	0.38	788,588	2	378
2013	789	0.00	0.38	788,588	2	378
2014	789	0.00	0.38	788,588	2	378
2015	789	0.00	0.38	788,588	2	378
2016	789	0.00	0.38	788,588	2	378
2017	789	0.00	0.38	788,588	2	378
2018	789	0.00	0.38	788,588	2	378
2019	789	0.00	0.38	788,588	2	378

Program Name: Residential Power Savers Energy Audit

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Participants	(d) Cumulative Penetration Level %[1]
2010	4,010,837	693,875	0	0%
2011	4,056,428	701,762	15,000	2%
2012	4,141,910	701,550	15,000	4%
2013	4,226,978	701,267	15,000	6%
2014	4,311,223	700,842	15,000	9%
2015	4,394,802	700,301	15,000	11%
2016	4,477,937	699,683	15,000	13%
2017	4,560,569	698,978	15,000	15%
2018	4,642,575	698,166	15,000	17%
2019	4,720,827	696,703	15,000	19%

Notes: Column a - The total number of customers in residential rate class

Column b - The total number of residential customers eligible for one or more applicable program measures

Column d - Column c cumulative / Column b

[1] Cumulative Penetration Level addresses participants in 2010 and beyond.

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
2010	0	0.00	0.00	0	0	0
2011	459	0.08	0.03	6,888,313	1,178	512
2012	459	0.08	0.03	6,888,313	1,178	512
2013	459	0.08	0.03	6,888,313	1,178	512
2014	459	0.08	0.03	6,888,313	1,178	512
2015	459	0.08	0.03	6,888,313	1,178	512
2016	459	0.08	0.03	6,888,313	1,178	512
2017	459	0.08	0.03	6,888,313	1,178	512
2018	459	0.08	0.03	6,888,313	1,178	512
2019	459	0.08	0.03	6,888,313	1,178	512

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
2010	0	0.00	0.00	0	0	0
2011	493	0.09	0.04	7,398,912	1,290	561
2012	493	0.09	0.04	7,398,912	1,290	561
2013	493	0.09	0.04	7,398,912	1,290	561
2014	493	0.09	0.04	7,398,912	1,290	561
2015	493	0.09	0.04	7,398,912	1,290	561
2016	493	0.09	0.04	7,398,912	1,290	561
2017	493	0.09	0.04	7,398,912	1,290	561
2018	493	0.09	0.04	7,398,912	1,290	561
2019	493	0.09	0.04	7,398,912	1,290	561

Program Name: Residential Power Savers Energy Efficiency

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Participants	(d) Cumulative Penetration Level %[1]
2010	4,010,837	693,875	0	0%
2011	4,056,428	701,762	5,000	1%
2012	4,141,910	711,550	5,000	1%
2013	4,226,978	721,267	5,000	2%
2014	4,311,223	730,842	5,000	3%
2015	4,394,802	740,301	5,000	3%
2016	4,477,937	749,683	5,000	4%
2017	4,560,569	758,978	5,000	5%
2018	4,642,575	768,166	5,000	5%
2019	4,720,827	776,703	5,000	6%

Notes: Column a - The total number of customers in residential rate class

Column b - The total number of residential customers eligible for one or more applicable program measures

Column d - Column c cumulative / Column b

[1] Cumulative Penetration Level addresses participants in 2010 and beyond.

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
2010	0	0.00	0.00	0	0	0
2011	1479	0.56	0.63	7,393,295	2,820	3,136
2012	1479	0.56	0.63	7,393,295	2,820	3,136
2013	1479	0.56	0.63	7,393,295	2,820	3,136
2014	1479	0.56	0.63	7,393,295	2,820	3,136
2015	1479	0.56	0.63	7,393,295	2,820	3,136
2016	1479	0.56	0.63	7,393,295	2,820	3,136
2017	1479	0.56	0.63	7,393,295	2,820	3,136
2018	1479	0.56	0.63	7,393,295	2,820	3,136
2019	1479	0.56	0.63	7,393,295	2,820	3,136

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
2010	0	0.00	0.00	0	0	0
2011	1588	0.62	0.69	7,941,326	3,087	3,433
2012	1588	0.62	0.69	7,941,326	3,087	3,433
2013	1588	0.62	0.69	7,941,326	3,087	3,433
2014	1588	0.62	0.69	7,941,326	3,087	3,433
2015	1588	0.62	0.69	7,941,326	3,087	3,433
2016	1588	0.62	0.69	7,941,326	3,087	3,433
2017	1588	0.62	0.69	7,941,326	3,087	3,433
2018	1588	0.62	0.69	7,941,326	3,087	3,433
2019	1588	0.62	0.69	7,941,326	3,087	3,433

Program Name: Residential Solar Water Heating

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Participants	(d) Cumulative Penetration Level %[1]
2010	4,010,837	4,010,837	1,366	0%
2011	4,056,428	4,055,061	4,588	0%
2012	4,141,910	4,135,955	4,882	0%
2013	4,226,978	4,216,141	4,974	0%
2014	4,311,223	4,295,412	4,970	0%
2015	4,394,802	4,374,021	0	0%
2016	4,477,937	4,457,157	0	0%
2017	4,560,569	4,539,788	0	0%
2018	4,642,575	4,621,795	0	0%
2019	4,720,827	4,700,047	0	0%

Notes: Column a - The total number of customers in residential rate class
Column b - The total number of eligible customers in residential rate class.
Column d - Column c cumulative / Column b
[1] Cumulative Penetration Level addresses participants in 2010 and beyond.

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
2010	1,482	0.45	0.22	2,024,835	615	301
2011	1,482	0.45	0.22	6,799,875	2,065	1,009
2012	1,482	0.45	0.22	7,235,124	2,197	1,074
2013	1,482	0.45	0.22	7,371,468	2,238	1,094
2014	1,482	0.45	0.22	7,365,540	2,237	1,093
2015	0	0.00	0.00	0	0	0
2016	0	0.00	0.00	0	0	0
2017	0	0.00	0.00	0	0	0
2018	0	0.00	0.00	0	0	0
2019	0	0.00	0.00	0	0	0

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
2010	1,592	0.49	0.24	2,174,926	673	329
2011	1,592	0.49	0.24	7,303,918	2,261	1,105
2012	1,592	0.49	0.24	7,771,430	2,405	1,176
2013	1,592	0.49	0.24	7,917,881	2,451	1,198
2014	1,592	0.49	0.24	7,911,514	2,449	1,197
2015	0	0.00	0.00	0	0	0
2016	0	0.00	0.00	0	0	0
2017	0	0.00	0.00	0	0	0
2018	0	0.00	0.00	0	0	0
2019	0	0.00	0.00	0	0	0

Program Name: Residential Solar Water Heating (Low Income New Construction)

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Participants	(d) Cumulative Penetration Level %[1]
2010	4,010,837	404	20	5%
2011	4,056,428	404	200	50%
2012	4,141,910	404	200	50%
2013	4,226,978	404	200	50%
2014	4,311,223	404	200	50%
2015	4,394,802	404	0	0%
2016	4,477,937	404	0	0%
2017	4,560,569	404	0	0%
2018	4,642,575	404	0	0%
2019	4,720,827	404	0	0%

Notes: Column a - The total number of customers in residential rate class

Column b - The projected annual number of program-eligible new homes

Column d - Column c / Column b

[1] Cumulative Penetration Level addresses participants in 2010 and beyond.

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
2010	1,482	0.45	0.22	29,640	9	4
2011	1,482	0.45	0.22	296,400	90	44
2012	1,482	0.45	0.22	296,400	90	44
2013	1,482	0.45	0.22	296,400	90	44
2014	1,482	0.45	0.22	296,400	90	44
2015	0	0.00	0.00	0	0	0
2016	0	0.00	0.00	0	0	0
2017	0	0.00	0.00	0	0	0
2018	0	0.00	0.00	0	0	0
2019	0	0.00	0.00	0	0	0

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
2010	1,592	0.49	0.24	31,837	10	5
2011	1,592	0.49	0.24	318,371	99	48
2012	1,592	0.49	0.24	318,371	99	48
2013	1,592	0.49	0.24	318,371	99	48
2014	1,592	0.49	0.24	318,371	99	48
2015	0	0.00	0.00	0	0	0
2016	0	0.00	0.00	0	0	0
2017	0	0.00	0.00	0	0	0
2018	0	0.00	0.00	0	0	0
2019	0	0.00	0.00	0	0	0

Program Name: Business Solar Water Heating

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Participants	(d) Cumulative Penetration Level %[1]
2010	534,490	534,490	11	0%
2011	547,697	547,686	43	0%
2012	561,576	561,522	52	0%
2013	575,598	575,492	62	0%
2014	590,087	589,919	75	0%
2015	604,956	604,713	0	0%
2016	620,071	619,828	0	0%
2017	635,559	635,316	0	0%
2018	651,590	651,347	0	0%
2019	667,785	667,542	0	0%

Notes: Column a - The total number of customers in the business rate classes.
Column b - The total number of eligible customers in the business rate classes.
Column d - Column c cumulative / Column b

[1] Cumulative Penetration Level addresses participants in 2010 and beyond.

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
2010	3,818	0.07	1.00	41,994	1	11
2011	3,618	0.07	1.00	155,555	3	43
2012	3,640	0.07	1.00	189,299	4	52
2013	3,696	0.07	1.00	229,171	4	62
2014	3,677	0.07	1.00	275,797	5	75
2015	0	0.00	0.00	0	0	0
2016	0	0.00	0.00	0	0	0
2017	0	0.00	0.00	0	0	0
2018	0	0.00	0.00	0	0	0
2019	0	0.00	0.00	0	0	0

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
2010	4,101	0.08	1.09	45,107	1	12
2011	3,886	0.08	1.09	167,085	3	47
2012	3,910	0.08	1.09	203,331	4	57
2013	3,970	0.08	1.09	246,159	5	68
2014	3,950	0.08	1.09	296,240	6	82
2015	0	0.00	0.00	0	0	0
2016	0	0.00	0.00	0	0	0
2017	0	0.00	0.00	0	0	0
2018	0	0.00	0.00	0	0	0
2019	0	0.00	0.00	0	0	0

Program Name: Residential Photovoltaics

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Participants	(d) Cumulative Penetration Level %[1]
2010	4,010,837	4,010,837	341	0%
2011	4,056,428	4,056,087	340	0%
2012	4,141,910	4,141,229	340	0%
2013	4,226,978	4,225,957	340	0%
2014	4,311,223	4,309,862	340	0%
2015	4,394,802	4,393,101	0	0%
2016	4,477,937	4,476,236	0	0%
2017	4,560,569	4,558,868	0	0%
2018	4,642,575	4,640,874	0	0%
2019	4,720,827	4,719,126	0	0%

Notes: Column a - The total number of customers in residential rate class

Column b - The total number of eligible customers in residential rate class.

Column d - Column c cumulative / Column b

[1] Cumulative Penetration Level addresses participants in 2010 and beyond.

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
2010	5,378	0.05	1.70	1,834,005	17	580
2011	5,373	0.05	1.70	1,826,888	17	578
2012	5,373	0.05	1.70	1,826,888	17	578
2013	5,373	0.05	1.70	1,826,888	17	578
2014	5,373	0.05	1.70	1,826,888	17	578
2015	0	0.00	0.00	0	0	0
2016	0	0.00	0.00	0	0	0
2017	0	0.00	0.00	0	0	0
2018	0	0.00	0.00	0	0	0
2019	0	0.00	0.00	0	0	0

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
2010	5,777	0.05	1.86	1,969,951	19	635
2011	5,771	0.05	1.86	1,962,307	19	633
2012	5,771	0.05	1.86	1,962,307	19	633
2013	5,771	0.05	1.86	1,962,307	19	633
2014	5,771	0.05	1.86	1,962,307	19	633
2015	0	0.00	0.00	0	0	0
2016	0	0.00	0.00	0	0	0
2017	0	0.00	0.00	0	0	0
2018	0	0.00	0.00	0	0	0
2019	0	0.00	0.00	0	0	0

Program Name: Business Photovoltaics

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Participants	(d) Cumulative Penetration Level %[1]
2010	534,490	534,490	61	0%
2011	547,697	547,636	63	0%
2012	561,576	561,452	66	0%
2013	575,598	575,408	71	0%
2014	590,087	589,826	79	0%
2015	604,956	604,616	0	0%
2016	620,071	619,731	0	0%
2017	635,559	635,219	0	0%
2018	651,590	651,250	0	0%
2019	667,785	667,445	0	0%

Notes: Column a - The total number of customers in the business rate classes.
Column b - The total number of eligible customers in the business rate classes.
Column d - Column c cumulative / Column b

[1] Cumulative Penetration Level addresses participants in 2010 and beyond.

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
2010	22,520	0.21	7.13	1,373,718	13	435
2011	22,501	0.21	7.12	1,417,575	13	449
2012	22,494	0.21	7.12	1,484,617	14	470
2013	22,498	0.21	7.12	1,597,342	15	505
2014	22,438	0.21	7.10	1,772,634	17	561
2015	0	0.00	0.00	0	0	0
2016	0	0.00	0.00	0	0	0
2017	0	0.00	0.00	0	0	0
2018	0	0.00	0.00	0	0	0
2019	0	0.00	0.00	0	0	0

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
2010	24,189	0.23	7.80	1,475,545	14	476
2011	24,169	0.23	7.80	1,522,654	15	491
2012	24,162	0.23	7.79	1,594,665	15	514
2013	24,165	0.23	7.79	1,715,745	16	553
2014	24,102	0.23	7.77	1,904,031	18	614
2015	0	0.00	0.00	0	0	0
2016	0	0.00	0.00	0	0	0
2017	0	0.00	0.00	0	0	0
2018	0	0.00	0.00	0	0	0
2019	0	0.00	0.00	0	0	0

Program Name: Business Photovaltaics for Schools

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Participants	(d) Cumulative Penetration Level %[1]
2010	534,490	1,334	2	0%
2011	547,697	1,332	18	2%
2012	561,576	1,314	10	2%
2013	575,598	1,304	20	4%
2014	590,087	1,284	20	5%
2015	604,956	1,264	0	6%
2016	620,071	1,264	0	6%
2017	635,559	1,264	0	6%
2018	651,590	1,264	0	6%
2019	667,785	1,264	0	6%

Notes: Column a - The total number of customers in the business rate classes.
Column b - The total number of eligible customers in the business rate classes.
Column d - Column c cumulative / Column b

[1] Cumulative Penetration Level addresses participants in 2010 and beyond.

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
2010	13300	0.13	4.21	26,600	0	8
2011	13300	0.13	4.21	239,400	2	76
2012	13300	0.13	4.21	133,000	1	42
2013	6650	0.06	2.10	133,000	1	42
2014	6650	0.06	2.10	133,000	1	42
2015	0	0.00	0.00	0	0	0
2016	0	0.00	0.00	0	0	0
2017	0	0.00	0.00	0	0	0
2018	0	0.00	0.00	0	0	0
2019	0	0.00	0.00	0	0	0

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
2010	14286	0.14	4.61	28,572	0	9
2011	14286	0.14	4.61	257,146	2	83
2012	14286	0.14	4.61	142,859	1	46
2013	7143	0.07	2.30	142,859	1	46
2014	7143	0.07	2.30	142,859	1	46
2015	0	0.00	0.00	0	0	0
2016	0	0.00	0.00	0	0	0
2017	0	0.00	0.00	0	0	0
2018	0	0.00	0.00	0	0	0
2019	0	0.00	0.00	0	0	0

Program Name: Residential Home Energy Survey

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Participants	(d) Cumulative Penetration Level %[1]
2010	4,010,837	4,010,837	100,000 - 175,000	2% - 4%
2011	4,056,428	4,056,428	100,000 - 175,000	5% - 9%
2012	4,141,910	4,141,910	100,000 - 175,000	7% - 13%
2013	4,226,978	4,226,978	100,000 - 175,000	9% - 17%
2014	4,311,223	4,311,223	100,000 - 175,000	12% - 20%
2015	4,394,802	4,394,802	100,000 - 175,000	14% - 24%
2016	4,477,937	4,477,937	100,000 - 175,000	16% - 27%
2017	4,560,569	4,560,569	100,000 - 175,000	18% - 31%
2018	4,642,575	4,642,575	100,000 - 175,000	19% - 34%
2019	4,720,827	4,720,827	100,000 - 175,000	21% - 37%

Notes: Column a - The total number of customers in residential rate class
Column b - The total number of eligible customers in residential rate class.
Column d - Column c cumulative / Column b

[1] Cumulative Penetration Level addresses participants in 2010 and beyond.

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
2010	N/A	N/A	N/A	N/A	N/A	N/A
2011	N/A	N/A	N/A	N/A	N/A	N/A
2012	N/A	N/A	N/A	N/A	N/A	N/A
2013	N/A	N/A	N/A	N/A	N/A	N/A
2014	N/A	N/A	N/A	N/A	N/A	N/A
2015	N/A	N/A	N/A	N/A	N/A	N/A
2016	N/A	N/A	N/A	N/A	N/A	N/A
2017	N/A	N/A	N/A	N/A	N/A	N/A
2018	N/A	N/A	N/A	N/A	N/A	N/A
2019	N/A	N/A	N/A	N/A	N/A	N/A

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
2010	N/A	N/A	N/A	N/A	N/A	N/A
2011	N/A	N/A	N/A	N/A	N/A	N/A
2012	N/A	N/A	N/A	N/A	N/A	N/A
2013	N/A	N/A	N/A	N/A	N/A	N/A
2014	N/A	N/A	N/A	N/A	N/A	N/A
2015	N/A	N/A	N/A	N/A	N/A	N/A
2016	N/A	N/A	N/A	N/A	N/A	N/A
2017	N/A	N/A	N/A	N/A	N/A	N/A
2018	N/A	N/A	N/A	N/A	N/A	N/A
2019	N/A	N/A	N/A	N/A	N/A	N/A

Program Name: Residential Air-Conditioning

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Participants	(d) Cumulative Penetration Level %[1]
2010	4,010,837	3,172,427	88,838	3%
2011	4,056,428	3,198,487	74,781	5%
2012	4,141,910	3,263,623	84,402	8%
2013	4,226,978	3,323,390	90,550	10%
2014	4,311,223	3,360,966	94,477	13%
2015	4,394,802	3,399,540	93,207	15%
2016	4,477,937	3,438,115	88,056	18%
2017	4,560,569	3,481,718	72,836	20%
2018	4,642,575	3,518,664	65,073	21%
2019	4,720,827	3,574,697	60,227	23%

Notes: Column a - The total number of customers in residential rate class

Column b - The total number of residential customers eligible for one or more applicable program measures.

Column d - Column c cumulative / Column b

[1] Cumulative Penetration Level addresses participants in 2010 and beyond.

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
2010	940	0.22	0.49	83,519,740	19,500	43,917
2011	965	0.24	0.51	72,193,829	18,080	38,001
2012	973	0.24	0.51	82,110,842	20,098	43,270
2013	971	0.24	0.51	87,915,985	21,648	46,316
2014	962	0.23	0.51	90,901,507	21,943	47,907
2015	969	0.24	0.51	90,353,974	22,005	47,635
2016	959	0.23	0.50	84,403,953	20,236	44,298
2017	982	0.24	0.52	71,513,736	17,709	37,939
2018	999	0.24	0.53	64,981,702	15,364	34,363
2019	985	0.19	0.52	59,306,125	11,548	31,236

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
2010	1010	0.24	0.54	89,710,673	21,350	48,083
2011	1037	0.26	0.56	77,545,225	19,795	41,606
2012	1045	0.26	0.56	88,197,340	22,005	47,375
2013	1043	0.26	0.56	94,432,792	23,702	50,709
2014	1033	0.25	0.56	97,639,617	24,024	52,452
2015	1041	0.26	0.56	97,051,498	24,092	52,153
2016	1030	0.25	0.55	90,660,429	22,155	48,500
2017	1055	0.27	0.57	76,814,720	19,389	41,538
2018	1073	0.26	0.58	69,798,497	16,821	37,622
2019	1058	0.21	0.57	63,702,215	12,643	34,199

Program Name: Residential Duct System Testing & Repair

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Participants	(d) Cumulative Penetration Level %[1]
2010	4,010,837	1,708,376	22,138	1%
2011	4,056,428	1,705,657	27,931	3%
2012	4,141,910	1,714,136	39,161	5%
2013	4,226,978	1,711,209	46,337	8%
2014	4,311,223	1,700,755	49,573	11%
2015	4,394,802	1,686,783	51,599	14%
2016	4,477,937	1,670,594	54,516	17%
2017	4,560,569	1,651,274	49,856	21%
2018	4,642,575	1,636,348	45,948	24%
2019	4,720,827	1,623,730	42,273	26%

Notes: Column a - The total number of customers in residential rate class

Column b - The total number of residential customers eligible for one or more applicable program measures.

Column d - Column c cumulative / Column b

[1] Cumulative Penetration Level addresses participants in 2010 and beyond.

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
2010	343	0.21	0.18	7,586,491	4,641	3,968
2011	342	0.21	0.18	9,557,736	5,845	5,000
2012	342	0.21	0.18	13,378,867	8,179	7,000
2013	341	0.21	0.18	15,802,493	9,658	8,269
2014	340	0.21	0.18	16,873,567	10,309	8,831
2015	338	0.21	0.18	17,443,770	10,664	9,135
2016	337	0.21	0.18	18,367,565	11,226	9,621
2017	363	0.22	0.19	18,079,558	11,185	9,409
2018	387	0.24	0.20	17,794,766	11,125	9,209
2019	406	0.24	0.21	17,162,838	10,146	8,877

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
2010	368	0.23	0.20	8,148,843	5,081	4,345
2011	368	0.23	0.20	10,266,207	6,399	5,474
2012	367	0.23	0.20	14,370,581	8,955	7,664
2013	366	0.23	0.20	16,973,859	10,574	9,054
2014	366	0.23	0.20	18,124,327	11,287	9,669
2015	363	0.23	0.19	18,736,796	11,675	10,001
2016	362	0.23	0.19	19,729,068	12,291	10,534
2017	390	0.25	0.21	19,419,713	12,246	10,301
2018	416	0.27	0.22	19,113,810	12,181	10,083
2019	436	0.26	0.23	18,435,040	11,108	9,719

Program Name: Residential Building Envelope

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Participants	(d) Cumulative Penetration Level %[1]
2010	4,010,837	2,850,172	12,685	0%
2011	4,056,428	2,885,528	27,935	1%
2012	4,141,910	2,906,443	33,260	3%
2013	4,226,978	2,922,856	38,407	4%
2014	4,311,223	2,934,960	42,583	5%
2015	4,394,802	2,943,739	45,256	7%
2016	4,477,937	2,950,711	42,347	8%
2017	4,560,569	2,961,472	41,287	10%
2018	4,642,575	2,974,189	36,583	11%
2019	4,720,827	2,992,519	29,071	12%

Notes: Column a - The total number of customers in residential rate class

Column b - The total number of residential customers eligible for one or more applicable program measures

Column d - Column c cumulative / Column b

[1] Cumulative Penetration Level addresses participants in 2010 and beyond.

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
2010	923	0.30	0.41	11,703,509	3,856	5,239
2011	635	0.24	0.30	17,739,326	6,573	8,291
2012	666	0.23	0.31	22,137,915	7,722	10,389
2013	710	0.23	0.34	27,286,815	8,762	12,868
2014	737	0.22	0.35	31,394,823	9,566	14,855
2015	749	0.22	0.36	33,907,387	10,029	16,083
2016	844	0.24	0.40	35,720,071	10,138	16,739
2017	892	0.24	0.42	36,813,281	9,786	17,271
2018	1009	0.22	0.48	36,926,455	7,968	17,509
2019	1257	0.25	0.58	36,528,136	7,232	16,904

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
2010	991	0.33	0.45	12,571,036	4,222	5,736
2011	682	0.26	0.32	19,054,261	7,196	9,077
2012	715	0.25	0.34	23,778,896	8,455	11,375
2013	763	0.25	0.37	29,309,461	9,593	14,089
2014	792	0.25	0.38	33,721,977	10,474	16,264
2015	805	0.24	0.39	36,420,785	10,981	17,609
2016	906	0.26	0.43	38,367,835	11,099	18,326
2017	958	0.26	0.46	39,542,080	10,714	18,909
2018	1084	0.24	0.52	39,663,643	8,724	19,170
2019	1350	0.27	0.64	39,235,798	7,918	18,508

Program Name: Residential New Construction (BuildSmart®)

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Participants	(d) Cumulative Penetration Level %[1]
2010	4,010,837	18,505	2,879	16%
2011	4,056,428	30,508	5,564	18%
2012	4,141,910	36,750	7,164	19%
2013	4,226,978	39,597	8,604	22%
2014	4,311,223	41,313	10,265	25%
2015	4,394,802	43,189	9,733	23%
2016	4,477,937	43,800	9,871	23%
2017	4,560,569	44,274	9,977	23%
2018	4,642,575	45,278	10,203	23%
2019	4,720,827	46,918	8,006	17%

Notes: Column a - The total number of customers in residential rate class

Column b - The projected annual number of program-eligible new homes

Column d - Column c / Column b

[1] Cumulative Penetration Level addresses participants in 2010 and beyond.

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
2010	1363	0.39	0.86	3,925,225	1,121	2,469
2011	1363	0.39	0.86	7,586,622	2,167	4,773
2012	1388	0.40	0.87	9,945,031	2,856	6,248
2013	1409	0.41	0.88	12,125,307	3,508	7,604
2014	1437	0.42	0.90	14,751,361	4,308	9,229
2015	1470	0.43	0.92	14,310,398	4,224	8,929
2016	1470	0.43	0.92	14,513,101	4,284	9,055
2017	1470	0.43	0.92	14,670,006	4,330	9,153
2018	1470	0.43	0.92	15,002,561	4,428	9,361
2019	1663	0.50	1.04	13,312,380	3,965	8,299

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
2010	1464	0.43	0.94	4,216,184	1,228	2,703
2011	1464	0.43	0.94	8,148,983	2,373	5,225
2012	1491	0.44	0.95	10,682,211	3,127	6,841
2013	1514	0.45	0.97	13,024,100	3,841	8,325
2014	1544	0.46	0.98	15,844,812	4,717	10,104
2015	1579	0.48	1.00	15,371,161	4,625	9,776
2016	1579	0.48	1.00	15,588,890	4,690	9,914
2017	1579	0.48	1.00	15,757,426	4,741	10,021
2018	1579	0.48	1.00	16,114,632	4,848	10,249
2019	1786	0.54	1.13	14,299,165	4,341	9,086

Program Name: Residential Load Management (On Call)

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Participants	(d) Cumulative Penetration Level %[1]
2010	4,010,837	3,225,872	9,615	0%
2011	4,056,428	3,261,848	9,615	1%
2012	4,141,910	3,337,715	9,615	1%
2013	4,226,978	3,413,168	3,000	1%
2014	4,311,223	3,494,413	3,000	1%
2015	4,394,802	3,574,992	3,000	1%
2016	4,477,937	3,655,127	3,000	1%
2017	4,560,569	3,734,759	3,000	1%
2018	4,642,575	3,813,765	3,000	1%
2019	4,720,827	3,889,017	3,000	1%

Notes: Column a - The total number of customers in residential rate class

Column b - The total number of residential customers eligible for one or more applicable program measures

Column d - Column c cumulative / Column b

[1] Cumulative Penetration Level addresses participants in 2010 and beyond.

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
2010	19	1.04	1.14	182,655	10,000	10,961
2011	19	1.04	1.14	182,655	10,000	10,961
2012	19	1.04	1.14	182,655	10,000	10,961
2013	19	1.04	1.14	56,991	3,120	3,420
2014	19	1.04	1.14	56,991	3,120	3,420
2015	19	1.04	1.14	56,991	3,120	3,420
2016	19	1.04	1.14	56,991	3,120	3,420
2017	19	1.04	1.14	56,991	3,120	3,420
2018	19	1.04	1.14	56,991	3,120	3,420
2019	19	1.04	1.14	56,991	3,120	3,420

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
2010	20	1.14	1.25	196,195	10,948	12,001
2011	20	1.14	1.25	196,195	10,948	12,001
2012	20	1.14	1.25	196,195	10,948	12,001
2013	20	1.14	1.25	61,215	3,416	3,744
2014	20	1.14	1.25	61,215	3,416	3,744
2015	20	1.14	1.25	61,215	3,416	3,744
2016	20	1.14	1.25	61,215	3,416	3,744
2017	20	1.14	1.25	61,215	3,416	3,744
2018	20	1.14	1.25	61,215	3,416	3,744
2019	20	1.14	1.25	61,215	3,416	3,744

Program Name: Residential AC Tune-Up & Maintenance

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Participants	(d) Cumulative Penetration Level %[1]
2010	4,010,837	3,730,079	0	0%
2011	4,056,428	3,772,478	5,436	0%
2012	4,141,910	3,846,541	6,014	0%
2013	4,226,978	3,919,640	6,646	0%
2014	4,311,223	3,991,341	7,338	1%
2015	4,394,802	4,061,732	8,093	1%
2016	4,477,937	4,130,955	8,914	1%
2017	4,560,569	4,198,889	9,805	1%
2018	4,642,575	4,265,349	10,771	1%
2019	4,720,827	4,327,352	10,733	2%

Notes: Column a - The total number of customers in residential rate class

Column b - The total number of residential customers eligible for one or more applicable program measures

Column d - Column c cumulative / Column b

[1] Cumulative Penetration Level addresses participants in 2010 and beyond.

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
2010	0	0.00	0.00	0	0	0
2011	529	0.00	0.30	2,874,394	0	1,628
2012	529	0.00	0.30	3,179,964	0	1,801
2013	529	0.00	0.30	3,514,594	0	1,991
2014	529	0.00	0.30	3,880,350	0	2,198
2015	529	0.00	0.30	4,279,312	0	2,424
2016	529	0.00	0.30	4,713,541	0	2,670
2017	529	0.00	0.30	5,185,040	0	2,937
2018	529	0.00	0.30	5,695,722	0	3,226
2019	454	0.00	0.26	4,873,246	0	2,758

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
2010	0	0.00	0.00	0	0	0
2011	568	0.00	0.33	3,087,459	0	1,782
2012	568	0.00	0.33	3,415,681	0	1,972
2013	568	0.00	0.33	3,775,114	0	2,179
2014	568	0.00	0.33	4,167,982	0	2,406
2015	568	0.00	0.33	4,596,518	0	2,654
2016	568	0.00	0.33	5,062,934	0	2,923
2017	568	0.00	0.33	5,569,383	0	3,215
2018	568	0.00	0.33	6,117,920	0	3,532
2019	488	0.00	0.28	5,234,477	0	3,020

Program Name: Residential Refrigerator Replacement

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Participants	(d) Cumulative Penetration Level %[1]
2010	4,010,837	4,010,837	0	0%
2011	4,056,428	4,056,428	20,390	1%
2012	4,141,910	4,121,520	28,014	1%
2013	4,226,978	4,178,574	37,292	2%
2014	4,311,223	4,225,527	47,862	3%
2015	4,394,802	4,261,244	33,079	4%
2016	4,477,937	4,311,301	0	4%
2017	4,560,569	4,393,933	0	4%
2018	4,642,575	4,475,939	0	4%
2019	4,720,827	4,554,191	0	4%

Notes: Column a - The total number of customers in residential rate class

Column b - The total number of residential customers eligible for one or more applicable program measures

Column d - Column c cumulative / Column b

[1] Cumulative Penetration Level addresses participants in 2010 and beyond.

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
2010	0	0.00	0.00	0	0	0
2011	100	0.03	0.03	2,038,972	620	667
2012	100	0.03	0.03	2,801,384	851	917
2013	100	0.03	0.03	3,729,239	1,133	1,220
2014	100	0.03	0.03	4,786,161	1,455	1,566
2015	100	0.03	0.03	3,307,869	1,005	1,082
2016	0	0.00	0.00	0	0	0
2017	0	0.00	0.00	0	0	0
2018	0	0.00	0.00	0	0	0
2019	0	0.00	0.00	0	0	0

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
2010	0	0.00	0.00	0	0	0
2011	107	0.03	0.04	2,190,111	678	730
2012	107	0.03	0.04	3,009,037	932	1,003
2013	107	0.03	0.04	4,005,670	1,241	1,336
2014	107	0.03	0.04	5,140,937	1,593	1,714
2015	107	0.03	0.04	3,553,066	1,101	1,185
2016	0	0.00	0.00	0	0	0
2017	0	0.00	0.00	0	0	0
2018	0	0.00	0.00	0	0	0
2019	0	0.00	0.00	0	0	0

Program Name: Business Energy Evaluation

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Participants	(d) Cumulative Penetration Level %[1]
2010	534,490	534,490	13,081	2%
2011	547,697	547,697	13,277	5%
2012	561,576	561,576	13,476	7%
2013	575,598	575,598	13,679	9%
2014	590,087	590,087	13,884	11%
2015	604,956	604,956	14,092	13%
2016	620,071	620,071	14,303	15%
2017	635,559	635,559	14,518	17%
2018	651,590	651,590	14,736	19%
2019	667,785	667,785	14,957	21%

Notes: Column a - The total number of customers in the business rate classes.

Column b - The total number of eligible customers in the business rate classes.

Column d - Column c cumulative / Column b

[1] Cumulative Penetration Level addresses participants in 2010 and beyond.

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
2010	N/A	N/A	N/A	N/A	N/A	N/A
2011	N/A	N/A	N/A	N/A	N/A	N/A
2012	N/A	N/A	N/A	N/A	N/A	N/A
2013	N/A	N/A	N/A	N/A	N/A	N/A
2014	N/A	N/A	N/A	N/A	N/A	N/A
2015	N/A	N/A	N/A	N/A	N/A	N/A
2016	N/A	N/A	N/A	N/A	N/A	N/A
2017	N/A	N/A	N/A	N/A	N/A	N/A
2018	N/A	N/A	N/A	N/A	N/A	N/A
2019	N/A	N/A	N/A	N/A	N/A	N/A

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
2010	N/A	N/A	N/A	N/A	N/A	N/A
2011	N/A	N/A	N/A	N/A	N/A	N/A
2012	N/A	N/A	N/A	N/A	N/A	N/A
2013	N/A	N/A	N/A	N/A	N/A	N/A
2014	N/A	N/A	N/A	N/A	N/A	N/A
2015	N/A	N/A	N/A	N/A	N/A	N/A
2016	N/A	N/A	N/A	N/A	N/A	N/A
2017	N/A	N/A	N/A	N/A	N/A	N/A
2018	N/A	N/A	N/A	N/A	N/A	N/A
2019	N/A	N/A	N/A	N/A	N/A	N/A

Program Name: Business Heating, Ventilating & Air-Conditioning

Year	(a) Total Number of Customers (kW)	(b) Total Number of Eligible Customers (kW)	(c) Annual Number of Participants (kW)	(d) Cumulative Penetration Level %[1]
2010	605,498	411,481	12,694	3%
2011	620,548	409,015	20,362	8%
2012	635,972	399,134	25,041	15%
2013	651,779	384,835	28,479	22%
2014	667,980	367,366	28,643	31%
2015	684,583	350,006	24,320	40%
2016	701,598	337,250	20,404	47%
2017	719,037	328,697	18,802	54%
2018	736,909	322,040	17,111	61%
2019	755,226	317,377	15,755	67%

Notes: Column a - The total summer kW of all program-applicable equipment in the business rate classes (one customer represents one summer kW)

Column b - The total summer kW of all program-eligible equipment in the business rate classes (one customer represents one summer kW)

Column d - Column c cumulative / Column b

[1] Cumulative Penetration Level addresses participants in 2010 and beyond.

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
2010	3482	1.81	1.00	44,195,721	22,996	12,694
2011	4879	1.18	1.00	99,346,866	23,952	20,362
2012	4959	1.04	1.00	124,173,546	26,029	25,041
2013	4953	0.97	1.00	141,057,124	27,498	28,479
2014	4865	0.97	1.00	139,333,646	27,801	28,643
2015	4809	1.13	1.00	116,955,548	27,406	24,320
2016	4306	1.29	1.00	87,863,486	26,391	20,404
2017	4059	1.34	1.00	76,312,023	25,106	18,802
2018	3804	1.39	1.00	65,092,151	23,818	17,111
2019	3563	1.44	1.00	56,140,425	22,667	15,755

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
2010	3740	1.98	1.09	47,471,746	25,177	13,898
2011	5241	1.29	1.09	106,710,991	26,224	22,294
2012	5326	1.14	1.09	133,377,959	28,498	27,417
2013	5320	1.06	1.09	151,513,039	30,106	31,181
2014	5225	1.06	1.09	149,661,807	30,438	31,360
2015	5166	1.23	1.09	125,624,924	30,006	26,627
2016	4625	1.42	1.09	94,376,401	28,894	22,340
2017	4360	1.46	1.09	81,968,681	27,488	20,586
2018	4086	1.52	1.09	69,917,132	26,077	18,734
2019	3827	1.58	1.09	60,301,856	24,818	17,249

Program Name: Business Lighting

Year	(a) Total Number of Customers (kW)	(b) Total Number of Eligible Customers (kW)	(c) Annual Number of Participants (kW)	(d) Cumulative Penetration Level %[1]
2010	842,587	449,346	4,352	1%
2011	863,530	456,162	7,888	3%
2012	884,994	459,721	8,154	4%
2013	906,991	463,297	8,390	6%
2014	929,535	466,930	8,532	8%
2015	952,639	470,719	7,197	9%
2016	976,317	476,149	6,768	11%
2017	1,000,584	482,323	7,469	12%
2018	1,025,454	488,117	8,507	14%
2019	1,050,943	493,202	9,053	15%

Notes: Column a - The total summer kW of all program-applicable equipment in the business rate classes (one customer represents one summer kW)

Column b - The total summer kW of all program-eligible equipment in the business rate classes (one customer represents one summer kW)

Column d - Column c cumulative / Column b

[1] Cumulative Penetration Level addresses participants in 2010 and beyond.

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
2010	3311	0.63	1.00	14,410,903	2,758	4,352
2011	3456	0.65	1.00	27,262,175	5,126	7,888
2012	3478	0.65	1.00	28,358,824	5,316	8,154
2013	3502	0.65	1.00	29,377,937	5,495	8,390
2014	3529	0.66	1.00	30,112,988	5,607	8,532
2015	3609	0.67	1.00	25,974,976	4,799	7,197
2016	3671	0.67	1.00	24,843,495	4,526	6,768
2017	3676	0.67	1.00	27,458,160	5,000	7,469
2018	3664	0.67	1.00	31,169,216	5,697	8,507
2019	3670	0.67	1.00	33,221,961	6,069	9,053

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
2010	3556	0.69	1.09	15,479,117	3,020	4,765
2011	3712	0.71	1.09	29,282,994	5,612	8,636
2012	3736	0.71	1.09	30,460,933	5,821	8,928
2013	3761	0.72	1.09	31,555,589	6,016	9,185
2014	3791	0.72	1.09	32,345,125	6,139	9,342
2015	3876	0.73	1.09	27,900,382	5,254	7,880
2016	3943	0.73	1.09	26,685,029	4,955	7,409
2017	3949	0.73	1.09	29,493,507	5,474	8,178
2018	3935	0.73	1.09	33,479,646	6,238	9,314
2019	3942	0.73	1.09	35,684,552	6,644	9,912

Program Name: Business Refrigeration

Year	(a) Total Number of Customers (kW)	(b) Total Number of Eligible Customers (kW)	(c) Annual Number of Participants (kW)	(d) Cumulative Penetration Level %[1]
2010	87,601	45,200	535	1%
2011	89,778	45,789	1,523	4%
2012	92,010	45,418	1,936	9%
2013	94,297	44,661	2,177	14%
2014	96,641	43,693	2,013	19%
2015	99,043	42,920	1,933	24%
2016	101,505	42,257	782	26%
2017	104,028	42,777	804	27%
2018	106,613	43,308	809	29%
2019	109,263	43,866	799	30%

Notes: Column a - The total summer kW of all program-applicable equipment in the business rate classes (one customer represents one summer kW)

Column b - The total summer kW of all program-eligible equipment in the business rate classes (one customer represents one summer kW)

Column d - Column c cumulative / Column b

[1] Cumulative Penetration Level addresses participants in 2010 and beyond.

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
2010	7105	0.33	1.00	3,797,827	178	535
2011	7825	0.46	1.00	11,914,224	704	1,523
2012	7709	0.41	1.00	14,926,933	799	1,936
2013	7701	0.41	1.00	16,768,434	882	2,177
2014	7987	0.42	1.00	16,077,813	850	2,013
2015	8011	0.40	1.00	15,484,558	773	1,933
2016	9617	1.03	1.00	7,516,229	809	782
2017	9621	1.03	1.00	7,731,180	829	804
2018	9626	1.03	1.00	7,790,745	832	809
2019	9630	1.03	1.00	7,694,115	819	799

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
2010	7631	0.36	1.09	4,079,343	194	585
2011	8405	0.51	1.09	12,797,371	770	1,667
2012	8280	0.45	1.09	16,033,398	875	2,120
2013	8272	0.44	1.09	18,011,400	965	2,384
2014	8579	0.46	1.09	17,269,587	931	2,204
2015	8605	0.44	1.09	16,632,357	847	2,116
2016	10330	1.13	1.09	8,073,373	885	856
2017	10335	1.13	1.09	8,304,257	907	880
2018	10339	1.13	1.09	8,368,237	911	886
2019	10344	1.12	1.09	8,264,444	897	875

Program Name: Business Building Envelope

Year	(a) Total Number of Customers (kW)	(b) Total Number of Eligible Customers (kW)	(c) Annual Number of Participants (kW)	(d) Cumulative Penetration Level %[1]
2010	455,771	455,771	5,127	1%
2011	467,099	462,061	12,040	4%
2012	478,709	461,857	13,415	7%
2013	490,608	460,610	14,213	10%
2014	502,802	458,899	14,009	13%
2015	515,300	457,725	13,467	16%
2016	528,108	457,341	11,992	18%
2017	541,234	458,499	11,900	21%
2018	554,687	460,078	11,825	23%
2019	568,474	462,066	11,767	26%

Notes: Column a - The total summer kW of all program-applicable equipment in the business rate classes (one customer represents one summer kW)

Column b - The total summer kW of all program-eligible equipment in the business rate classes (one customer represents one summer kW)

Column d - Column c cumulative / Column b

[1] Cumulative Penetration Level addresses participants in 2010 and beyond.

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
2010	2107	0.10	1.00	10,801,233	523	5,127
2011	2059	0.11	1.00	24,788,595	1,339	12,040
2012	2048	0.10	1.00	27,475,385	1,402	13,415
2013	2053	0.09	1.00	29,175,443	1,314	14,213
2014	1986	0.11	1.00	27,822,935	1,514	14,009
2015	1938	0.10	1.00	26,104,074	1,404	13,467
2016	1937	0.06	1.00	23,234,768	664	11,992
2017	1938	0.05	1.00	23,063,753	556	11,900
2018	1939	0.04	1.00	22,925,692	469	11,825
2019	1939	0.03	1.00	22,818,350	402	11,767

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
2010	2263	0.11	1.09	11,601,878	572	5,613
2011	2211	0.12	1.09	26,626,059	1,466	13,183
2012	2200	0.11	1.09	29,512,008	1,535	14,688
2013	2205	0.10	1.09	31,338,085	1,439	15,561
2014	2133	0.12	1.09	29,885,321	1,657	15,338
2015	2082	0.11	1.09	28,039,049	1,537	14,744
2016	2081	0.06	1.09	24,957,054	727	13,130
2017	2082	0.05	1.09	24,773,363	609	13,028
2018	2082	0.04	1.09	24,625,068	514	12,946
2019	2083	0.04	1.09	24,509,769	440	12,883

Program Name: Business Water Heating

Year	(a) Total Number of Customers (kW)	(b) Total Number of Eligible Customers (kW)	(c) Annual Number of Participants (kW)	(d) Cumulative Penetration Level %[1]
2010	80,321	73,863	465	1%
2011	82,317	75,233	526	1%
2012	84,363	76,588	578	2%
2013	86,460	77,939	1,117	3%
2014	88,609	78,798	691	4%
2015	90,812	80,133	426	5%
2016	93,069	81,783	259	5%
2017	95,382	83,651	259	5%
2018	97,753	85,573	259	5%
2019	100,182	87,548	743	6%

Notes: Column a - The total summer kW of all program-applicable equipment in the business rate classes (one customer represents one summer kW)

Column b - The total summer kW of all program-eligible equipment in the business rate classes (one customer represents one summer kW)

Column d - Column c cumulative / Column b

[1] Cumulative Penetration Level addresses participants in 2010 and beyond.

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
2010	5411	0.62	1.00	2,518,450	290	465
2011	7308	0.62	1.00	3,847,541	328	526
2012	7308	0.62	1.00	4,222,490	360	578
2013	5218	0.62	1.00	5,826,850	696	1,117
2014	7308	0.62	1.00	5,047,600	430	691
2015	7308	0.62	1.00	3,113,155	265	426
2016	7308	0.62	1.00	1,891,137	161	259
2017	7308	0.62	1.00	1,891,137	161	259
2018	7308	0.62	1.00	1,891,137	161	259
2019	4166	0.62	1.00	3,093,689	463	743

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
2010	5812	0.68	1.09	2,705,131	317	510
2011	7850	0.68	1.09	4,132,741	359	576
2012	7850	0.68	1.09	4,535,484	394	633
2013	5605	0.68	1.09	6,258,768	762	1,223
2014	7850	0.68	1.09	5,421,755	471	756
2015	7850	0.68	1.09	3,343,919	291	466
2016	7850	0.68	1.09	2,031,319	177	283
2017	7850	0.68	1.09	2,031,319	177	283
2018	7850	0.68	1.09	2,031,319	177	283
2019	4474	0.68	1.09	3,323,010	507	813

Program Name: Business Custom Incentive

Year	(a) Total Number of Customers (kW)	(b) Total Number of Eligible Customers (kW)	(c) Annual Number of Participants (kW)	(d) Cumulative Penetration Level %[1]
2010	139,467	90,912	274	0%
2011	142,934	92,898	294	1%
2012	146,487	94,919	316	1%
2013	150,128	96,976	340	1%
2014	153,859	99,069	365	2%
2015	157,683	101,196	392	2%
2016	161,603	103,359	422	2%
2017	165,619	105,555	453	3%
2018	169,736	107,786	487	3%
2019	173,955	110,049	523	4%

Notes: Column a - The total summer kW of all program-applicable equipment in the business rate classes (one customer represents one summer kW)

Column b - The total summer kW of all program-eligible equipment in the business rate classes (one customer represents one summer kW)

Column d - Column c cumulative / Column b

[1] Cumulative Penetration Level addresses participants in 2010 and beyond.

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
2010	7,189	0.00	1.00	1,969,819	0	274
2011	7,189	0.00	1.00	2,116,491	0	294
2012	7,189	0.00	1.00	2,274,084	0	316
2013	7,189	0.00	1.00	2,443,412	0	340
2014	7,189	0.00	1.00	2,625,347	0	365
2015	7,189	0.00	1.00	2,820.830	0	392
2016	7,189	0.00	1.00	3,030,868	0	422
2017	7,189	0.00	1.00	3,256,545	0	453
2018	7,189	0.00	1.00	3,499,027	0	487
2019	7,189	0.00	1.00	3,759,563	0	523

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
2010	7,722	0.00	1.09	2,115,832	0	300
2011	7,722	0.00	1.09	2,273,377	0	322
2012	7,722	0.00	1.09	2,442,652	0	346
2013	7,722	0.00	1.09	2,624,531	0	372
2014	7,722	0.00	1.09	2,819,952	0	400
2015	7,722	0.00	1.09	3,029,925	0	430
2016	7,722	0.00	1.09	3,255,532	0	462
2017	7,722	0.00	1.09	3,497,938	0	496
2018	7,722	0.00	1.09	3,758,394	0	533
2019	7,722	0.00	1.09	4,038,242	0	573

Program Name: Business On Call

Year	(a) Total Number of Customers (kW)	(b) Total Number of Eligible Customers (kW)	(c) Annual Number of Participants (kW)	(d) Cumulative Penetration Level %[1]
2010	1,723,593	1,632,987	3,657	0%
2011	1,766,434	1,672,171	3,657	0%
2012	1,810,340	1,712,420	3,657	1%
2013	1,855,337	1,753,760	3,657	1%
2014	1,901,452	1,796,219	3,657	1%
2015	1,948,714	1,839,824	3,657	1%
2016	1,997,150	1,884,604	3,657	1%
2017	2,046,791	1,930,587	3,657	2%
2018	2,097,665	1,977,805	3,657	2%
2019	2,149,804	2,026,287	3,657	2%

Notes: Column a - The total summer kW of all program-applicable equipment in the GS & GSD business rate classes (one customer represents one summer kW)

Column b - The total summer kW of all program-eligible equipment in the GS & GSD business rate classes (one customer represents one summer kW)

Column d - Column c cumulative / Column b

[1] Cumulative Penetration Level addresses participants in 2010 and beyond.

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
2010	1	0.00	1.00	3,698	0	3,657
2011	1	0.00	1.00	3,698	0	3,657
2012	1	0.00	1.00	3,698	0	3,657
2013	1	0.00	1.00	3,698	0	3,657
2014	1	0.00	1.00	3,698	0	3,657
2015	1	0.00	1.00	3,698	0	3,657
2016	1	0.00	1.00	3,698	0	3,657
2017	1	0.00	1.00	3,698	0	3,657
2018	1	0.00	1.00	3,698	0	3,657
2019	1	0.00	1.00	3,698	0	3,657

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
2010	1	0.00	1.09	3,972	0	4,004
2011	1	0.00	1.09	3,972	0	4,004
2012	1	0.00	1.09	3,972	0	4,004
2013	1	0.00	1.09	3,972	0	4,004
2014	1	0.00	1.09	3,972	0	4,004
2015	1	0.00	1.09	3,972	0	4,004
2016	1	0.00	1.09	3,972	0	4,004
2017	1	0.00	1.09	3,972	0	4,004
2018	1	0.00	1.09	3,972	0	4,004
2019	1	0.00	1.09	3,972	0	4,004

Program Name: Commercial/Industrial Demand Reduction

Year	(a) Total Number of Customers (kW)	(b) Total Number of Eligible Customers (kW)	(c) Annual Number of Participants (kW)	(d) Cumulative Penetration Level %[1]
2010	4,895,780	3,780,346	13,073	0%
2011	5,017,468	3,861,236	13,073	1%
2012	5,142,180	3,944,461	13,073	1%
2013	5,269,992	4,030,080	13,073	1%
2014	5,400,981	4,118,152	12,993	2%
2015	5,535,225	4,208,817	12,993	2%
2016	5,672,807	4,302,059	12,993	2%
2017	5,813,808	4,397,942	12,993	2%
2018	5,958,314	4,496,530	12,993	3%
2019	6,106,411	4,597,892	12,993	3%

Notes: Column a - The total summer kW of all program-applicable equipment for business customers with demands greater than 200 kW (one customer represents one summer kW)

Column b - The total summer kW of all program-applicable equipment for business customers with demands greater than 200 kW (one customer represents one summer kW)

Column d - Column c cumulative / Column b

[1] Cumulative Penetration Level addresses participants in 2010 and beyond.

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
2010	8	1.00	1.00	99,355	13,073	13,073
2011	8	1.00	1.00	99,355	13,073	13,073
2012	8	1.00	1.00	99,355	13,073	13,073
2013	8	1.00	1.00	99,355	13,073	13,073
2014	8	1.00	1.00	98,751	12,993	12,993
2015	8	1.00	1.00	98,751	12,993	12,993
2016	8	1.00	1.00	98,751	12,993	12,993
2017	8	1.00	1.00	98,751	12,993	12,993
2018	8	1.00	1.00	98,751	12,993	12,993
2019	8	1.00	1.00	98,751	12,993	12,993

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
2010	8	1.09	1.09	106,720	14,313	14,313
2011	8	1.09	1.09	106,720	14,313	14,313
2012	8	1.09	1.09	106,720	14,313	14,313
2013	8	1.09	1.09	106,720	14,313	14,313
2014	8	1.09	1.09	106,071	14,226	14,226
2015	8	1.09	1.09	106,071	14,226	14,226
2016	8	1.09	1.09	106,071	14,226	14,226
2017	8	1.09	1.09	106,071	14,226	14,226
2018	8	1.09	1.09	106,071	14,226	14,226
2019	8	1.09	1.09	106,071	14,226	14,226

Program Name: Business Motors

Year	(a) Total Number of Customers (kW)	(b) Total Number of Eligible Customers (kW)	(c) Annual Number of Participants (kW)	(d) Cumulative Penetration Level %[1]
2010	62,588	15,259	0	0%
2011	64,144	15,639	791	5%
2012	65,738	15,237	827	11%
2013	67,372	14,808	862	17%
2014	69,047	14,354	893	23%
2015	70,763	13,880	920	31%
2016	72,522	13,389	942	39%
2017	74,324	12,887	959	48%
2018	76,172	12,378	971	58%
2019	78,065	11,868	977	69%

Notes: Column a - The total summer kW of all program-applicable equipment in the business rate classes (one customer represents one summer kW)

Column b - The total summer kW of all program-eligible equipment in the business rate classes (one customer represents one summer kW)

Column d - Column c cumulative / Column b

[1] Cumulative Penetration Level addresses participants in 2010 and beyond.

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
2010	0	0.00	0.00	0	0	0
2011	5021	0.03	1.00	3,969,585	22	791
2012	5021	0.03	1.00	4,155,021	23	827
2013	5021	0.03	1.00	4,327,141	24	862
2014	5021	0.03	1.00	4,482,545	25	893
2015	5021	0.03	1.00	4,617,947	26	920
2016	5021	0.03	1.00	4,730,322	26	942
2017	5021	0.03	1.00	4,817,055	27	959
2018	5021	0.03	1.00	4,876,100	27	971
2019	5021	0.03	1.00	4,906,108	27	977

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
2010	0	0.00	0.00	0	0	0
2011	5393	0.03	1.09	4,263,832	24	866
2012	5393	0.03	1.09	4,463,013	25	906
2013	5393	0.03	1.09	4,647,892	26	944
2014	5393	0.03	1.09	4,814,815	27	977
2015	5393	0.03	1.09	4,960,254	28	1,007
2016	5393	0.03	1.09	5,080,959	29	1,031
2017	5393	0.03	1.09	5,174,122	29	1,050
2018	5393	0.03	1.09	5,237,543	30	1,063
2019	5393	0.03	1.09	5,269,775	30	1,070

SECTION VIII – ECCR COSTS & UNRECOVERED REVENUE REQUIREMENTS

A. DSM Plan Costs

Pursuant to Commission Staff's request, FPL has projected both the ECCR costs and the unrecovered revenue requirements associated with FPL's proposed DSM Plan. For FPL's DSM Plan, these costs total almost $4.3 billion over the 2010-2019 goals period. The $4.3 billion[iii] is comprised of approximately $3.2 billion of ECCR costs and $1.1 billion of unrecovered revenue requirements (non-fuel). It should be noted that there will be additional growing unrecovered revenue requirements (non-fuel) for the years after the goals period. FPL conservatively estimates those unrecovered revenue requirements to be over $2.1 billion for just the next ten years.

Table 15
DSM Costs Estimates

Energy Goals (GWh) (1)			ECCR Cost (2)				
Year	Annual (1a)	Cumulative (1b)	Energy Efficiency & Load Management (2a)	Solar Pilot (2b)	Residential Bill Impact of ECCR Cost (@1200 kWh) (3)	Unrecovered Revenue Requirements (4)	ECCR + System Fixed Cost (2a +2b + 4)
Current					**$2.26**		
2010	204	**204**	$219,330,680	$8,535,230	**$2.83**	$5,185,002	**$233,050,912**
2011	295	**500**	$297,267,099	$15,570,628	**$3.79**	$19,538,405	**$332,376,132**
2012	360	**860**	$325,724,557	$14,484,028	**$4.02**	$41,770,631	**$381,979,216**
2013	389	**1,249**	$348,150,728	$14,984,372	**$4.25**	$66,648,187	**$429,783,287**
2014	394	**1,643**	$359,225,563	$15,243,277	**$4.32**	$96,033,723	**$470,502,563**
2015	361	**2,004**	$351,663,976		**$4.01**	$125,391,145	**$477,055,121**
2016	318	**2,321**	$336,015,039		**$3.77**	$149,453,608	**$485,468,647**
2017	279	**2,600**	$323,074,730		**$3.56**	$174,815,526	**$497,890,256**
2018	253	**2,854**	$314,637,152		**$3.40**	$204,106,344	**$518,743,496**
2019	229	**3,082**	$304,693,571		**$3.22**	$219,018,256	**$523,711,827**
TOTAL	**3,082**		**$3,179,783,096**	**$68,817,535**		**$1,101,960,827**	**$4,350,561,458**
Assumed 10 Year Life Total		**30,822**				**$2,190,182,560**	

B. ECCR Clause Impact

FPL projects that the DSM Plan costs recovered through the ECCR clause will be approximately $3.2 billion, which are essentially double the 2000-2009 expenditures of $1.6 billion. This reflects the fact that FPL is required to implement much more DSM than it has in the past decade. For example, the GWh goal is almost 150% of the energy saved between 2000 and 2009. If FPL had not employed several analytical techniques to minimize rates, such as utilizing the linear programming model and limiting paybacks to no less than two years for most measures, the projected ECCR costs would have been even higher. As Table 16 below illustrates, the cost of broadening the Energy Efficiency and Load Management programs is approximately $3 billion, the cost of the Residential Low Income Portfolio is approximately $93 million, and the cost of the Solar Pilot Portfolio (over a five-year pilot term) is approximately $69 million.

Table 16

2010-2019 ECCR Clause Impact

Year	Energy Efficiency & Load Management	Low Income	Solar Pilot	Total
2010	$218,916,472	$414,208	$8,535,230	**$227,865,910**
2011	$287,996,085	$9,271,014	$15,570,628	**$312,837,727**
2012	$316,221,768	$9,502,789	$14,484,028	**$340,208,585**
2013	$338,410,369	$9,740,359	$14,984,372	**$363,135,100**
2014	$349,241,695	$9,983,868	$15,243,277	**$374,468,840**
2015	$341,430,511	$10,233,465		**$351,663,976**
2016	$325,525,738	$10,489,301		**$336,015,039**
2017	$312,323,196	$10,751,534		**$323,074,730**
2018	$303,616,830	$11,020,322		**$314,637,152**
2019	$293,397,741	$11,295,830		**$304,693,571**
TOTAL	**$3,087,080,406**	**$92,702,690**	**$68,817,535**	**$3,248,600,631**

C. Unrecovered Revenue Requirements

Another major impact of the proposed DSM Plan on customer electric rates would be the impact on base rates. FPL recovers its fixed costs through base rates for demand or energy. When sales are diminished due to DSM, the revenue requirements that would have been recovered through those sales will go unrecovered. This places FPL in the position of needing to seek base rate relief. These unrecovered revenue requirements were acknowledged by all parties in the DSM Goals proceeding.

The following table illustrates estimated unrecovered revenue requirements (non-fuel) due to implementation of FPL's DSM Plan.

Table 17
Projected FPL Unrecovered Revenue Requirements

Year	Unrecovered Revenue Requirements
2010	$5,185,002
2011	$19,538,405
2012	$41,770,631
2013	$66,648,187
2014	$96,033,723
2015	$125,391,145
2016	$149,453,608
2017	$174,815,526
2018	$204,106,344
2019	$219,018,256
TOTAL	**$1,101,960,827**

[i] FPL is required to account for free riders pursuant to Rule 25-17.0021, F.A.C.
[ii] Unless otherwise indicated, all dollar values stated in this document are in nominal terms rather than net present value terms.