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FLORIDA
PUBLIC SERVICE
COMMISSION



ANNUAL REPORT ON

Activities
Pursuant
to the
Florida
Energy
Efficiency and
Conservation
Act

As Required by
Sections 366.82(10),
377.703(2)(f), and
553.975, Florida Statutes

Table of Contents

Executive Summary	1
Section 1. DSM Goal Setting Process	5
1.1 Historic Goal Setting Process	5
1.2 Current Goal Setting Process	6
Section 2. Overview of Florida’s Electricity Market	9
2.1 Energy Demand in Florida.....	9
2.2 Florida’s Electric Generating Resources	10
Section 3. The Florida Energy Efficiency and Conservation Act	12
3.1 History of FEECA.....	12
3.2 Conservation Achievements	13
3.3 Conservation Cost Recovery.....	16
3.4 Conservation Activities of Natural Gas Utilities	18
Section 4. Florida Energy Conservation Standards Act	20
Appendix 1. Educating Florida’s Consumers On Conservation	21
Appendix 2. Conservation Activities of FEECA Utilities	24
A. Florida Power & Light Company (FPL).....	24
B. Progress Energy Florida (PEF)	26
C. Gulf Power Company (Gulf).....	28
D. Tampa Electric Company (TECO)	30
E. Florida Public Utilities Company (FPUC)	33
F. Orlando Utilities Commission (OUC).....	35
G. JEA.....	37
Appendix 3. Related Web Sites	39

List of Acronyms

DCA	Department of Community Affairs
DSM	Demand-Side Management
ECCR	Energy Conservation Cost Recovery
E-RIM	Enhanced Rate Impact Measure
E-TRC	Enhanced Total Resource Cost
F.A.C.	Florida Administrative Code
FEECA	Florida Energy Efficiency and Conservation Act
F.S.	Florida Statute
GWh	Gigawatt-Hour
HERS	Home Energy Rating System
HVAC	Heating Ventilating and Air Conditioning
kWh	Kilowatt-hour
LDC	Local Distribution Company
MW	Megawatt
PSC	Public Service Commission
RIM	Rate Impact Measure
TRC	Total Resource Cost

Executive Summary

Sections 366.80 through 366.85 and Section 403.519, Florida Statutes (F.S.), are known as the Florida Energy Efficiency and Conservation Act (FEECA). Originally enacted in 1980, FEECA places emphasis on reducing the growth rates of weather-sensitive peak demand, reducing and controlling the growth rates of electricity consumption, and reducing the consumption of scarce resources such as petroleum fuels. The Public Service Commission (Commission or PSC) fulfills the requirements of the FEECA statutes by setting numeric electric peak demand and energy savings goals for each of the seven electric utilities subject to FEECA.¹ Each of the FEECA utilities must then submit for Commission approval cost-effective demand-side management (DSM) plans and programs designed to meet the goals.

This report fulfills three statutory requirements. Section 366.82(10), F.S., directs the Commission to provide an annual report to the Legislature and the Governor with the goals it has adopted under FEECA and the progress achieved toward those goals. Section 377.703(2)(f), F.S., requires the PSC to file information “on electricity and natural gas and information on energy conservation programs conducted and underway in the last year” with the Energy and Climate Commission. Section 553.975, F.S., requires the Commission to report on the effectiveness of energy conservation standards in the state.

This report is divided into four sections. Section 1 discusses the Commission’s recently completed goal setting process. Section 2 provides an overview of Florida’s electricity market. Section 3 provides a summary of the history of Florida Energy Efficiency and Conservation Act (FEECA) along with the achievements made by the utilities subjected to FEECA and the natural gas investor-owned utilities. Section 4 discusses the Florida Energy Conservation Standards Act.

Goal Setting Activities

The 2008 Legislative session brought about several changes to the FEECA statute. These changes included: (1) establishing goals for demand-side renewable energy resources; (2) consideration of efficiency investments in generation, transmission, and distribution efficiency improvements; (3) clarification of the costs and benefits to be considered in the determination of cost-effectiveness; and (4) authorization to provide rewards and penalties for conservation

¹ The seven utilities subject to FEECA include Florida Power & Light Company, Progress Energy Florida, Inc., Tampa Electric Company, Gulf Power Company, Florida Public Utilities Company, Orlando Utilities Commission, and JEA.

achievements. In 2007, in preparation for the new goal-setting process, the Commission conducted five workshops regarding energy efficiency initiatives and the new requirements in Section 366.82, F.S. On June 26, 2008, the Commission opened Dockets 080407-EG through 080413-EG to review numeric conservation goals for the utilities subject to FEECA. On November 13, 2008, the Commission staff contracted with GDS Associates, Inc. (GDS) to provide independent technical consulting and witness services during the conservation goal-setting proceeding. GDS was retained to review and critique the overall goals proposed by each utility and provide expert testimony and recommendations on alternative goals.

An evidentiary hearing in Dockets 080407-EG through 080413-EG was held on August 10-13, 2009. On October 15, 2009, staff filed its recommendation regarding the review of the FEECA utilities numeric goals. At the November 10, 2009, Agenda Conference the Commission directed staff to develop more robust goals for each utility.

At the December 1, 2009 Agenda Conference, the Commission approved aggressive new DSM goals. In order to address recent statutory changes, the Commission voted that the numeric DSM goals for FPL, PEF, TECO, Gulf, and FPUC be based on the Enhanced Total Resource Cost (E-TRC) test which takes in consideration costs imposed by the regulation of greenhouse gas emissions, along with several residential measures that have a two-year or less payback. In addition, the investor-owned utilities were authorized to spend up to 10 percent (approximately \$24 million) of their historic energy conservation cost recovery expenditures as an annual cap for solar water heating and solar photovoltaic pilot programs. The table below illustrates the proposed goals by the utilities in comparison to the Commission approved goals. Additional detail of the goal-setting process is discussed in Section 1.

2010-2019 Incremental Demand-Side Management Goals						
	Summer Demand Goals (MW)		Winter Demand Goals (MW)		Annual Energy Goals (GWH)	
Utility	Utility Proposal	Commission Approved Goals	Utility Proposal	Commission Approved Goals	Utility Proposal	Commission Approved Goals
FPL	607	1,498	338	605	878	3,082
PEF	521	1,183	560	1,072	614	3,488
TECO	82	138	41	109	202	360
Gulf	69	144	46	110	159	574
FPUC	0	4	0	2	0	13
OUC	0	12	0	9	0	36
JEA	0	44	0	30	0	290
Total	1,279	3,023	985	1,937	1,853	7,843

Conservation Achievements

The Commission’s consumer education program employs a variety of tools to educate consumers on daily conservation and energy efficiency activities. Appendix 1 summarizes the Commission’s efforts on this front. Florida’s utilities have generally been successful in meeting the overall objectives of FEECA. Residential energy audits provide the first step for utilities and customers to assess conservation opportunities. To date, Florida’s investor-owned utilities have performed over 300,000 residential energy audits. Florida’s investor-owned utilities offer over 71 conservation programs for residential and commercial customers which are summarized in Appendix 2.

Since 1980, utility-sponsored DSM programs are projected to reduce statewide summer peak demand by an estimated 6,107 megawatts (MW) and winter peak demand by 6,442 MW. Annual energy savings from utility-sponsored DSM programs were estimated to be 7,647 gigawatt-hours (GWh)² in 2009. The demand savings from these programs has deferred the need for over 30 typical 150 MW combustion turbine units, or enough capacity to serve approximately 1.6 million households.

² A GWh is equal to 1 million kilowatt-hours.

In 2008, Florida's investor-owned electric utilities recovered over \$284 million in conservation program expenditures from ratepayers. Over the last 10 years, the investor-owned utilities have recovered over \$2.4 billion dollars in conservation program expenditures.

FPL, PEF, TECO, JEA and OUC met or surpassed all of the Commission-approved cumulative demand and energy goals in 2008. Gulf and FPUC both fell short of their goals for at least one customer class, as described below. For example, the dramatic downturn in new home construction in Gulf's service territory has reduced participation in its residential programs. Although FPUC significantly surpassed all of its 2008 residential DSM goals, it did not meet its commercial/industrial goals. The goals established in 2009 contain a provision that will allow the PSC to assess penalties to utilities who do not achieve their goals. The Commission will continue to monitor the progress of all FEECA utilities' efforts to meet the newly approved goals and take appropriate action, if necessary. More detail on each utility company's progress in meeting its goals is provided in Section 3.

Conclusion

Despite the recent decrease in population growth, Florida's population – nearly 19 million today – is still expected to reach nearly 24 million by 2030. Conservation, DSM, and renewable energy will continue to play important roles in meeting the state's energy needs. Although Florida's utilities traditionally have been successful in meeting the objectives of FEECA, customer participation in utility-offered DSM and energy conservation programs, along with individual efforts to use electrical energy wisely, remain fundamental elements for reducing the demand for energy. As power plant sites and transmission corridors become scarcer, utility efforts to defer future generating units and transmission lines are increasingly important.

Section 1. DSM Goal Setting Process

1.1 Historic Goal Setting Process

DSM programs benefit the general body of electric utility ratepayers by (1) deferring the need for future power plant construction, (2) reducing current production cost, and (3) improving reliability.

Section 366.82, F.S., requires utility conservation programs to be cost-effective. As part of the implementation of this statute, the Commission adopted Rule 25-17.008, F.A.C., which codifies the cost-effectiveness methodologies and cost and benefit information which must be submitted to the Commission. In order to obtain cost recovery, utilities must provide a cost-effectiveness analysis of each program using three tests: the Participant test, the Ratepayer Impact Measure (RIM) test and the Total Resource Cost (TRC) test. Each test is summarized below.

Participant test. DSM programs assist program participants by reducing their electric bills. The Participant test reviews costs and benefits from a program participant's point of view and ignores the impact on the utility and other ratepayers not participating in the program. The costs customers pay for equipment and maintenance are considered under the Participant test. Benefits considered include incentives that are paid by the utility to the customers and a reduction in customer bills.

RIM test. The RIM test includes the costs associated with incentive payments to participants and decreased revenues to the utility which typically must be recovered from the general body of ratepayers at the time of a rate case. In particular, the RIM test is designed to ensure that all ratepayers will benefit from a proposed DSM program, not just the program's participants. A DSM program that passes the RIM test ensures that all customer rates are lower than they otherwise would have been without the DSM program.

TRC test. The TRC test measures the overall economic efficiency of a DSM program from a societal perspective. This test measures the net costs of a DSM program based on its total cost, including both the participant's and the utility's costs. Unlike the RIM test, customer incentives and decreased revenues are not included as costs in the TRC test; instead, these factors are treated as transfer payments among ratepayers.

The Commission's traditional policy has been to set goals for utilities based on measures that pass both the Participant and RIM tests. In addition, the Commission encourages utilities to evaluate implementation of TRC measures when the savings are large and the rate impacts are small.³ TRC measures that have a large savings but small impact on rates are reviewed and approved by the Commission on a case-by-case basis.

The Commission also requires investor-owned utilities to reevaluate programs on a regular basis. If a program is no longer cost-effective, the utility is required to file a petition before the Commission to request changes to or discontinuation of the program. Conversely, if new programs become available which are cost-effective, the utility is required to file a petition before the Commission requesting inclusion of the new program.

1.2 Current Goal Setting Process

New legislation enacted in 2008 amended the FEECA statute and placed upon the Commission additional responsibilities when adopting goals. These responsibilities include consideration of benefits and costs to program participants and ratepayers as a whole as well as the need for energy efficiency incentives for customers and utilities. The Commission must also evaluate the costs imposed by state and federal regulations on greenhouse gas emissions. In addition, the Commission is charged to evaluate the technical potential of all demand-side and supply-side energy conservation measures, including demand-side renewable energy systems. The statute was also amended to allow the Commission to provide appropriate financial rewards and/or penalties to utilities over which it has rate-setting authority. Finally, the 2008 legislation authorized the Commission to allow an investor-owned utility to receive an additional return on equity of up to 50 basis points for exceeding 20 percent of its annual load growth through energy efficiency and conservation measures.

The purpose of the goals is to bolster conservation efforts, particularly where expensive resources are concerned, as well as to reduce the growth rate of peak load demand. In preparation for the new goal-setting process, beginning in 2007, the Commission conducted a

³ Order No. PSC-94-1313-FOF-EG, issued October 25, 1994, in Docket No. 930548-EG, In Re: Adoption of numeric conservation goals in consideration of National Energy Policy Act Standards (Section 111) by Florida Power and Light Company; Docket No. 930549-EG, In Re: Adoption of numeric conservation goals in consideration of National Energy Policy Act Standards (Section 111) by Florida Power Corporation; Docket No. 930550-EG, In Re: Adoption of numeric conservation goals in consideration of National Energy Policy Act Standards (Section 111) by Gulf Power Company; Docket No. 930551-EG, In Re: Adoption of numeric conservation goals in consideration of National Energy Policy Act Standards (Section 111) by Tampa Electric Company.

series of workshops regarding energy efficiency initiatives and the new requirements in Section 366.82, F.S. On June 26, 2008, the Commission opened Dockets 080407-EG through 080413-EG to review numeric conservation goals for the utilities subject to FEECA. On November 13, 2008, the Commission staff contracted with GDS Associates, Inc. (GDS) to provide independent technical consulting and witness services during the conservation goal-setting proceeding. GDS was retained to review and critique the overall goals proposed by each utility and provide expert testimony and recommendations on alternative goals.

An evidentiary hearing in Dockets 080407-EG through 080413-EG was held on August 10-13, 2009. The FEECA utilities requested goals based on an enhanced RIM (E-RIM) test, which included estimates of anticipated future carbon regulation costs. Including such carbon costs results in higher goals than the traditional RIM test. On October 15, 2009, staff filed its recommendation regarding the review of the FEECA utilities numeric goals. At the November 10, 2009, Agenda Conference, the Commissioners directed staff to develop more robust goals for each utility. At the December 1, 2009, Agenda Conference, the Commission established goals for each utility based on an enhanced TRC (E-TRC) test. Establishing goals based on the E-TRC will result in higher demand and energy savings compared to the E-RIM tests proposed by the utilities. In addition to the E-TRC based goals, the Commission included the estimated savings for certain residential measures that have a payback of two years or less. Table 1 illustrates the summer demand, winter demand, and annual energy goals proposed by the utilities compared to the Commission’s approved goals.

Table 1. 2010-2019 Incremental Demand-Side Management Goals

Utility Proposed Compared to Commission Approved DSM Goals						
	Summer Demand Goals (MW)		Winter Demand Goals (MW)		Annual Energy Goals (GWH)	
	Utility Proposal	Commission Approved Goals	Utility Proposal	Commission Approved Goals	Utility Proposal	Commission Approved Goals
FPL	607	1,498	338	605	878	3,082
PEF	521	1,183	560	1,072	614	3,488
TECO	82	138	41	109	202	360
Gulf	69	144	46	110	159	574
FPUC	0	4	0	2	0	13
OUC	0	12	0	9	0	36
JEA	0	44	0	30	0	290
Total	1,279	3,023	985	1,937	1,853	7,843

The companies are required to file for Commission approval of proposed DSM programs to meet the new goals in early 2010.

Demand-Side Renewables

Rule 25-6.065, F.A.C., encourages the promotion and development of customer-owned demand-side renewable generation up to two megawatts (MW) by enhancing the interconnection of such generation and minimizing the customer’s cost when interconnecting to a utility’s system. Data submitted in April 2009 illustrates that for the 2008 period, 383 customers of investor-owned utilities owned solar photovoltaic systems resulting in approximately 1.76 MW of capacity.

During the DSM goal setting process, the analyses conducted by the utilities revealed that demand-side renewables were not cost-effective. The Commission voted to accept the recommendation of its consultant, GDS, and authorized the IOUs to spend up to 10 percent (approximately \$24 million) on the development of solar PV and solar water heating technologies on a pilot basis. The idea is to have the programs complement the Solar Rebate Program established by the Legislature and implemented by the Florida Energy and Climate Commission. Table 2 represents the Commission approved expenditures for the solar technologies mentioned previously.

Table 2. Commission Approved Annual Expenditures for Solar Technologies

Utility	Commission Approved Annual Expense
FPL	\$15,536,870
Gulf	\$900,338
PEF	\$6,467,592
TECO	\$1,531,018
FPUC	\$47,233
Total	\$24,483,051

Section 2. Overview of Florida’s Electricity Market

2.1 Energy Demand in Florida

Because of its large population, Florida’s total energy consumption ranks among the highest in the country. In addition, its electrical demand and energy consumption follow unique patterns because of the state’s largely residential customer base. Understanding this pattern and why it occurs – partly because of high air-conditioning use during hot summer months and widespread use of electricity for home heating during winter months – is key to grasping conservation’s importance in Florida. As shown in Table 3, residential customers comprise almost 89 percent of Florida’s electricity customers and purchase about 52 percent of electrical energy in the state. Commercial electrical energy usage in Florida is about 38 percent, and industrial customers purchase the remaining 10 percent of Florida’s electrical energy.

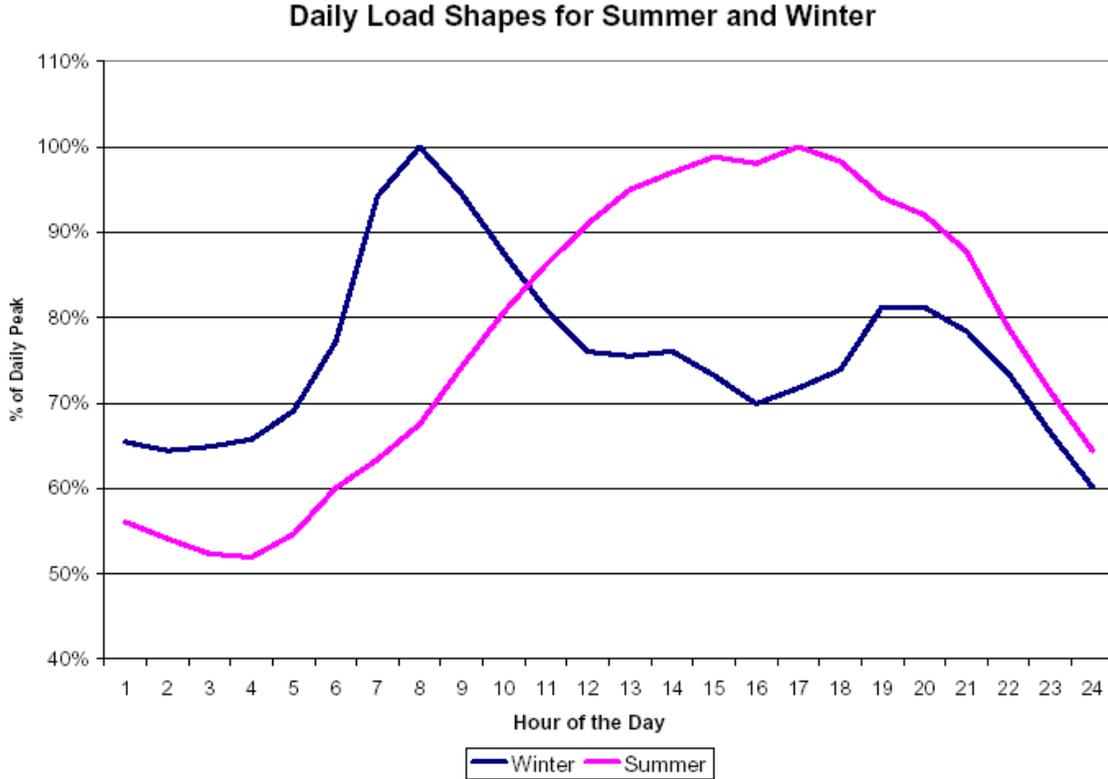
Table 3. Florida’s Electric Customers by Class and Consumption in 2008

Customer Class	Number of Customers	% of Customers	Energy Sales (gigawatt-hours)	% of Sales
Residential	8,351,253	88.7	112,431	51.8
Commercial	1,036,598	11.0	82,205	37.8
Industrial	30,134	0.3	22,615	10.4
Total	9,417,985	100.0	217,251	100.0

Florida’s high temperatures and humidity levels cause residential customers’ electrical usage to fluctuate more throughout the day. Residential energy use peaks in the early evening in the summer and in the mid-morning and late evening in the winter compared to industrial use, which tends to be more uniform throughout the day. These usage patterns cause a need for greater variation in the amounts of energy in Florida than in other states with higher industrial energy usage rates and smaller populations.

Figure 1 depicts the daily load shape curves for typical summer and winter days in Florida. In the summer, customer demand begins to increase in the morning and peaks in the early evening, a pattern which corresponds to the sun heating buildings and the resulting air conditioning loads. In contrast, the winter load curve has two peaks, the largest in mid-morning, followed by a smaller peak in the late evening. Both correspond to heating loads.

Figure 1. Typical Florida Daily Electric Load Shapes



Traditionally, Florida’s electric demand has been highest in the summer months. Peak electric demand reached 50,935 MW in the summer of 2008 and 51,096 MW in the winter. In 2018, Florida’s peak electric demand is projected to increase to 61,994 MW in the summer and 61,035 MW in the winter.

2.2 Florida’s Electric Generating Resources

The need for new electric generating capacity is spurred by the increase in peak demand. Electric utilities’ resource-planning processes are designed to ensure sufficient installed capacity to meet the highest projected customer demand and provide a reserve for contingencies. As discussed further in Section 3, utility-sponsored conservation programs help to lessen peak demand and energy consumption, thus postponing the need for new generating capacity.

Florida's electric utility industry is comprised of the following types of companies:

- 5 investor-owned electric utilities
- 33 municipally owned electric utilities
- 18 rural electric cooperatives

Together, these utilities currently possess 50,482 MW of summer electric generating capacity and 53,857 MW of winter generating capacity. Non-utility generators in the state provide an additional 6,311 MW of summer electric generating capacity and 7,299 MW of winter generating capacity. Supplementary capacity is purchased from out-of-state utilities over the Florida-Georgia transmission interties.

Historically, Florida's electric utilities pursued fuel diversity by maintaining a balanced fuel supply with a relative mix of energy generation from coal, nuclear, natural gas, oil, and other sources. However, Florida's utilities in the early 1990s began to rely more on natural gas to meet the increasing need for energy because of its low prices and ready availability. Between 1990 and 2008, most new generating capacity constructed in Florida was natural gas-fired, increasing the percentage of the state's total energy generated by gas from 11.4 percent in 1990 to over 40 percent in 2008. The price volatility associated with natural gas has caused concern regarding the ratepayers' ability to afford their electric bill.

However, in recent years Florida lawmakers and the Public Service Commission have placed rising importance on utilities maintaining a balanced and diverse fuel supply, resulting in the inclusion of additional fuel sources, such as nuclear and renewable energy, in the utilities' Ten Year Site Plans. Currently, renewable energy facilities provide more than 1,170 MW of firm and non-firm capacity. The Public Service Commission has approved four new nuclear plants (FPL's Turkey Point Units 6 and 7 and Progress' Levy Units 1 and 2.) In addition, the Commission approved uprates to FPL's and PEF's existing nuclear facilities that will allow an increase in the amount of capacity at each facility. Combined, the four new nuclear facilities and the uprates will add approximately 4,938 MW of additional nuclear capacity in Florida when placed into service.

Despite the focus on fuel diversity and the approval of the aforementioned nuclear units, natural gas still is projected to provide over 54 percent of Florida's energy in 2018. To ensure Florida can sustain its growing need for energy, utilities must pay special attention to DSM, conservation, renewable energy, and public awareness efforts.

Section 3. The Florida Energy Efficiency and Conservation Act

3.1 History of FEECA

From its inception in 1980, FEECA has emphasized reducing the growth rates of weather-sensitive peak demand, reducing and controlling the growth rates of electricity consumption, and reducing the consumption of scarce resources such as petroleum fuels. To accomplish these objectives, FEECA requires the Commission to establish goals and the electric utilities to implement DSM programs to meet those goals.

Initially, all of Florida's electric utilities were subject to FEECA. Two major changes resulted from the legislative sunset review of the FEECA statute in 1989: (1) inclusion of a size limitation so that only electric utilities with more than 500 gigawatt-hours (GWh) of annual retail sales would be subject to FEECA; (2) the addition of language to encourage cogeneration. At the time, the 12 utilities which exceeded the sales threshold comprised approximately 94 percent of all retail electricity sales in Florida.

In 1996, the Legislature further revised the FEECA statute. The revision increased the minimum retail sales threshold for municipal and cooperative utilities subject to FEECA to 2,000 GWh. Pursuant to the statute, retail sales for each municipal and cooperative utility were measured as of July 1, 1993, to determine whether the company was subject to FEECA. All five Florida investor-owned utilities are subject to FEECA, regardless of sales. Investor-owned utilities include FPL, PEF, TECO, Gulf, and FPUC. The two municipal utilities currently subject to FEECA are OUC and JEA. No rural electric cooperatives are subject to FEECA.

On the following page, Table 4 displays the 2008 energy sales by each FEECA utility and non-FEECA utilities. Also included in the table is a percentage allocation of energy sales per FEECA utility along with a total percentage allocation for the non-FEECA utilities.

Table 4. Energy Sales by Florida’s FEECA Utilities in 2008

Florida’s FEECA Utilities	Energy Sales GWh	% of Total FEECA Energy Sales
FPL	102,919	53.8
PEF	38,555	20.1
TECO	18,990	9.9
Gulf	11,543	6.0
FPUC	738	0.4
JEA	12,615	6.6
OUC	6,115	3.2
FEECA Total	191,475	85.7
Non-FEECA Utilities Total	31,990	14.3
Statewide Total	223,465	100.0

3.2 Conservation Achievements

As a whole, Florida’s utilities have been successful in meeting FEECA’s overall objectives. Pursuant to 366.82(5), F.S., all FEECA utilities are required to offer energy audits to residential customers. Energy audits serve as the basis for all DSM and conservation programs by allowing utilities the opportunity to evaluate conservation opportunities for their customers. To date, Florida’s investor-owned utilities have performed more than 300,000 residential energy audits and offer more than 70 conservation programs for residential and commercial customers.

Building codes and appliance efficiency standards impact utilities’ conservation programs by creating a baseline for the cost-effectiveness of any new program and decreasing the amount of incremental energy savings as code standards become more rigorous. As a result, appliance efficiency standards can reduce the need for utility DSM goals. Utility programs offer rebates and incentives for appliances that exceed minimum efficiency standards, thereby avoiding duplicate savings estimates. Staying current on building codes is highly important to the FEECA utilities’ DSM efforts. In an effort to do so, the FEECA utilities participate in meetings of the Florida Building Commission’s Energy Technical Advisory Committee, take part in activities with the Department of Community Affairs, host Continuing Education Classes

in regards to building codes, and conduct in-house assessments regarding how to offer more performance based programs such as Energy Star.

Specifically, in March 2009, FPL modified its BuildSmart program standards to reflect Code changes that specified a minimum 15 percent increase in building energy performance relative to the 2007 version of the code. Also in 2009, JEA expanded its incentive offerings beyond Energy Star to be performance-based using the Home Energy Rating (HERS) Index and by raising the incentive cap.

Since FEECA's enactment, utility-sponsored DSM programs are projected to reduced statewide summer peak demand by an estimated 6,107 MW and winter peak demand by 6,442 MW and reduced annual energy consumption by an estimated 7,647 GWh in 2009. The demand savings from these programs has deferred the need for over 30 typical 150 MW combustion turbine units, or enough capacity to serve approximately 1.6 million households.

**Table 5. Estimated Cumulative Savings
From Utility-Sponsored DSM Programs Since 1980**

	2009
Summer Peak Demand	6,107 MW
Winter Peak Demand	6,442 MW
Energy Consumption (Annual)	7,647 GWh

Table 6 shows the reported DSM demand and energy achievements of the 5 investor-owned utilities and 2 municipalities in 2008. The table compares the achievements to the utilities' DSM goals set by the Commission in 2004.

Table 6. Comparison of Cumulative DSM Achievements with Approved Goals in 2008

Utility	Winter MW Goals	Reported Winter MW Reduction	Summer MW Goals	Reported Summer MW Reduction	Annual GWh Goals	Reported Annual GWh Reduction
FPL						
Residential	127.30	136.10	194.60	238.70	333.30	351.00
Commercial/Industrial	43.20	176.70	92.60	280.60	67.80	402.90
PEF						
Residential	142.00	207.00	38.00	87.00	65.00	118.00
Commercial/Industrial	14.00	86.00	14.00	97.00	12.00	78.00
TECO						
Residential	15.40	17.60	10.70	13.90	28.10	34.80
Commercial/Industrial	11.90	52.20	15.30	58.30	24.20	44.60
Gulf						
Residential	28.90	8.28	23.60	6.74	12.30	5.91
Commercial/Industrial	11.00	11.99	23.10	23.69	8.90	22.31
FPUC						
Residential	0.14	0.310	0.08	0.130	0.18	0.359
Commercial/Industrial	0.10	0.094	0.16	0.101	0.42	0.336
JEA						
Residential	0.00	4.10	0.00	4.80	0.00	21.50
Commercial/Industrial	0.00	1.60	0.00	2.60	0.00	40.60
OUC						
Residential	0.00	0.105	0.00	0.345	0.00	1.608
Commercial/Industrial	0.00	0.724	0.00	0.724	0.00	2.128

Table 5 shows that FPL, PEF, TECO, JEA, and OUC met or surpassed all of the Commission-approved cumulative demand and energy goals in 2008. Although the Commission set goals for JEA and OUC at zero, both utilities have accomplished additional DSM achievements.

Gulf and FPUC both failed to achieve their 2008 goals for at least one customer class. Although Gulf met or exceeded its goals for commercial/industrial customers, it did not reach its residential demand goals. Gulf states that the eligible customer base for its GoodCents Select program has been reduced by advancements in heating and cooling equipment efficiency and communications technology. Shortages of equipment caused by the manufacturer also delayed new installations, causing Gulf to temporarily suspend promotion of the program until April 2009. The dramatic downturn in new home construction in Gulf's service territory has also

reduced participation in the GoodCents/Energy Star program. Although FPUC surpassed all of its 2008 residential DSM goals, the company did not meet its commercial/industrial goals. FPUC cited its inability to network with commercial builders and developers and inadequate conservation personnel as causes for its failure to achieve the commercial energy audit program's DSM goals. As discussed in Section 1, the Commission has recently established aggressive DSM goals for the FEECA utilities, and contrary to the former goals, the goals established in 2009 contain a provision that will allow the Public Service Commission (PSC) to assess penalties to utilities who do not achieve their goals. The Commission will continue to monitor the progress of all FEECA utilities' efforts to meet the newly approved goals and take appropriate action, if necessary.

While utility compliance with FEECA is important, consumer choice also plays an essential role in reducing the growth rates of electrical demand and energy in Florida. Smaller, more efficient homes; energy-efficient appliances, including air conditioning systems; energy-efficiency improvements to existing homes to reduce energy losses; and increased use of the most efficient and cost-effective demand-side renewable systems are areas where customers may actively be involved with electric energy conservation. As power plant sites and transmission corridors grow scarce in Florida, utility efforts to defer future generating units and transmission lines become increasingly important. Customer participation in utility-offered DSM and energy conservation programs and personal conservation decisions are vital to such efforts.

3.3 Conservation Cost Recovery

Investor-owned electric utilities are permitted to recover reasonable expenses, including incentives paid to participating customers, for Commission-approved DSM programs through the Energy Conservation Cost Recovery (ECCR) clause. Prior to seeking cost recovery through the ECCR clause, utilities are required to present evidence that new DSM programs are cost-effective and, therefore, benefit the general body of ratepayers. Program modifications must also be approved by the Commission prior to a utility seeking cost recovery through the ECCR clause.

Since 1981, Florida's investor-owned electric utilities have recovered nearly \$5 billion of conservation program expenditures through the ECCR clause, with over \$2.4 billion of that amount in the last 10 years. Depicted in Table 7, are annual DSM expenditures recovered from customers by Florida's investor-owned utilities through the ECCR clause over the last ten years. The table also shows that the investor-owned utilities' annual expenditures have remained fairly stable from 2003 to 2007, primarily due to DSM programs reaching saturation in participation levels and a decline in the cost-effectiveness of DSM programs resulting from the lower cost of

new generating units. However, expenditures in 2008 were approximately \$285 million following the implementation of several new programs approved by the Commission in 2006 and 2007.

**Table 7. DSM Expenditures Recovered Through the ECCR Clause
(\$ Dollars)**

	FPL	PEF	TECO	Gulf	FPUC	Total
1999	158,376,162	68,431,962	18,129,268	2,963,888	300,415	\$248,201,695
2000	158,312,902	66,052,277	16,656,250	3,872,004	323,102	\$245,216,535
2001	157,660,093	64,831,597	17,600,060	4,984,286	358,054	\$245,434,090
2002	162,062,655	63,150,036	16,970,240	5,436,083	418,498	\$248,037,512
2003	150,026,657	62,156,585	17,518,874	7,313,033	381,563	\$237,396,712
2004	145,679,192	60,072,362	16,357,137	7,619,637	382,504	\$230,110,832
2005	144,192,696	59,143,076	15,583,727	8,826,754	473,610	\$228,219,863
2006	146,205,249	59,543,107	14,099,638	9,562,098	456,162	\$229,866,254
2007	146,204,978	67,109,815	13,652,585	9,107,952	515,022	\$236,589,592
2008	180,016,994	77,593,960	16,989,411	9,257,740	534,350	\$284,392,455
Total						\$2,433,465,540

Each November, the Commission determines an energy conservation cost recovery factor to be applied to the energy portion of each customer's bill during the following calendar year. These factors are set based on each utility's estimated conservation costs for the next calendar year, along with a true-up for any actual conservation cost under- or over-recovery for the previous year. The Commission most recently set conservation cost recovery factors for each rate class on December 1, 2009. These factors will take effect with the first billing cycle of 2010. Table 8, on the following page, displays the conservation cost recovery factors which will be applied to residential customer bills. These factors were applied to a bill based on 1,200 kilowatt-hour (kWh) energy usage to estimate the impact on a typical residential customer's monthly bill.

Table 8. Residential Conservation Cost Recovery Factors in 2010

Utility	Residential Conservation Cost Recovery Factor (cents per kWh)	Typical Residential Monthly Bill Impact (based on 1,200 kWh)
FPL	0.188	\$2.26
PEF	0.270	\$3.24
TECO	0.254	\$3.05
Gulf	0.108	\$1.30
FPUC	0.080	\$0.96

3.4 Conservation Activities of Natural Gas Utilities

With the challenges of high fuel costs, local gas distribution companies (LDCs) are charged with developing and offering new and more efficient conservation programs. Any DSM program offered by Florida's investor-owned gas utilities must pass two economic tests to ensure the program benefits the participating customers and the company's entire customer base.

Under the Commission's Energy Conservation Cost Recovery (ECCR) clause, investor-owned utilities petition the Commission for approval to implement natural gas conservation programs. Each of Florida's LDCs offers conservation programs and is authorized to participate in the ECCR. Cost-effective programs that are approved often give rebates to customers to help defray the cost of appliances, which, over time, save the customer money. Investments in energy efficiency typically reduce future bills and translate into savings for the average residential natural gas customer. Table 9 summarizes the conservation expenditures of Florida's natural gas utilities in 2008.

Table 9. Natural Gas Conservation Cost Recovery in 2008

Utility	Number of Customers	Expenditures
Chesapeake Utilities	14,520	\$714,243
City Gas Company	103,565	\$2,678,650
Florida Public Utilities	51,957	\$1,962,670
Peoples Gas System	335,126	\$5,735,876
St. Joe Natural Gas	3,057	\$116,970
Indiantown Gas Company	680	\$15,806
Sebring (Transportation Only)	477	\$6,816
Total:	509,382	\$11,231,031

Section 4. Florida Energy Conservation Standards Act

Section 553.954, F.S., directs the Department of Community Affairs (DCA) to adopt, modify, revise, update, and maintain the Florida Energy Conservation Standards. Section 553.963, F.S., lists the appliances whose energy-efficiency standards are monitored by the DCA. Those appliances include refrigerators, refrigerator-freezers, lighting equipment, and showerheads.

Pursuant to Section 553.975, F.S., the Commission must report the effectiveness of energy conservation standards in the state. Appliance efficiency standards are mandatory efficiency improvements that will reduce the need for utility DSM goals. Utility programs offer rebates and incentives for appliances that exceed minimum efficiency standards, thereby avoiding duplicate savings estimates.

Appendix 1. Educating Florida's Consumers On Conservation

The PSC's consumer education program employs a variety of tools to share conservation information with consumers, such as public events, brochure distribution, and educational articles. The Commission also continues to seek existing community events and develop new events where educational materials may be distributed and discussed with citizens. Highlights from the PSC's 2009 conservation education activities include National Consumer Protection Week, the Library Outreach Program, Earth Day and development of the *Get Wise and Conserve Florida* student resource guide.

National Consumer Protection Week and Other Public Events

National Consumer Protection Week (March 1-7, 2009). National Consumer Protection Week played a significant role in the PSC's 2009 conservation education efforts. The Commission partnered with **WORKFORCE plus** to help Florida's unemployed residents save money on their telephone and utility bills. Chairman Matthew M. Carter II began the week's activities with a presentation to consumers at the **WORKFORCE plus** office in Tallahassee. Additional events were held in Jacksonville, Tampa, and Madison. In keeping with the 2009 national theme, *Nuts and Bolts: Tools for Today's Economy*, presentations included information about reducing utility expenses through conservation, and consumers were provided with educational brochures featuring tips on energy and water conservation.

Community Events. The PSC participates in consumer programs and distributes conservation-related materials through partnerships with governmental entities, consumer groups, and many other organizations. Examples of events where conservation information was shared during 2009 include Ambassadors for Aging Day, Gadsden County Come Together Day, West Florida Community Day, Lincoln Neighborhood Center Senior Day, National Employ Older Workers Week, and National Lifeline Awareness Week. The PSC also provided a variety of conservation brochures to be distributed by Lake County during Public Assistance Day and the Ninth Annual Central Florida Kidfest and Family Expo.

Hearings and Customer Meetings. As an ongoing outreach initiative, the Commission supplies conservation brochures to consumers at hearings and customer meetings across the state. These public meetings give staff an opportunity to distribute information and address consumer questions. Consumers who file a complaint with the Commission about high electric or natural gas bills also receive conservation information.

Library Outreach and Youth Education Programs

Library Outreach Program. The Commission's Library Outreach Program is an effective consumer education program with a statewide impact. Each year the PSC provides educational brochures to be distributed by Florida's 280 public libraries and branches. Special emphasis is placed on publications that feature practical energy and water conservation tips. Results from annual surveys to library administrators indicate their continuing support for the program and their willingness to partner with the Commission on future outreach projects. Some libraries also request additional materials throughout the year to maintain brochure supplies for library patrons.

Youth Education. The PSC has placed increased emphasis on educating Florida's young consumers as an effective way to expand conservation education. In 2009, the PSC participated in the Earth Day celebration at the Florida Capitol that focused on *Green Schools*. Chairman Carter attended the event to introduce the Tallahassee Young Actors Theatre premier of *Somewhere That's Green*, and PSC staff provided students and their teachers with energy and water conservation tips they can use on campus and at home. The PSC also provided several presentations about energy and water conservation to more than 100 school children at the W. R. Tolar Summer Camp in Bristol.

During 2009, the PSC developed and published the new *Get Wise and Conserve* booklet to educate children about energy and water conservation, as well as provide some telecommunications facts. The student resource book features the colorful characters Electra, Deputy Drip, and Tammy Talkalot who help children learn the importance of conservation. These three young utility experts take the children on a learning journey that includes energy riddles, fun facts, word games, and art projects. The booklet has been distributed to some public libraries and was used at the W. R. Tolar Summer Camp.

In recent years, the PSC developed and helped produce two conservation plays: *Turn It On, Turn It Off* and *Water Wiser*. The plays were designed to be performed by teen drama groups or young school children for their classmates, thereby increasing the students' interest in learning about conservation. The PSC continues to work with school programs that are interested in producing these plays. Both plays are included in the *Arts in Education Directory*, produced by the Tallahassee-Leon County Council on Culture and Arts, that serves as a resource guide for teachers seeking information about educational programs available in the area.

Educational Brochures and Articles

The PSC's conservation brochures are available to consumers through the PSC's Web site at <http://www.floridapsc.com/publications/>. The brochures may be viewed and printed directly from the Web site, ordered via an online order system, or requested by mail or phone. The Commission's conservation brochures are periodically supplemented with additional information on current energy and water conservation topics through the Consumer E-Newsletter and Consumer Tips. Recent topics include the Florida Renewable Energy Portfolio, the Low-Income Home Energy Assistance Program (LIHEAP), *Have a Green Holiday with LED Lights*, and *Save Money with a Clean Air Filter* which is the first consumer tip to include a video demonstration. All Consumer E-Newsletters and Consumer Tips posted since 2005 are available on the PSC's Web site at: <http://www.floridapsc.com/consumers/newsletter/index.aspx> and <http://www.floridapsc.com/consumers/tips/>.

The PSC's Web site also features an interactive Energy Conservation House that gives informative "point and click" conservation tips for the home, helping consumers discover ways to reduce their monthly utility bills. The Energy Conservation House may be viewed at: <http://www.floridapsc.com/consumers/house/>.

Conservation information is also available to consumers through other governmental and utility Web sites. Appendix 3 to this report supplies a list of related Web sites belonging to state and federal entities, investor-owned electric utilities, and local gas distribution companies to assist consumers in researching additional conservation opportunities. The links to these utilities may also be located on the PSC Website as well.

Appendix 2. Conservation Activities of FEECA Utilities

A. Florida Power & Light Company

Residential Programs

Residential Building Envelope. This program encourages qualified customers to install energy-efficient building envelope measures that cost-effectively reduce FPL's coincident peak air-conditioning load and customer energy consumption.

Duct System Testing and Repair Program. This program identifies air conditioning duct system leaks and has qualified contractors repair those leaks.

Residential Air Conditioning Program. This program provides financial incentives for residential customers to purchase a more efficient unit when replacing an existing air conditioning system.

Residential Load Management Program (On Call Program). This program offers voluntary load control to residential customers.

Residential New Construction Program (BuildSmart). The program's objective is to encourage the design and construction of energy-efficient homes that cost-effectively reduce FPL's coincident peak load and customer energy consumption.

Residential Low Income Weatherization Program. This program employs a combination of energy audits and incentives to encourage low-income housing administrators to perform tune-ups of Heating and Ventilation Air Conditioning (HVAC) systems and install reduced air infiltration energy efficiency measures.

Commercial/Industrial Programs

Business Heating, Ventilating, and Air Conditioning Program. This program reduces the current and future growth of coincident peak demand and energy consumption of business customers by increasing the use of high efficiency heating, ventilating, and air conditioning (HVAC) systems.

Business Efficient Lighting. This program encourages the installation of energy efficient lighting measures in business facilities.

Business Customer Incentive. This program assists FPL's business customers achieve electric demand and energy savings that are cost-efficient to all FPL customers. FPL provides incentives to qualifying customers who purchase, install, and successfully operate cost-effective energy efficiency measures not covered by other FPL programs.

Business Building Envelope Program. This program encourages eligible business customers to increase the efficiency of the qualifying portion of their building's envelope to reduce HVAC energy consumption and demand.

Business On Call Program. This program offers voluntary load control of central air conditioning to General Service and General Service Demand customers.

Commercial Demand Reduction. This program reduces coincident peak demand by controlling customer loads of 200 kW or greater during periods of extreme demand or capacity shortages.

Business Energy Evaluation. This program provides evaluations of business customers' existing and proposed facilities and encourages energy efficiency by identifying DSM opportunities and providing recommendations to the customer.

Commercial/Industrial Load Control. This program reduces coincident peak demand by controlling customer loads of 200 kW or greater during periods of extreme demand or capacity shortages.

Cogeneration and Small Power Production. This program facilitates the installation of cogeneration and small power production facilities.

Business Water Heating. This program encourages business customers to install qualifying Heat Recovery Units (HRU) or Heat Pump Water Heater (HPWR) equipment.

Business Refrigeration Program. This program encourages eligible business customers to install energy-saving equipment to reduce or eliminate the use of electric heating elements needed to prevent condensation on display case doors and to defrost freezer doors.

Research and Development and Pilot Program

Conservation Research and Development Program. This program evaluates emerging conservation technologies to determine which are worthy of further evaluation as candidates for program development.

Residential Thermostat Load Control Pilot Project. This project provides participating residential customers a programmable thermostat and the option of overriding FPL's control of their central air conditioning and heating appliances via telephone or the Internet.

B. Progress Energy Florida

Residential Programs

Home Energy Check. This program provides Progress Energy Florida Inc.'s (PEF) residential customers with an analysis of energy consumption and recommendations on energy efficiency improvements. Acting as a motivational tool to identify, evaluate, and inform consumers on cost effective energy saving measures, the Home Energy Check is the foundation of the residential Home Energy Improvement program and is a program requirement for participation. Seven types of energy audits are available: the free walk-through, the paid walk-through (\$15 charge), the energy rating (Energy Gauge), the mail-in audit, an Internet option, a phone-assisted audit, and a student audit.

Home Energy Improvement. This efficiency program provides existing residential customers incentives for energy efficient heating, air conditioning, insulation upgrades, duct leakage repair, reflective roofing products, high performance windows, window film, and solar screens.

Low-Income Weatherization Assistance Program. This program's goal is to integrate PEF's DSM program measures with the Department of Community Affairs (DCA) and local weatherization providers to deliver energy efficiency measures to low-income families. Through this partnership, Progress Energy assists local weatherization agencies by providing energy education materials and financial incentives to weatherize the homes of low-income families.

Energy Management (Residential and Commercial). This load management program incorporates direct radio control of selected customer equipment to reduce system demand during peak capacity periods and/or emergency conditions by temporarily interrupting selected consumer appliances for special periods of time. Customers have a choice of options and receive

a credit on their monthly electric bills depending on the options selected and their monthly kWh usage.

Neighborhood Energy Saver. This program assists low-income families with escalating energy costs by implementing a comprehensive package of electric conservation measures at no cost to eligible customers. In addition to installing these measures, Progress seeks to achieve three important goals: educate participating families on proper energy efficiency techniques and best practices, change their energy-use behavior, and manage their energy usage.

Renewable Energy Program. This program consists of two areas that are designed to encourage the installation of renewable energy systems:

(1) Solar Water Heater with EnergyWise. This measure encourages residential customers to install a solar thermal water heating system. The customer must have whole house electric cooling, electric water heating and electric heating to be eligible for this program.

(2) Solar Photovoltaics with EnergyWise. This measure promotes environmental stewardship and renewable energy education through the installation of solar energy systems at schools within PEF's service territory. Customers participating in the Winter-Only EnergyWise or Year-Round EnergyWise Program can elect to donate their monthly credit toward the Solar Photovoltaics with EnergyWise Fund.

All proceeds collected from participating customers and their associated monthly credits, are used to promote photovoltaics and renewable energy educational opportunities.

Commercial/Industrial Programs

Business Energy Check. This free audit for non-residential customers can be completed at the facility by an auditor or online by the business customer. A paid audit provides a more thorough energy analysis for non-residential facilities. The program acts as a motivational tool to identify, evaluate, and inform consumers on cost-effective energy saving measures for their facilities. The Business Energy Check is the foundation of the Better Business Program and a requirement for participation.

Better Business. This efficiency program provides incentives to existing commercial and industrial customers for heating, air conditioning, motors, water heaters, roof installation upgrade, direct leakage and repair, window film, cool roof, and lighting.

Commercial/Industrial New Construction. This efficiency program provides incentives for the design and construction of energy efficient commercial and industrial facilities, including energy efficient heating, air conditioning, motors, water heating, window film, insulation, leak free ducts, cool roof, and lighting.

Innovation Incentive. The program encourages conservation efforts that are not supported by Progress Energy's other programs. Major equipment replacement or other actions that substantially reduce PEF peak demand requirements are evaluated to determine their impact on Progress Energy's system. If cost-effective, these actions may qualify for an economic incentive in order to shorten the payback time of the project.

Standby Generation. This program provides an incentive for customers to voluntarily operate their on-site generation during times of system peak.

Interruptible Service Program. This program is a rate tariff which allows PEF to switch off electrical service to customers during times of capacity shortages. The signal to operate the automatic switch is operated by the Energy Control Center. In return for this interruption, the customers receive a monthly rebate on their kW demand charge.

Curtable Service Program. This program is a dispatchable DSM program in which customers contract to curtail or shut down a portion of their load during times of capacity shortages. The curtailment is done voluntarily by the customer when notified by PEF. In return for this cooperation, the customer receives a monthly rebate for the curtable portion of their load.

Technology Development Program. This program allows PEF to undertake certain development and demonstration projects which have promise to become cost-effective conservation and energy efficiency programs.

C. Gulf Power Company

Residential Programs

GoodCents Select Program. This program provides the customer with a means of conveniently and automatically controlling and monitoring his/her energy purchases in response to prices that vary during the day and by season in relation to Gulf's cost of producing or purchasing energy.

Residential Geothermal Heat Pump Program. The program's purpose is to reduce the demand and energy requirements of new and existing residential customers through the promotion and installation of geothermal systems.

Residential Energy Survey Program. This program offers energy conservation advice to individuals and contractors building new homes. In addition the program advises existing residential customers to implement efficiency measures resulting in energy savings. Owners of existing homes may choose to have a Gulf Power representative conduct an on-site survey of their home, or they may opt to participate in either a mail-in or online interactive version of the survey, the Energy Check Up. Qualifying new home owners and contractors may request a survey of their final construction plans. Regardless of the option chosen, these surveys provide customers with specific whole-house energy recommendations.

Commercial Programs

GoodCents Commercial Buildings Program. This program educates commercial and industrial customers on the most cost-effective methods of designing new and improving existing buildings. The program stresses efficient heating and cooling equipment, improved thermal envelope, operation and maintenance, lighting, cooking, and water heating. Field representatives work with architects, engineers, consultants, contractors, equipment suppliers, building owners, and occupants to encourage them to make the most efficient use of all energy sources and available technologies.

Commercial Geothermal Heat Pump Program. The program's objective is to reduce the demand and energy requirements of new and existing commercial/industrial customers through the promotion and installation of advanced and emerging geothermal systems.

Commercial/Industrial Energy Analysis. This program provides advice to Gulf Power's existing commercial and industrial customers on how to reduce and make the most efficient use of energy. The program includes semi-annual and annual follow-ups with the customer to verify conservation measures installed and to reinforce the need to continue with more conservation efforts. Customers may participate by requesting a basic Energy Analysis Audit through either an on-site survey or a direct mail survey. A more comprehensive analysis can be provided through a Technical Assistance Audit.

Energy Services Program. This program establishes the capability and process to offer advanced energy services and energy efficient end-use equipment customized to meet the individual needs

of large customers. Potential projects are evaluated on a case-by-case basis and must be cost-effective to qualify for incentives or rebates. Types of projects covered under this program include demand reduction or efficiency improvement retrofits, such as lighting (fluorescent and incandescent), motor replacements, HVAC retrofit (including geothermal applications), and new electro-technologies.

Research and Development Program

Conservation Demonstration and Development. This package of conservation programs explores and pursues research, development, and demonstration projects to promote energy efficiency and conservation. The program serves as an umbrella program for the identification, development, demonstration, and evaluation of new or emerging end-use technologies.

Renewable Energy. This program encompasses a variety of voluntary renewable and green energy programs under development by Gulf Power. The voluntary pricing options for customers include, but are not limited to, EarthCents Solar (Photovoltaic Rate Rider) and the Solar for Schools program. In addition, the renewable energy program includes expenses necessary to prepare and implement a green energy pilot program using landfill gas, wind, solar, or other renewable energy sources.

D. Tampa Electric Company (TECO)

Residential Programs

Residential Energy Audits. On-site audits of premises, online audits, and telephone surveys instruct customers how to use conservation measures and practices to reduce their energy usage.

Duct Repair. This program reduces weather-sensitive peaks by offering incentives to encourage the repair of the air distribution system in a residence.

Heating and Cooling Program. This program reduces weather-sensitive peaks of residential customers by providing incentives for the installation of high efficiency heating and air conditioning equipment at existing residences.

Residential Building Envelope Improvement. This program reduces demand and saves energy by decreasing the load on residential air conditioning and heating (HVAC) equipment. Eligible

customers can receive incentives to add ceiling installation, exterior walls, window replacements and window film.

Prime Time Program. This load management program directly controls the larger loads in residential customers' homes such as air conditioning, water heating, electric space heating, and pool pumps. Participating customers receive monthly credits on their electric bills. The program is currently closed to new participants.

Renewable Energy Initiative. This program assists in the delivery of renewable energy for TECO's Renewable Energy Program by providing funding for program administration, evaluation, and market research.

Price Responsive Load Management. This program reduces weather sensitive peak loads by offering a multi-tiered rate structure as an incentive for participating customers to reduce their electric demand during high cost or critical periods of generation.

Residential Low-Income Weatherization. This program saves demand and energy by decreasing the energy consumption at a residence. The program is aimed at low-income customers and provides, at no cost to qualified customers, the following: eight compact fluorescent lamps, one water heater wrap, three low-flow faucet aerators, two showerheads, a window (HVAC) weatherstripping kit, wall plate thermometers, HVAC filters, weatherstripping, caulking, and ceiling insulation (up to R-19).

Educational Energy Awareness – Pilot. This program saves demand and energy by increasing customer awareness of available conservation measures and practices that can reduce the individual's energy use. TECO partners with schools within its service area at the eighth grade level to teach students the benefits of energy efficiency.

Energy Plus Homes. This program encourages the new home construction to be above the minimum energy efficiency levels required by the State of Florida Energy Efficiency Code for New Construction through the installation of high efficiency equipment and building envelope options.

Commercial Programs

Cogeneration. This program encourages the development of cost-effective commercial and industrial cogeneration facilities through the evaluation and administration of standard offers and the negotiation of contracts for the purchase of firm capacity and energy.

Commercial Cooling. The purpose of this program is to encourage the installation of high efficiency direct expansion (DX) commercial air conditioning equipment.

Commercial Lighting. This program reduces weather-sensitive peaks by encouraging investment in more efficient lighting technology in commercial facilities.

Commercial Load Management. This load management program's purpose is to achieve weather-sensitive demand reductions through load control of equipment at the facilities of firm commercial customers.

Standby Generator. This program uses the emergency generation capacity at firm commercial and industrial facilities to reduce weather-sensitive peak demand.

Conservation Value. This incentive program for firm commercial and industrial customers encourages additional investments in substantial demand shifting or demand reduction measures.

Industrial Load Management. This program is for large industrial customers with interruptible loads of 500 kW or greater.

Commercial Duct Repair. This program reduces weather-sensitive peaks by offering incentives to encourage the repair of the air distribution system in a facility.

Commercial Building Envelope Improvement. This program saves demand and energy by decreasing the load on air conditioning and heating (HVAC) equipment. Eligible customers can receive incentives to add ceiling insulation, exterior wall insulation, and window film.

Commercial Efficient Motors. This program encourages commercial/industrial customers to install premium-efficiency motors in new or existing facilities through incentives. The program aims to reduce the growth of peak demand and energy by encouraging customers to replace worn out, inefficient equipment with high efficiency equipment that exceeds minimum product manufacturing standards.

Research and Development

This five-year Research and Development program is directed at end-use technologies (both residential and commercial) not yet commercially available, where insufficient data exists for measure evaluations specific to Central Florida climate.

E. Florida Public Utilities Company

Residential Programs

Geothermal Heat Pump Program. This program reduces the demand and energy requirements of new and existing residential customers through the promotion and installation of advanced and emerging geothermal systems.

Residential Heating and Cooling Efficiency Upgrade. The purpose of this program is to reduce the rate of growth in peak demand and energy throughout the company's service territories by increasing the number of high-efficiency heat pumps.

GoodCents Home/Energy Star Program. This program provides guidance concerning energy efficiency in new construction by promoting energy efficient home construction techniques and by evaluating the energy efficient components of design and construction.

GoodCents Energy Survey Program. The program promotes the installation of cost-effective conservation measures by giving the customer specific whole-house recommendations regarding energy efficiency. The survey process also checks for possible duct leakage.

Residential Ceiling Insulation Upgrade Program. This program reduces peak demand and energy consumption by decreasing the load presented by the residential air-conditioning and heating equipment. Customers are required to add at least R-11 of ceiling insulation to qualify for a \$100 incentive in the form of an Insulation Certificate that may be applied to the total cost of installing the added ceiling insulation.

Commercial Programs

GoodCents Commercial Building Program. This program addresses the most common critical areas in commercial buildings affecting summer peak kW demand: thermal efficiency of the building and HVAC equipment efficiency. In addition, the program is designed to ensure that buildings are constructed with energy efficiency levels above the Florida Model Energy code standards.

GoodCents Commercial Technical Assistance Audit. This program is an interactive program that assists commercial customers in identifying advanced energy conservation opportunities. Customers receive an on-site review of the facility operation, equipment, and energy usage pattern by a Florida Public Utilities Company Conservation Specialist. In addition, a technical evaluation is performed to determine the economic payback or life cycle cost for various improvements to the facility.

Commercial Indoor Efficient Lighting Rebate Program. This program reduces peak demand and energy consumption by decreasing the load presented by commercial lighting equipment. The program requires that commercial customers achieve at least 1,000 watts of lighting reduction from any lighting source that has been retrofitted with a more efficient fluorescent lighting system (ballasts and lamps). By doing so, customers qualify for an incentive of 10 cents per watt reduced.

Educational and Research Programs

Low Income. This program provides low-income customers with basic energy education and informs the customers of specific services offered by the utility.

Affordable Housing Builders and Providers. This program encourages affordable housing builders to attend educational seminars and workshops related to energy efficient construction, retrofit programs, financing programs, and the GoodCents Home program. The company works with the Florida Energy Extension Service and other seminar sponsors to offer a minimum of two seminars and/or workshops per year.

Conservation Demonstration and Development (CDD). The program pursues research, development, and demonstration projects that are designed to promote energy efficiency and conservation.

F. Orlando Utilities Commission

Residential Programs

Residential Energy Survey Program. This program provides residential customers with recommended energy efficiency measures and practices. The program consists of three measures: the Residential Energy Walk-Through Survey, the Residential Energy Survey Video and DVD, and an interactive Online Home Energy Audit.

Residential Energy Efficiency Rebate Program. The purpose of this program is to reward customers who have invested in energy-efficient heat pumps, weather stripping, insulation, duct repairs, or other energy-savings measures for their single family homes.

Residential Home Energy Fix-Up Program. This program is offered to residential customers with a total annual family income of \$35,000 or less. OUC pays 85 percent of the cost of specified home weatherization measures recommended in the Residential Energy Survey requested by the customer.

Residential Financed Insulation Program. Orlando Utilities offers this program to customers who use some type of electric heat and/or air conditioning. In order to qualify, customers must request a free Residential Energy Survey and have a satisfactory credit rating with Orlando Utilities. The program allows customers who insulate their attics to a minimum R-19 level to pay for the insulation on their monthly bills for up to two years interest free with no money down. Also, customers receive a \$100 rebate deducted from the financed amount.

Residential Efficient Electric Heat Pump Program. The purpose of this program is to provide rebates to qualifying customers who install heat pumps having a seasonal energy efficiency ratio (SEER) of 14.0 or higher. Customers will be qualified to obtain a rebate in the form of a credit on their bill of \$100, \$200, or \$300, if they install heat pumps with a SEER rating of 14, 15, or 16 respectively.

Residential Gold Ring Home Program. This program is closely aligned with Energy Star ratings. Orlando Utilities partnered with local home builders to construct new homes according to federal Energy Star standards. Some features include high efficiency heat pumps, heat recovery water heaters, R-30 attic insulation, interior air ducts, double pane windows, and window shading. Contractors are required to qualify its homes to Energy Star standards by having the homes rated by a certified rater. In return for each Energy Star home certification, the builder receives a

rebate of \$200 for single-family homes and \$100 for townhomes. In addition, OUC will help support the builder's efforts through further advertising and other promotional strategies.

Residential Energy Conservation Rate. This program makes Orlando Utilities' customers more energy-conscientious by encouraging conservation. Orlando Utilities modified its residential rate structure to a two-tiered block structure to encourage energy conservation. Customers using more than 1,000 kWh per month pay a higher rate for the additional energy usage.

Commercial Programs

Commercial Energy Survey Program. The purpose of this program is to focus on increasing energy efficiency and energy conservation in commercial buildings. A free survey comprised of a physical walk-through inspection of the commercial facility performed by experienced energy experts is included.

Commercial Indoor Lighting Retrofit Program. The program reduces energy consumption for the commercial customer through the replacement of older fluorescent and incandescent lighting with newer, more efficient lighting technologies.

Commercial OUConsumption Online Program. This program enables businesses to check their energy use and demand from a desktop computer, allowing business owners to manage their energy load. Participants must cover a one-time program set-up fee of \$45, a \$45 monthly fee per meter for the service, and the cost of additional infrastructure (ranging between \$0 and \$500) at the meters, which may be required.

Commercial OUConvenient Lighting Program. This program provides complete outdoor lighting services for commercial applications, including industrial parks, sports complexes, and residential developments. Each lighting package is customized for each participant, allowing the participant to choose among light fixtures. Upfront financial costs and maintenance are controlled by Orlando Utilities. The participant then pays a low monthly fee for each fixture. Orlando Utilities also retrofits existing fixtures to new light sources or higher output units. New agreements have allowed this program to expand into neighboring communities like Clermont, Oviedo, and Brevard County.

Commercial Power Quality Analysis Program. This program gives Orlando Utilities the ability to ensure the highest possible power quality to commercial customers. The program's goals include making the maximum effort to solve power quality problems through monitoring and

interpretive analysis, identifying solutions that will lead to corrective action, and providing ongoing follow-up services to monitor results.

Commercial Infrared Inspections Program. The purpose of this program is to help customers uncover potential reliability and power quality problems. The infrared inspection detects thermal energy and measures the temperature of wires, breakers, and other electrical equipment components. The information is transferred into actual images and those images reveal potential problem areas and hot spots that are invisible to the naked eye.

OUCooling. Funded originally in 1997, this program allows Orlando Utilities to fund, install and maintain a central chiller plant for each business district participating under the program. Benefits to the businesses are lower energy consumption, increased reliability, no environmental risks associated with the handling of chemicals, avoided initial capital cost, lower maintenance costs, a smaller mechanical room, no insurance requirements, improved property resale value, and availability of maintenance personnel for other duties.

G. JEA

Residential Programs

The Solar Incentive. In this Green/Clean Power Program, cash incentives are paid for customers to install solar photovoltaic and solar thermal systems at a residence or business. Incentives are paid directly to the contractors who must net the incentive against the charge to the customer. The amount of the incentive varies with the project type and location, as well as other factors; the incentive amounts to as much as 30 percent of system cost for a photovoltaic system or \$25 per square foot for solar water collectors. A maximum of \$25,000 is paid for each project.

Residential Net Metering. This program is offered to encourage the use of customer-sited solar photovoltaic electric generating systems. JEA requires that the system be installed according to JEA engineering standards, and then JEA will install a meter which turns backward when a customer's system is producing more energy than the customer is using. The amount of electricity billed is reduced by the amount of electricity exported to the JEA system.

District Chilled Water Service. Where available, this service uses a centralized chiller plant circulating cold water via an underground network to meet the air conditioning needs of multiple buildings. For participating buildings, the savings come by eliminating redundant installations of on-site chillers and their associated operating costs.

Performance Contracting. This program offers a guarantee to a building owner that capital improvements will result in sufficient energy and operational savings to cover the project cost. The program evaluates a project and then provides turnkey installation, followed by measurement and verification of savings to support self-funding of the project. The costs of improvements are recovered through the savings.

Lighting Solutions. This plan offers lighting energy audits and associated energy use analyses. The consumer has access to opportunities for financing projects and installing equipment to reduce energy costs, increase energy efficiency, and enhance energy management.

Low-Income Residential Audits One. Performed by the Jacksonville Housing Partnership under contract with JEA, this program provides for the installation of a conservation measure consistent with a priority list established by JEA. The number of installations is capped at 150 per year, consistent with the Housing Partnership mission focus on major repairs for the residential customer served.

Low-Income Residential Audits Two. This program uses JEA personnel for energy and conservation audits in participating dwellings supervised by the local public housing authority. The audit emphasizes the lifestyle choices available to the individual consumer and the direct impact of those choices on the amount of energy used. As part of this program, JEA personnel may give educational presentations to large audiences.

Free Energy Audits. These audits, offered to residential and commercial customers, may be in person, online, or by video. JEA maintains the ENERGYsmart Library, which provides information on energy usage and technologies. The library covers a wide range of topics associated with energy consumption, including food storage, water heating technologies, temperature selection, three phase motors, light industrial equipment, the Energy Star label, and weatherization.

Appendix 3. Related Web Sites

State Agencies and Organizations

Florida Public Service Commission, <http://www.floridapsc.com/>

Florida Department of Environmental Protection, <http://www.dep.state.fl.us>

*Florida Energy and Climate Commission,
http://myfloridaclimate.com/climate_quick_links/florida_energy_climate_commission*

Florida Solar Energy Center, <http://www.fsec.ucf.edu/>

*Florida Weatherization Assistance,
<http://www.floridacommunitydevelopment.org/wap/index.cfm>*

*Florida's Local Weatherization Agencies List,
<http://www.floridacommunitydevelopment.org/CommunityAssistanceContactList.pdf>*

U.S. Agencies and National Organizations

National Energy Foundation, <http://www.nefl.org/>

U.S. Energy Star Program, <http://www.energystar.gov/>

*U.S. Department of Energy – Energy Efficiency and Renewable Energy Information,
<http://www.eere.energy.gov/>*

*U.S. Department of Energy – Consumer Energy Efficiency Tips,
http://www.eere.energy.gov/consumer/your_home/*

*U.S. Department of Energy – Consumer Energy Saving Information,
<http://www.energysavers.gov/>*

Florida's Electric Utilities Subject to FEECA

Florida Power & Light Company, <http://www.fpl.com/>

Florida Public Utilities Company, <http://www.fpuc.com/>

Tampa Electric Company, <http://www.tampaelectric.com/>

Gulf Power Company, <http://www.gulfpower.com/>

Progress Energy Florida, Inc., <http://www.progress-energy.com/>

Orlando Utilities Commission, <http://www.ouc.com/>

JEA, <http://www.jea.com/>

Florida's Investor-Owned Natural Gas Utilities

Chesapeake Utilities Corporation, <http://www.cfgas.com/>

Florida City Gas, <http://www.floridacitygas.com/>

Florida Public Utilities Company, <http://www.fpuc.com/>

Peoples Gas System, <http://www.peoplesgas.com/>

St. Joe Natural Gas Company, <http://www.stjoenaturalgas.com/>