

FEBRUARY 2008

FLORIDA
PUBLIC SERVICE
COMMISSION



ANNUAL REPORT ON

Activities
Pursuant
to the
Florida
Energy
Efficiency and
Conservation
Act

As Required by
Sections 366.82(4),
377.703(3)(F) and
553.975, Florida Statutes

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Prepared by
Florida Public Service Commission
Division of Economic Regulation

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Introduction

This report describes the Commission's conservation activities implementing the Florida Energy Efficiency and Conservation Act (FEECA) and fulfills the requirements of Sections 366.82(4), 377.703(3)(f), and 553.975, Florida Statutes. Sections 366.80 through 366.85 and Section 403.519, Florida Statutes, are known as the Florida Energy Efficiency and Conservation Act which was 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 Florida Public Service Commission (Commission) has adopted rules requiring those electric utilities which are subject to FEECA to implement cost-effective demand-side management (DSM) programs.

Section 366.82(4), Florida Statutes, directs the Commission to provide an annual report to the Legislature and the Governor with the DSM goals it has adopted under FEECA and the progress toward meeting these goals.

Section 377.703(3)(f), Florida Statutes, directs the Commission to provide an annual report to the Department of Environmental Protection on "electricity and natural gas and information on energy conservation programs."

Section 553.975, Florida Statutes, requires the Commission to prepare a biennial report on the savings derived from the efficiency standards for lighting equipment, showerheads, and refrigerators enumerated in Section 553.963, Florida Statutes, the Energy Conservation Standards Act.

Executive Summary

Florida's utilities have been successful in meeting the overall objectives of the Florida Energy Efficiency and Conservation Act (FEECA). FEECA places emphasis on reducing the growth rates of weather-sensitive peak electric demand, reducing and controlling the growth rates of electricity consumption, and reducing the consumption of scarce fossil fuels. The Florida Public Service Commission (Commission) sets numeric electric peak demand and energy savings goals for the seven electric utilities subject to FEECA,¹ and closely monitors the utilities' conservation achievements. The Commission encourages utilities to pursue conservation and demand-side management programs that are beneficial to all utility customers.

Since the enactment of FEECA, utility-sponsored demand-side management (DSM) programs have reduced statewide summer peak demand by an estimated 5,685 megawatts (MW) and winter peak demand by 6,100 MW. Annual energy savings from utility-sponsored DSM programs were estimated to be 6,977 gigawatt-hours (GWh)² in 2007. 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. By 2016, DSM programs are forecasted to further reduce aggregate peak demand and energy consumption, as summarized below.

Estimated Cumulative Savings from Utility-Sponsored DSM Programs Since 1980

	2007	By 2016
Summer Peak Demand	5,685 MW	7,422 MW
Winter Peak Demand	6,100 MW	7,570 MW
Energy Consumption (Annual)	6,977 GWh	9,051 GWh

The Commission has emphasized the need for diversity to meet the energy needs of Florida's growing population. Conservation and energy efficiency act to mitigate the growth of energy consumption thereby contributing to energy diversity and reducing ratepayer exposure to high electric rates. Florida's utilities must continue to: (1) offer cost-effective conservation programs to customers, (2) install the most fuel-efficient generation, and (3) increase the use of

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.

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

renewable fuels. The Commission encourages Florida's utilities and consumers to view energy conservation as an essential starting point for achieving energy security because conservation eliminates the use of fuel and defers the need for additional generating capacity. Florida's electric utilities must demonstrate that all cost-effective conservation opportunities have been exhausted in order to obtain a determination of need from the Commission for major new electric generating capacity.

Residential energy audits provide the first step for utilities and customers to assess conservation opportunities for Florida's individual homeowners. Florida's investor-owned utilities offer a menu of conservation programs for residential and commercial customers. In order to obtain cost recovery, Florida's investor-owned utilities must show that each program is cost-effective not only to the participating customer, but to the general body of ratepayers as well. In special circumstances, the Commission may approve programs that have a minimal effect on rates, but offer a large potential for energy savings. In 2006, Florida's investor-owned electric utilities recovered approximately \$230 million in conservation program expenditures from ratepayers, while investor-owned natural gas utilities recovered approximately \$14.2 million in conservation program expenditures.

Conservation Activities

On November 29, 2007, the Commission sponsored a workshop on energy efficiency initiatives. The workshop explored how the Commission can encourage additional energy efficiency and conservation. A wide range of stakeholders discussed the Commission's implementation of FEECA; the economic tests used to analyze utility energy efficiency programs; the efforts of the investor-owned electric utilities in demand-side management; incentives that may encourage further conservation efforts; and measures used in other states. The Commission plans to schedule additional workshops during 2008 to further discuss ways to enhance and expand energy efficiency efforts in Florida.

Significant conservation savings also occur outside of utility-sponsored DSM programs. For example, the Commission has provided input for improved state building codes and federal equipment efficiency standards. In 2006, federal equipment standards increased the required efficiency of heating, ventilating, and air conditioning units by 30 percent over previous standards. The Commission's consumer education efforts complement existing conservation activities of the FEECA utilities and also serve as a central resource center for consumer information related to conservation matters. Section 5 of this reports further addresses the Commission actions of educating Florida consumers on conservation.

In order to meet the statutory requirement of FEECA to review utility DSM goals every five years, the Commission must set new goals by January 2010. The Commission will begin the goal review process later this year (2008).

Renewable Generation

Consistent with FEECA goals, generating electricity with renewable fuels can also reduce the state's dependence on expensive fossil fuels. The Commission continues to develop policies designed to encourage renewable generation within the state. Currently in Florida, over 1,100 MW of renewable generation facilities are fueled by biomass, hydroelectric sources, waste heat, landfill gas, and municipal solid waste. Based on the April 2, 2007, Ten-Year Site Plans, several renewable generation projects are proposed to be in service within the next five years. These projects will produce nearly 300 MW of capacity. FPL recently announced that it is pursuing a St. Lucie County project capable of producing approximately 20 MW of wind powered energy and 300 MW of solar powered energy. The company has not provided estimates of in-service dates at this time.

The following points describe some of the Commission's activities regarding renewable generation:

- In March 2007, the Commission finalized rules requiring utilities to continuously offer to purchase capacity and energy from renewable generators. On May 22, 2007, the Commission approved standard offer contracts resulting in the continuous offering to purchase approximately 2,400 MW of renewable energy for Florida's four largest investor-owned utilities (IOUs). However, three of the four standard offer contracts filed were protested and a hearing is currently scheduled for early 2008.
- Since January 1, 2007, the Commission has approved two negotiated purchased power contracts with renewable generators totaling approximately 120 MW. Three IOUs have also issued requests for proposals of capacity or energy that would come from renewable sources.
- The Commission held workshops in January, April and July 2007, assessing the availability, development, and facilitation of additional renewable energy in Florida. The Commission has proposed rules on net metering and interconnection that would (1) apply to all renewable generation technologies up to 2 MW in size, (2) expedite the interconnection of customer-owned renewable generation, and (3) allow customers to offset their electric consumption through net metering. Comments regarding the proposed rules were received before the January 25, 2008, deadline. Staff will have a

recommendation regarding the proposed comments scheduled for the March 4, 2008, Agenda Conference.

Conclusion

Conservation, DSM, and renewable energy are expected to continue to play a vital role in meeting the needs of Florida's growing population. While Florida's utilities have been successful overall in meeting the objectives of FEECA, the Commission believes that customer choice plays an essential role in achieving the overall goals of FEECA. Electric customers can contribute to meeting these goals through buying energy efficient homes; purchasing energy-efficient appliances, including air conditioning systems; making energy-efficiency improvements to their existing homes to reduce energy losses; and taking advantage of natural gas for heating, water heating, and cooking where available and affordable. As power plant sites and transmission corridors become more and more scarce, utility efforts to defer future generating units and transmission lines become increasingly important. Customer participation in utility-offered DSM and energy conservation programs as well as individual efforts to use electrical energy wisely are paramount in such efforts.

Section 1. Overview Of Florida's Electricity Market

1.1 Energy Demand in Florida

Understanding customer electrical demand in Florida is essential to fully comprehending the importance of conservation. Florida's electrical demand and energy usage are somewhat unique because the state's customer base is heavily weighted toward residential customers. As shown in Table 1, residential customers make up nearly 89 percent of Florida's electricity customers, purchasing about 53 percent of the state's total electrical energy. At approximately 11 percent, Florida's industrial electrical energy usage is much smaller than the national average of 28 percent.

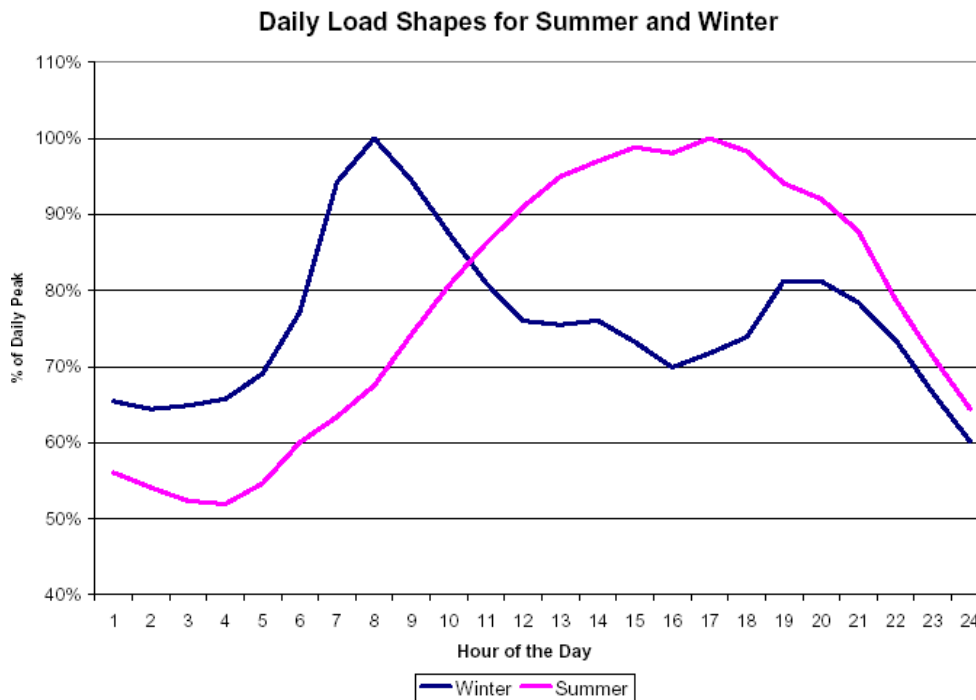
Table 1. Florida's Electric Customers by Class and Consumption in 2006

Customer Class	Number of Customers	% of Customers	Energy Sales (gigawatt-hours)	% of Sales
Residential	8,158,148	88.7	115,279	52.6
Commercial	1,006,646	10.9	80,474	36.7
Industrial	37,769	0.4	23,425	10.7
Total	9,202,563	100.0	219,178	100.0

Florida's traditionally high temperatures and humid climate have a profound effect on residential customers' electrical energy usage. Typically, residential customers' electrical usage varies more throughout the day than commercial usage and shows more pronounced peaks in the early evening in the summer and in the mid-morning and late evening in the winter. Industrial electrical energy usage, however, is more uniform throughout the day. The high proportion of residential customers in Florida results in more pronounced summer and winter peak demands than in a state with a higher proportion of industrial customers.

Figure 1 illustrates an example of daily load shape curves for peak summer and winter days in Florida. In the summer, customer demand begins to climb 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



Historically, Florida’s electric demand has typically been highest in the summer. In 2006, peak electric demand reached 48,140 megawatts (MW) in the summer and 44,812 MW in the winter. In 2016, Florida’s peak electric demand is projected to increase, net of future conservation efforts discussed in Section 2, to 56,935 MW in the summer and 59,659 MW in the winter, indicating a reversal of the historic trends.

The growth in peak demand drives the need for new electric generating capacity. The electric utilities’ resource planning processes are designed to achieve sufficient installed capacity to meet the highest projected customer demand and provide a reserve for contingencies. As discussed further in Section 2, utility-sponsored conservation programs help reduce peak demand and energy consumption, thereby avoiding or deferring the need for new generating capacity.

1.2 Florida’s Electric Generating Resources

Utility conservation efforts significantly affect and, in turn, are affected by Florida’s electricity generation market. 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

Combined, these utilities currently have 48,555 MW of summer electric generating capacity and 51,927 MW of winter generating capacity. Non-utility generators in the state provide an additional 4,948 MW of summer electric generating capacity and 5,297 MW of winter generating capacity. Additional capacity is purchased from out-of-state utilities over the Florida-Georgia transmission interties.

From a historical perspective, Florida's electric utilities have pursued fuel diversity by maintaining a balanced fuel supply according to the types of fuel used to generate electricity. In the past, Florida's utilities maintained a relative balance of energy generation from coal, nuclear, natural gas, oil, and other sources. Due to continued growth in the state's electricity demand and relatively low natural gas prices, Florida's utilities turned to gas-fired generating units to satisfy economic and reliability needs. Between 1990 and 2006, the vast majority of new generating capacity constructed in Florida was natural gas-fired. The result has been an increase in the percentage of the state's energy generated by gas from 11.4 percent in 1990 to 38 percent of the total energy generated in 2006.

Over the past few years, the Legislature and the Commission have stressed the importance of utilities maintaining a balanced fuel supply. Florida's utilities responded to these concerns with the inclusion of one nuclear and several coal-fired power plants in their 2007 Ten-Year Site Plans which were filed on April 2, 2007. Subsequent to the filing of the 2007 Ten-Year Site Plans, the uncertainty associated with future natural gas and coal prices and emerging energy policy at the state and federal levels concerning the impact of greenhouse gas emissions have resulted in several coal-fired plants no longer being considered as part of the current planning process. Forecasts of the state's growing total energy demand continue to surpass current conservation, DSM, and renewable energy programs offered by Florida's utilities. Meeting this increasing demand will require the addition of traditional generation capacity to satisfy reliability requirements. The recent removal of several coal-fired units from consideration in the utilities' plans may result in the addition of natural gas-fired generation over the next several years. If, for example, natural gas becomes the replacement fuel of choice, natural gas generation is projected to grow to more than 50 percent of Florida's energy as early as 2013. Florida's utilities must continue to explore alternatives to natural gas energy generation with emphasis placed on increasing public knowledge and awareness of energy conservation. Utilities must also continue to develop and employ all cost-effective DSM measures and renewable generation.

Section 2. The Florida Energy Efficiency and Conservation Act

2.1 History of FEECA

From its inception in 1980, FEECA has placed 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. To accomplish these objectives, FEECA requires the Commission to establish goals and electric utilities to implement DSM programs to meet the established 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 and (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.

The Legislature further revised the FEECA statute in 1996. This 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. The two municipal utilities currently subject to FEECA are Orlando Utilities Commission (OUC) and JEA. All five Florida investor-owned utilities are subject to FEECA, regardless of sales. The investor-owned utilities are Florida Power & Light Company (FPL), Progress Energy Florida, Inc. (Progress Energy), Tampa Electric Company (TECO), Gulf Power Company (Gulf), and Florida Public Utilities Company (FPUC).

Table 2 displays the 2006 energy sales by Florida's electric utilities, with emphasis on the utilities subject to FEECA. The utilities subject to FEECA are currently responsible for approximately 85.7 percent of the state's total electrical energy sales.

Table 2. Energy Sales by Florida’s Electric Utilities in 2006

Florida’s Electric Utilities	Energy Sales GWh	% of Total State Energy Sales
<i>Utilities Subject to FEECA</i>		
FPL	103,659	46.0 %
Progress Energy	39,432	17.5 %
TECO	19,025	8.5 %
Gulf	11,429	5.1 %
FPUC	849	0.4 %
JEA	12,694	5.6 %
OUC	5,984	2.7 %
FEECA Total	193,072	85.7%
Non-FEECA Total	32,119	14.3%
State Total	225,191	100.0%

2.2 Commission Rules Implementing FEECA

In 1980, the Commission adopted Rules 25-17.001 through 25-17.015, Florida Administrative Code, requiring all electric utilities to implement cost-effective DSM programs. In June 1993, the Commission revised its rules, requiring the establishment of numeric DSM goals for summer and winter demand (MW) and annual energy sales (GWh). These rules now apply to the seven Florida utilities subject to FEECA.

The Commission reviews DSM goals for each utility at least once every five years and sets numeric demand and energy sales goals which extend ten years into the future. Within ninety days after the Commission issues its order approving DSM goals, each affected utility must file a DSM plan with the Commission for approval. These plans describe the DSM programs to be offered to customers which are designed to result in the demand and energy savings required by each utility’s DSM goals. The rules also require annual reporting. The Commission closely monitors and evaluates the effectiveness of DSM activities of the FEECA utilities.

DSM goals were most recently established for the seven utilities subject to FEECA on August 9, 2004.³ Concurrently, the Commission approved DSM plans filed by Progress Energy and FPUC and acknowledged the DSM plans of OUC and JEA. The Commission voted to maintain the numeric goals at zero for OUC and JEA because these two utilities could not identify any additional cost-effective DSM to offer. The Commission approved TECO’s DSM plan with modifications and FPL’s DSM plan on February 1, 2005. Two programs in FPL’s

³ See Dockets 040029-EG through 040035-EG.

DSM plan, the BuildSmart and Residential Conservation Services programs, were subsequently protested. The Commission issued a final order approving these two programs and granted FPL's request to include the programs in its 2005 DSM plan on January 10, 2006. The Commission approved Gulf Power's DSM plan on March 1, 2005. The Commission will reset DSM goals for the seven utilities subject to FEECA in 2009, to be effective in 2010.

Since FEECA goals were adopted in 2004, increases in fuel prices and plant construction costs have placed an upward pressure on avoided costs. Because of these increases, FEECA utilities have re-evaluated the cost-effectiveness of their DSM programs. As such, several new and modified programs have been proposed by the utilities.

In August 2006, the Commission approved two new DSM programs and eight modified programs filed by FPL. FPL believes its new and revised programs will lead to additional summer peak demand savings of 454 MW, winter peak demand savings of 310 MW, and annual energy savings of 54 GWh.

In December 2006, Progress Energy received Commission approval of modifications to its DSM programs. Progress Energy was allowed to offer two new residential conservation programs and modify three of its existing residential programs and three commercial/industrial programs. Progress Energy's modified plan is expected to result in additional summer demand savings of 344 MW, winter demand savings of 551 MW, and annual energy savings of 314 GWh.

On May 29, 2007, the Commission approved Gulf's modification to both its Residential and Commercial Geothermal Heat Pump programs. In order to increase participation in these DSM programs, Gulf proposed an increase in the incentives offered to participants.

On October 2007, TECO received Commission approval to offer twelve new DSM programs and modify nine existing programs. TECO expects its new and revised programs to lead to additional summer peak demand savings of 66.3 MW, winter peak demand savings of 66.5 MW, and annual energy savings of 110 GWh.

Overall, demand and energy savings from utility-sponsored conservation programs are expected to surpass current goals by as much as 50 percent. The cumulative effect is to increase summer savings by 312.24 MW, increase winter savings by 252.01 MW, and reduce GWh by 524.96, the equivalent of two 150 MW combustion turbine units. The Commission will continue to explore means of cost-effectively increasing the amount of DSM savings available from utility conservation programs.

2.3 Conservation Cost-Effectiveness Requirement

DSM programs favor 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. Historically, investor-owned utility DSM programs approved by the Commission for cost-recovery have been shown to have a cost to benefit ratio which benefited all utility ratepayers.

Section 366.82, Florida Statutes, requires utility conservation programs to be cost-effective. As part of the implementation of this statute, the Commission adopted Rule 25-17.008, Florida Administrative Code, 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 Total Resource Cost (TRC) test.

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. Customers pay equipment and maintenance costs under the Participant test. Benefits 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 ensures that all ratepayers benefit from a proposed DSM program, not just the program's participants. Because all customers ultimately pay the costs of DSM programs, the RIM test ensures that rates to all customers 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 utility's costs. Unlike the RIM test, however, incentives and decreased revenues are not included as costs in the TRC; instead, these factors are treated as transfer payments among ratepayers.

The Commission's current policy is to set goals for utilities based on measures that pass both the Participant and the RIM tests. In addition, the Commission "encourages utilities to evaluate implementation of TRC measures when it is found that the savings are large and the rate

impacts are small.”⁴ 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.

As discussed above, the Commission sets numeric DSM goals for the two municipal utilities currently subject to FEECA: OUC and JEA. However, since the Commission does not regulate the rates of municipal utilities, the Commission does not address cost recovery of the DSM costs of these utilities’ DSM programs.

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 requesting 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.

⁴ 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.

2.4 Conservation Achievements

As a whole, Florida's utilities have been successful in meeting the overall objectives of FEECA. Since FEECA's enactment, utility-sponsored DSM programs have reduced statewide summer peak demand by an estimated 5,685 MW and winter peak demand by 6,100 MW, as well as reduced annual energy consumption by an estimated 6,977 GWh in 2007. 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. By 2016, DSM programs are forecasted to further reduce aggregate peak demand and energy consumption, as summarized in Table 3. This reduction will benefit Florida's ratepayers by deferring the need for additional generating capacity in a cost-effective manner.

Table 3. Estimated Cumulative Savings from Utility-Sponsored DSM Programs Since 1980

	2007	By 2016
Summer Peak Demand	5,685 MW	7,422 MW
Winter Peak Demand	6,100 MW	7,570 MW
Energy Consumption (Annual)	6,977 GWh	9,051 GWh

Table 4 displays the reported DSM demand and energy achievements of the five investor-owned utilities and two municipalities in 2006, compared to their DSM goals set by the Commission in 2004.

Table 4. Comparison of Cumulative DSM Achievements with Approved Goals in 2006

	Winter MW Goals	Reported Winter MW Reduction	Summer MW Goals	Reported Summer MW Reduction	Annual GWh Goals	Reported Annual GWh Reduction
FPL						
Residential	55.6	62.5	91.9	118.5	166.0	191.2
Commercial/Industrial	23.7	48.3	49.8	101.3	50.8	192.7
Progress Energy						
Residential	75.0	99.0	21.0	37.0	35.0	58.0
Commercial/Industrial	7.0	12.0	7.0	16.0	6.0	9.0
TECO						
Residential	6.7	8.2	4.4	6.1	12.6	16.3
Commercial/Industrial	2.0	3.8	4.4	5.8	12.8	15.3
Gulf Power						
Residential	14.4	5.9	11.8	4.7	6.2	4.4
Commercial/Industrial	8.5	9.1	17.5	18.2	4.1	16.90
FPUC						
Residential	0.22	0.42	0.16	0.22	.32	.50
Commercial/Industrial	0.17	0.13	0.29	0.24	.80	.67
JEA						
Residential	0.00	0.30	0.00	0.00	0.00	0.00
Commercial/Industrial	0.00	1.70	0.00	3.30	0.00	16.00
OUC						
Residential	0.00	0.15	0.00	0.37	0.00	1.66
Commercial/Industrial	0.00	0.51	0.00	0.51	0.00	2.33

The chart above shows that FPL, Progress Energy, TECO, JEA and OUC met or surpassed all of the Commission-approved cumulative demand and energy goals in 2006. Although the Commission set goals for JEA and OUC at zero, both utilities have accomplished additional DSM achievements.

Gulf met or surpassed all its 2006 commercial/industrial goals, but did not meet its residential demand or energy goals. Gulf did not meet its 2006 residential demand goals due to decreased participation in GoodCents Select and GoodCents/Energy Star programs. Gulf states current participation in the GoodCents Select program dropped due to market condition changes related to recent hurricanes. As a result, increased home occupancy turnover and communication/HVAC technology incompatibilities required a higher level of equipment

removals than anticipated. Gulf states that the GoodCents/Energy Star program has been below projections due to the impact of the 2005 Department of Energy (DOE) regulations under the National Appliance Energy Conservation Act (NAECA). The Act increased the manufacturing standard for residential heat pump systems. In addition, Gulf states that the impact of the change has made differentiation of its premium efficiency home program more difficult than expected.

FPUC met or surpassed all of its 2006 residential DSM goals. FPUC did not meet its 2006 commercial/industrial goals due to lower than expected participation in its indoor efficient lighting program, a shift in company emphasis towards residential programs in light of its recent fuel rate increases, and inadequate preparation of conservation personnel to achieve the company's commercial lighting and commercial energy survey program's DSM goals.

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 natural gas for heating, water heating, and cooking where gas is available and cost-effective 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 as well as personal conservation decisions are paramount to such efforts.

2.5 Commission Actions To Encourage Additional Conservation And Energy Efficiency

On November 29, 2007, the Commission sponsored a workshop on energy efficiency initiatives. The workshop explored how the Commission can encourage additional energy efficiency and conservation. A wide range of stakeholders discussed the Commission's implementation of FEECA; the economic tests used to analyze utility energy efficiency programs; the efforts of the investor-owned electric utilities in demand-side management; incentives that may encourage further conservation efforts; and measures used in other states. The Commission will schedule additional workshops during 2008 to discuss further ways to enhance and expand energy efficiency efforts in Florida.

In order to meet the statutory requirements of FEECA to review utility DSM goals every five years, the Commission must set new goals by January 2010. The Commission will begin the goal review process later this year (2008).

2.6 Conservation Cost Recovery

Investor-owned electric utilities are permitted to recover prudent and reasonable expenses, including incentives paid to participating customers, for Commission-approved DSM programs through the Energy Conservation Cost Recovery (ECCR) clause. Utilities are required to present evidence that new DSM programs are cost-effective and therefore, benefit the general body of ratepayers prior to seeking cost recovery through the ECCR clause. 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 over \$4.61 billion of conservation program expenditures through the ECCR clause, with nearly \$2.45 billion of that amount in the last ten years. Table 5 depicts the annual DSM expenditures which have been recovered from customers by Florida's investor-owned utilities through the ECCR clause over the last ten years.

Table 5. DSM Expenditures Recovered Through the ECCR Clause

	FPL	Progress Energy	TECO	Gulf	FPUC	Total
1997	\$170,921,157	\$74,359,150	\$18,462,512	\$2,689,297	\$223,589	\$266,655,705
1998	\$164,483,007	\$77,936,016	\$19,421,194	\$2,356,560	\$284,326	\$264,481,103
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

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 next 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 November 26, 2007. These factors took effect with the first billing cycle of 2008. Table 6 displays the current conservation cost recovery factors which are 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 6. Residential Conservation Cost Recovery Factors in 2008

	Residential Conservation Cost Recovery Factor (cents per kWh)	Typical Residential Monthly Bill Impact (based on 1,200 kWh)
FPL	\$0.145	\$1.74
Progress	\$0.201	\$2.41
TECO	\$0.098	\$1.18
Gulf	\$0.097	\$1.16
FPUC	\$0.067	\$0.80

2.7 Renewable Generation

Currently in Florida, 1,123 MW of renewable generation facilities are fueled by biomass, hydroelectric sources, waste heat, landfill gas, and municipal solid waste. Florida's electric utilities purchase just over 507.2 MW of firm capacity from these renewable energy sources which can defer the need for utilities to construct power plants. The majority, 379.1 MW, is fueled by municipal solid waste.

Renewable energy facilities also produce 615.8 MW of non-firm capacity for internal use (self-service) or for sale to utilities on an as-available basis. As a result, the state's utilities do not count on this non-firm energy for reliability purposes; however, this energy allows utilities to avoid burning fossil fuels in existing generators. The primary contributors to this self-service category are biomass and waste heat.

Table 7 is a list of all renewable energy facilities that sell firm capacity to Florida's electric utilities.

Table 7. State of Florida: Renewable Energy Sources Providing Firm Capacity in 2007

UTILITY	FACILITY	FUEL TYPE	CAPACITY (MW)
FPL	Broward North	MSW	56.0
FPL	Broward South	MSW	54.1
FPL	Palm Beach County Solid Waste Authority	MSW	47.5
Progress	Bay County (Montenay Bay)	MSW	11.0
Progress	Dade County	MSW	43.0
Progress	Lake County (Covanta Lake)	MSW	12.8
Progress	Pasco County (Covanta Pasco)	MSW	23.0
Progress	Pinellas County	MSW	54.8
TECO	City of Tampa (McKay Bay)	MSW	19.0
TECO	Hillsborough County	MSW	22.9
SEC ⁵	Lee County	MSW	35.0
MSW Subtotal			379.1
Progress	Ridge Generating Station	Biomass	39.6
SEC	Timber Energy	Biomass	12.0
Biomass Subtotal			51.6
Progress	Cargill Fertilizer	Waste Heat	15.0
Waste Heat Subtotal			15.0
TAL ⁶	C. H. Corn Dam	Hydro	11.0
Fed. Govt. (SEPA)	Jim Woodruff Dam	Hydro	43.5
Hydro Subtotal			54.5
SEC	BioEnergy Partners	Landfill Gas	7.0
TOTAL FIRM CAPACITY RENEWABLES			507.2

⁵ Seminole Electric Cooperative

⁶ City of Tallahassee

Table 8 is a list of all renewable energy sources in the state that provide self-service generation or as-available energy to the state's electric system. Total net energy to serve load is composed of both firm and non-firm sources of energy. Non-firm sources, such as the as-available renewable energy sources depicted below, reduce the use of scarce fossil fuels but do not contribute a reliability benefit.

Table 8. State of Florida: Self-Service and Non-Firm Renewable Energy Sources for 2007

UTILITY	FACILITY	FUEL TYPE	CAPACITY (MW)
FPL	Tomoka Farms	Landfill Gas	3.8
TECO	City of Tampa	Landfill Gas	1.4
Landfill Gas Subtotal			5.2
Progress	Potash Corp. of Saskatchewan	Waste Heat	42.0
TECO	Cargill Millpoint	Waste Heat	41.3
TECO	Cargill Ridgewood	Waste Heat	55.0
TECO	CF Industries	Waste Heat	33.1
TECO	Greenbay	Waste Heat	28.2
TECO	IMC New Wales	Waste Heat	46.1
TECO	IMC South Pierce	Waste Heat	34.9
Waste Heat Subtotal			280.6
FMPA	US Sugar	Biomass	27.0
FPL	Georgia Pacific	Biomass	52.0
FPL	Okeelanta	Biomass	70.0
FPL	US Sugar Bryant	Biomass	20.0
Gulf	International Paper Company	Biomass	78.0
Gulf	Stone Container Company	Biomass	39.0
Progress	Jefferson Power	Biomass	6.0
Progress	Proctor & Gamble (Buckeye)	Biomass	38.0
Biomass Subtotal			330.0
TOTAL NON-FIRM ENERGY RENEWABLES			615.8

Several utilities are also active in photovoltaic and solar thermal projects. Many of these projects are associated with programs such as Solar for Schools and SunSmart Schools in which a solar array is placed on school grounds, allowing students to experience firsthand the benefits of renewable generation. The utilities’ photovoltaic projects combine to produce 0.516 MW of capacity. The totals of these systems, listed in Table 9, reflect an average capacity factor of 9 percent.

Table 9. PV Interconnection Summary

Utility	Number of Connections	MW	MWH	Capacity Factor
PEF	61	0.362	528.5	17%
FPL	31	0.108	80.7	9%
TECO	6	0.018	3.0	2%
GULF	1	0.005	3.3	8%
OUC	4	0.020	Not Reported	N/A
SEC	2	0.004	Not Reported	N/A
TOTAL	105	0.516	615.5	9% (avg.)⁷

Despite providing over 1,100 MW of capacity, existing renewable energy facilities do not account for a large portion of Florida’s energy generation. Historically, relatively high capital and operating costs as well as limited applications have hampered the development of renewable energy in the state. Based on the April 2, 2007, Ten-Year Site Plans, several renewable generation projects are proposed to be in service within the next five years. These projects will produce 307.99 MW of capacity. Table 10 summarizes these projects, some of which are still in contract negotiations. FPL has recently announced that it is pursuing a wind project, up to approximately 20 MW, in St. Lucie County and as much as 300 MW of solar powered generating capacity. However, the company has not provided estimates of the in-service dates or cost-effectiveness of these facilities.

⁷Average Capacity Factor does not include OUC and SEC.

Table 10. Future Renewable Projects through 2013

Utility	Fuel Type	Capacity (MW)
PEF	E-Grass	116.60
	Biomass Wood	75.00
	Landfill Gas	11.00
TECO	Waste Heat	35.00
	Solid Waste	16.00
	Solar	0.20
JEA	Landfill Gas	9.60
LAK ⁸	Solar	18.00
	Solar	6.00
OUC	Municipal Solid Waste	20.00
	LFG	Undetermined
FPL	Solar	0.25
	Solar	0.04
GRU ⁹	Photovoltaic	0.25
TOTAL		307.94

2.8 Commission Actions to Encourage Renewables

The 2005 Florida Legislature enacted Section 366.91, Florida Statutes, requiring FEECA utilities to continuously make available a standard offer contract for the purchase of capacity and energy from renewable energy resources. The 2006 Florida Legislature sought to further encourage the development of renewable generation in Florida by enacting Section 366.92, Florida Statutes, authorizing the Commission to adopt appropriate goals to increase the use of existing and new renewable energy resources in the state. Both statutes were intended to protect the economic viability of existing renewable energy facilities while promoting further development of renewable energy resources in the state.

Standard Offer Contracts for Renewables

In December 2006, the Commission adopted Rules 25-17.200 through 25-17.310, Florida Administrative Code, which became final in March 2007. These rules implement Section 366.91, Florida Statutes, requiring each utility to continuously offer a separate contract for each type of fossil fuel technology that is included in its Ten-Year Site Plan. The required standard

⁸ Lakeland Electric

⁹ Gainesville Regional Utilities

offer contracts were filed by Florida's investor-owned utilities on April 1, 2007, and approved by the Commission on May 22, 2007. The contracts result in a continuous offer to purchase approximately 2,400 MW of renewable capacity and energy. On July 2, 2007, the orders approving the standard offer contracts for PEF, FPL, and TECO were protested. Gulf and FPUC standard offer contracts are currently in effect. A hearing to address the protests is currently scheduled for early 2008.

Net Metering and Interconnection Rules

In 2007, the Commission initiated a multi-pronged effort to further encourage the development of renewable generation in Florida. In January 2007, the Commission held a workshop to review the renewable generation technologies with a potential for development within Florida. Based on the information gained during the workshop, the Commission initiated rulemaking on expedited interconnection and net metering of customer-owned renewable generating facilities.

Following a series of public workshops, in December 2007, the Commission proposed rules which require the investor-owned electric utilities to offer expedited interconnection and net metering of customer-owned renewable generation that is primarily intended to offset the customer's usage of electricity. These proposed rules significantly expand the Commission's existing policy by increasing the types of renewable generators eligible for expedited interconnection to the electric transmission grid and increasing the size of eligible systems from 10 kilowatts to 2 megawatts. The proposed rules also require utilities to net meter energy produced by these systems. At the end of the billing period, any excess energy delivered to the grid would be carried forward to the next month to help reduce the customer's electric bill. At the end of the calendar year, any remaining excess energy is paid at the utility's avoided energy rate. Comments regarding the proposed rules were received before the January 25, 2008 deadline. Staff will have a recommendation regarding the proposed comments scheduled for the March 4, 2008 Agenda Conference.

Renewable Portfolio Standard (RPS) for Florida

In 2006, Section 366.92, Florida Statutes, was enacted which gave the Commission the authority to "adopt appropriate goals for the use of existing, expanded, and new Florida renewable energy resources." In addition, on July 13, 2007, Governor Charlie Crist signed an

executive order requesting that the Commission initiate rulemaking on a renewable portfolio standard for Florida. A renewable portfolio standard (RPS) is defined as a requirement for electric service providers to supply a set percentage or a specified amount of customers' energy needs through renewable generation or other eligible resources.

As mentioned previously, the Commission held a workshop to review the renewable generation technologies with a potential for development within Florida. Following this workshop, the Commission directed its staff to hold a series of workshops on the design of an RPS policy for Florida. A series of four workshops were held on July 26, August 23, September 27, and December 6, 2007. A wide range of stakeholders participated in these workshops, including renewable generators, utilities, environmental advocates, electric consumers, and other state agencies. In addition, the Commission has obtained technical support from the U.S. Environmental Protection Agency, which provided expert subject matter speakers for each of the workshops.

Section 3: Conservation Activities Of Electric Utilities

3.1 Types of Conservation Programs

Along with energy audits, consumer education is important to any conservation program. Educational programs and announcements provide consumers basic techniques to conserve energy and to receive information on available energy efficiency conservation programs. During an energy audit, a utility representative will make customer-specific recommendations on energy-saving practices, home improvements, and appliances that can reduce the customer's energy usage and electric bill. Energy audit programs serve as the foundation for all other DSM programs by helping customers determine which conservation programs are beneficial to their energy demands. Each utility subject to FEECA is required to offer energy audits to residential customers, pursuant to Section 366.82(5), Florida Statutes, and most utilities also provide energy audits for commercial/industrial customers. Some utilities also have programs to educate developers on the Florida Energy Efficiency Code for Building Construction.

Specific conservation programs such as ceiling insulation upgrades, residential energy management, window film, and duct leak testing are offered, with the utility paying a financial incentive to the customer for installing qualified energy-efficient measures. In addition, utilities offer cash incentives to encourage the purchase of energy-efficient equipment for new installations or retrofits, such as heating, air cooling, water heating, and lighting equipment. Several utilities give incentives to commercial and industrial customers to support their investment in capital equipment that have the potential for substantial demand and energy savings.

Load management is an important part of any utility energy conservation plan. Load management programs pay the participant for allowing the utility to control when certain electric appliances are available for use. The few hours the appliances are not available usually occur during peak hours; however, these relatively few hours translate into significant savings for the utilities in terms of avoiding the construction of high cost peaking generation.

An important part of a utility's conservation activities, that customers may not readily observe, is research and development. Technologies currently being investigated include photovoltaics, wind, ocean energy, and thermal storage. The next generation of approved conservation programs in Florida may come, in large measure, from the investments utilities are making today in research and development. Some of the earlier research programs have recently been approved by the Commission for permanent program status. Florida's utilities continue to

conduct research programs to identify customer interest in renewable energy and the cost and technical feasibility of implementing new technologies.

3.2 Conservation Activities of FEECA Utilities

A. Florida Power & Light Company

On August 9, 2004, by Order No. PSC-04-0763-PAA-EG, the Commission set new numeric goals for Florida Power & Light for the period 2005 through 2014. The Commission approved FPL's 2005 DSM plan on February 1, 2005. However, the approval of two of the programs contained in FPL's DSM plan, BuildSmart and the Residential Conservation Services programs, were protested. On January 10, 2006, the Commission issued Order No. PSC-06-0025-FOF-EG, which addressed the protests and granted final approval of the two programs. The Commission also granted FPL's request to add these programs to its 2005 DSM plan. In August 2006, FPL received Commission approval for two new DSM programs and eight modified programs. It was FPL's belief that through greater customer participation, caused in part by higher customer incentives, the new and revised programs would lead to additional summer peak demand savings of 454 MW, winter peak demand savings of 310 MW, and annual energy savings of 54 GWh. In September 2007, FPL received Commission approval to offer the Residential Load Control Program, formerly know as a pilot On-Call Program, on a permanent basis. The newly approved program is expected to increase FPL's system demand and energy savings and continue to meet the policy objectives of FEECA. FPL's DSM plan, which incorporates the change approved in 2007, includes the following programs.

Residential Programs

1. *Residential Building Envelope.* This program offers incentives to residential customers to install energy efficient roof and ceiling insulation measures. A maximum incentive of \$1,676 per summer kW demand reduction is offered for ceiling insulation. The program also includes a maximum incentive of \$706 per summer kW for reflective roof installation, and a maximum of \$1,518 per summer kW for other roofing technologies.
2. *Duct System Testing and Repair Program.* This program provides reduced cost duct system testing to identify leaks in air conditioning duct systems and encourages the repair of those leaks by qualified contractors. Incentives are offered for duct system repair. FPL offers a maximum incentive of \$466 per summer kW reduction.
3. *Residential Air Conditioning Program.* This program offers incentives to customers to purchase higher efficiency heating, ventilating, and air conditioning equipment with incentive levels at a maximum of \$1,429 and \$1,643 per summer kW reduction for straight cooling and heat pumps, respectively. The program includes additional incentives for: (1) plenum repair measure, with a maximum incentive level of \$412 per

summer kW reduction; (2) air handler units with electronically commutated motors with a maximum incentive of \$208 per summer kW; and, (3) units properly sized using FPL approved sizing software with a maximum incentive of \$272 per summer kW.

4. *Residential Load Management Program (On Call Program)*. Offers load control of major appliances/household equipment to residential customers in exchange for monthly electric bill credits. Direct load control equipment is installed on selected customer end-use equipment, allowing FPL to control these customer loads as needed. Qualifying equipment (and applicable incentives) includes central electric air conditioners (\$3.00 for cycle units and \$9.00 for shed units), central electric heaters (\$2.00 for cycle and \$4.00 for shed), conventional electric water heaters (\$1.50), and swimming pool pumps (\$3.00).
5. *Residential New Construction Program (BuildSmart)*. BuildSmart encourages the design and construction of energy efficient homes by offering education to contractors on energy efficiency measures, and providing construction design reviews and home inspections
6. *Residential Low Income Weatherization Program*. This program combines energy audits and incentives to encourage low income housing administrators to retrofit homes with energy efficiency measures. Following an energy audit, local providers of approved weatherization service may receive incentives of \$45 for HVAC maintenance, \$60 maximum for reduced air infiltration, and \$25 for replacement of a room air conditioner.
7. *Residential Conservation Service*. Offers a walk-through energy audit, a computer generated Class A audit, and a customer-assisted energy audit. For customer-assisted energy audits, a mail-in, phone, or Internet audit option may be offered. FPL does not apply demand and energy savings from this program towards its goals.
8. *Green Power Program (marketed as the Sunshine Energy® program)*. A voluntary program providing interested residential and business customers with the opportunity to support renewable energy development. The program includes a special tariff, under which participating residential and commercial customers voluntarily pay a \$9.75 monthly premium. In exchange, FPL purchases a 1,000 kWh block of tradable renewable energy credits. For every 10,000 customers participating in the program, FPL will cause to be developed 150 kW of photovoltaic capacity in Florida.

Commercial/Industrial Programs

1. *Business HVAC Program*. This program offers Commercial/Industrial customers financial incentives to upgrade to higher efficiency HVAC equipment that exceed the minimum efficiencies mandated by the U.S. Department of Energy. The current FPL program includes (1) maximum thermal storage incentive up to \$898 per summer kW reduction, (2) maximum incentive for chillers up to \$99 per summer kW, (3) incentives for energy recovery ventilator units with a maximum incentive up to \$417 per summer kW reduction, (4) incentives for direct expansion (DX) units up to \$168 per summer kW reduction and up to \$498 per

summer kW for efficient air conditioning room units, (5) maximum incentive of \$627 per summer kW for demand control ventilation systems including kitchen hood control, and (6) maximum incentive of \$102 per summer kW for electrically commutated motors for air conditioning systems.

2. *Business Efficient Lighting Program.* The Efficient Lighting program offers C/I customers financial incentives to install high efficiency lighting measures at the time of replacement. The maximum incentive for reduction in demand is \$132 per summer kW. The program offers an incentive of 65¢ to \$200 on linear fluorescent plus a schedule of incentives for other efficient lighting technologies,
3. *Business Building Envelope Program.* This existing program offers financial incentives to business customers to install high efficiency building envelope measures such as roof/ceiling insulation and reflective roof coatings. The current incentive structure offers incentives for summer kW reductions. Maximum incentives are \$185 for ceiling insulation, \$219 for roof insulation, \$579 for reflective roofs, and \$429 for window treatments.
4. *Business Custom Incentive Program.* This existing “catch-all” program is for cost- effective C/I efficiency measures which are not included in other FPL programs. DSM measures must reduce or shift at least 25 kW during peak hours, have verifiable demand and energy savings, and pass the RIM test.
5. *Business On Call Program.* This existing program offers load control of central air conditioning units to both small nondemand-billed and medium demand-billed, business customers in exchange for monthly electric bill credits. FPL offers incentive payments of \$2.00 per ton.
6. *C/I Demand Reduction Program.* This program reduces peak demand by allowing the direct control of customer loads of 200 kW or greater during periods of extreme demand or capacity shortages. Participants contract for a firm demand level which may not be exceeded during capacity shortage periods. In return, participants receive a monthly credit in exchange for allowing FPL to directly control their electrical loads during periods of extreme demand, capacity shortages, or system emergencies. Customers must give a five-year termination notice to discontinue service under this rider.
7. *Business Energy Evaluation.* This C/I audit program offers free standard level energy evaluations on-site and online. More detailed evaluations are available with costs shared between FPL and the participating customer. Participation in FPL’s other C/I DSM programs is promoted through this program.
8. *C/I Load Control (CILC).* The CILC program reduces peak demand by controlling customer loads of 200 kW or greater during peak periods, and in return, participating customers receive service under a reduced rate. Pursuant to Order No. PSC-99-0505-PCO-EG, issued March 10, 1999, the program has not been offered to new participants since December 31, 2000, even though the program will continue for prior customers.
9. *Cogeneration and Small Power Production Program.* Designed to facilitate FPL compliance with all regulatory requirements concerning qualifying facilities and small power

producers. One role of the program is to assist customers in the evaluation of potential cogeneration projects, including self-generation. FPL does not project demand and energy savings from this program.

10. *Business Water Heating.* This new program provides incentives for the installation of heat recovery or heat pump water heaters. Both types of equipment reduce the electrical demand and energy consumed. The incentive is determined from equipment specifications and is based on reduction to peak load, not to exceed \$881 per summer kW reduction.
11. *Business Refrigeration Program.* This program is designed for stores, distribution centers and restaurants having freezers and refrigerated display cases. Using advanced control systems allows the staggering of heating cycles, and using reclaimed hot gas as a replacement for strip heaters prevents condensation. Incentives are based on a cost-effectiveness analysis for each system and will not exceed \$80 per summer kW reduction.

Research & Development and Pilot Programs

1. *Conservation Research and Development Program (CRD).* CRD is an umbrella research program under which new DSM technologies are analyzed. Several FPL DSM programs have emerged from the CRD program, including the C/I Building Envelope, Business On Call, and Residential New Construction programs. The program has also resulted in the addition of cost-effective measures to existing programs, such as the proposed inclusion of Energy Recovery Ventilators to the C/I HVAC Program. FPL operates this program based on DSM Plan approval, or for 6 years, whichever occurs first, with a spending cap of \$2,500,000 for the period.
2. *Residential Thermostat Load Control Pilot Project.* On June 15, 2007, FPL filed a petition with the Commission for the Residential Thermostat Load Control Pilot Project. A typical barrier to customer acceptance of utility load control programs is reluctance to surrender control of heating and air conditioning appliances. Consequently, for an initial 24-month period, FPL is proposing to evaluate whether the benefits of the OnCall Program can be expanded through using a new generation of communication and control technologies that put residential customers in charge of decisions that could lower energy costs, while allowing customers to override FPL control of their heating and air conditioning appliances. The Commission approved FPL's request on August 14, 2007.

B. Progress Energy Florida

On August 9, 2004, by Order No. PSC-04-0769-PAA-EG, the Commission set new numeric goals for Progress Energy for the period 2005-2014. On July 26, 2006, the Commission approved revised measures were set in response to the new minimum SEER 13 requirement for air conditioning equipment and rising costs for equipment installations. Further cost-effective modifications to programs, approved on December 11, 2006, by Order No. PSC-06-1018-TRF-EI, increased incentives that took effect on August 1, 2007. Progress Energy expects the new

incentives will result in increased program participation. Progress Energy's modified plan is expected to result in additional summer demand savings of 344 MW, winter demand savings of 551 MW, and annual energy savings of 314 GWh over the next eight years. The following are Progress Energy's current approved programs:

Residential Programs

1. *Home Energy Check.* Under this residential energy audit program, a company auditor examines the home and makes recommendations on low-cost or no-cost energy-saving practices and measures. Six types of audits are offered: a free walk-through, a customer-completed mail-in survey, a customer-completed online survey, a phone-assisted customer survey, a paid walk-through (\$15), and a home energy rating analysis.
2. *Home Energy Improvement.* This comprehensive program for existing homes that have received a Progress energy audit recommending changes combines thermal envelope efficiency improvements with upgraded equipment and appliances. Progress offers the customer a choice of rebates, as described below, or interest-free installment billing over 12 months. The program promotes the following energy-efficiency measures:

Attic Insulation Upgrade: Encourages customers who have electric space heat to add ceiling insulation. Progress Energy pays a portion of the installed cost. The specific incentive amount is based on the increase in insulation to a minimum of R-30, with a maximum incentive amount of \$100 per customer, plus \$0.07 per square foot over 1500 square feet.

Spray-in Wall Insulation: Encourages customers to add insulation to the block wall area. An incentive of \$0.20 per square foot is offered, to a maximum of \$300.

Duct Test and Repair: Promotes energy efficiency through improved duct system sealing. The program helps identify and reduce energy loss by measuring air leakage rate through the central duct system. The customer may have ducted or non-ducted electric heating system to participate. PEF pays up to \$30 for the first unit (\$20 for each additional unit at same address) for the duct leakage test and up to \$125 per unit for duct repair.

Plenum Duct Sealing: Encourages sealing of the supply and return portion of the plenum to the air handler. The incentive of \$50 per system applies only to new heating/cooling systems with a SEER rating of 14 or higher.

High Efficiency Electric Heat Pumps: Pays financial incentive, not exceeding \$350 per unit, to replace existing electric heating equipment with high-efficiency electric heat pumps. The specific incentive is based on minimum heating and/or cooling efficiency levels. The indoor air handler and outdoor condenser must both be replaced with new equipment to qualify for this rebate.

Conversion to Electric Central Air Conditioning: Encourages customers with existing non-electric heat to install high efficiency air conditioners with a SEER rating of 14 or higher. A \$50 incentive per unit is offered.

Proper Sizing of High Efficiency Air conditioners: Encourages the customer to have the air conditioning unit properly sized using approved sizing software. The offered incentive of \$75 applies only when installing a new air handler and condensing unit.

Supplemental Incentive Bonus: Encourages adoption of several energy-efficiency measures through an additional incentive of up to \$50. Incentive is paid to a participant in Progress Energy's high efficiency electric heat pump program who also implements the ceiling insulation upgrade, duct leakage repair, or both, within 90 days.

3. *Residential New Construction.* This comprehensive program for new home construction, multi-family, and manufactured homes (1) promotes energy-efficient construction which exceeds the building code; (2) provides information, education, and advice to home builders and contractors on energy-related issues and efficiency measures; and (3) promotes energy-efficient electric heat pumps with a maximum \$400 incentive for incorporation of all measures in a three-tiered incentive structure.
4. *Low-Income Weatherization Assistance.* This overall program to improve the energy efficiency of low-income family homes over two years old by integrating DSM measures with existing programs operated by the Department of Community Affairs. Efficiency measures and incentives are identical to those offered in Progress Energy's Home Energy Improvement Program, with the following additions:
 - *Reduced Air Infiltration:* A \$75 incentive is paid for work which reduces air infiltration by a minimum specified amount.
 - *Water Heater Wrap/Replacement:* Provides wrap for water heater and associated piping near the tank. A \$25 incentive may be paid towards the purchase of a high-efficiency water heater in lieu of an insulating jacket.
 - *High-Efficiency Alternate Water Heating:* Promotes installation of high-efficiency alternative electric water heating equipment. This plan provides a \$100 incentive for each heat recovery unit and \$200 per unit for each dedicated heat pump water heater unit.
 - *Heating and Air Conditioning Maintenance:* A \$40 incentive is paid for service/tune-up maintenance on an existing electric central heating and air conditioning system.
 - *Low Flow Shower Heads:* An \$18 incentive is paid for each low flow shower head with maximum of two per residence.

- Replacement of Incandescent Lamps with Compact Fluorescent: An incentive of \$4 per lamp, with a maximum of three per household.
 - Faucet Aerators: An incentive of \$2 each, with maximum of three per household.
 - Refrigerator Coil Cleaning: The coil cleaning brush is provided and demonstrated, and an incentive of \$7 is paid.
5. *Residential Year Round Energy Management.* In this voluntary load control program in which Progress Energy reduces peak demand by interrupting electric service to water heaters and central electric heating units. The program is offered only during winter months (November through March). The maximum monthly bill credit is \$11.50, which is paid only during winter months when customer usage exceeds 600 kWh per month.
6. *Neighborhood Energy Saver* - This new program was approved by order PSC-06-1018-TRF-EI to extend the success of the low income programs to all residents of the neighborhoods served. Beginning August 1, 2007, the following measures will be offered by utility personnel on site at each residence, at no charge to the customer:
- Water heater temperature check and adjustment
 - Five compact fluorescent bulbs to replace incandescent bulbs with identical lumen output
 - Low flow faucet aerators and showerheads, two maximum
 - Refrigerator coil cleaning brush
 - Refrigerator thermometer
 - Water closet leak detection tablets and instructions on leak detection
 - HVAC filters
 - Magnetic calendar to remind customer to change filters
 - Weatherization kit installed for maximum of three wall or window AC units along with explanation of use and value for reducing air infiltration
 - Wall plate thermometer
 - Weatherization measures to be used to reduce air infiltration around doors, windows, and pipe entries; includes weather stripping, door sweeps, caulk, foam sealant and tape
7. *Renewable Energy Program.* Beginning August 2007, this new program will be offered in conjunction with energy management. Solar energy will replace a portion of consumer demand, and the interruption of selected electrical equipment will reduce peak demand. The program will offer two measures:
- Solar Water Heater with Energy Management: The installation of solar water heating equipment becomes cost-effective through a direct incentive of \$450 plus an ongoing incentive based on participation in the energy management program.
 - Solar Photovoltaics with Energy Management: Under this program, customers can sign up for energy management and direct their monthly credits for funding the

development of solar energy systems in schools. Credits are escrowed until there is enough to fund the installation of solar energy systems in schools; ten percent of the credits will be used for renewable energy education.

Commercial/Industrial Programs

1. *Business Energy Check.* This C/I energy audit program offers a free walk-through inspection audit, a paid walk-through energy analysis audit, and an online customer-completed internet audit.
2. *Better Business.* This efficiency program for existing C/I buildings gives customers information and advice on energy-related issues and efficiency measures. The program offers a choice of rebates, as described below, and promotes the following energy-efficiency measures:

HVAC Equipment: Pays various financial incentives for the purchase of high-efficiency HVAC equipment such as heat pumps replacing resistance heaters (up to \$350), packaged terminal heat pumps (\$50 per kW reduced), and water-cooled and air-cooled chillers (\$150 per KW reduced along with the \$75,000 per project).

Energy Recovery Ventilation: Pays a financial incentive of up to \$15,000 per building for the installation of high-efficiency energy recovery ventilation units that remove heat and humidity from conditioned space. The customer must have an electric heating and cooling system to participate.

Duct Leakage Test and Repair: Promotes energy efficiency through improved duct system sealing. The program helps identify and reduce energy loss by measuring air leakage rate through the central duct system. The customer must have electric heating and centrally-ducted cooling system to participate. Progress Energy pays up to \$30 per unit for duct leakage test and up to \$150 per unit for duct repair.

Roof Insulation Upgrade: Encourages customers who have electric space heat to add roof insulation. Progress Energy pays \$.07 per square foot up to \$15,000 per building. The weighted average R-value of the existing insulation under the total roof square footage (above conditioned space) must be less than R-12. Insulation must be added to a final insulation value equal or greater than R-19.

Cool Roof: Promotes the installation of “cool roof” coating which reflects heat and sun. The customer must have an electric cooling system to participate. Progress Energy pays \$.10 per square foot of cool roof coating installed up to a maximum of \$15,000.

3. *C/I New Construction:* This comprehensive efficiency program for new C/I buildings provides information, education, and advice on energy-related issues and efficiency measures. The program allows Progress Energy to be involved early in the building’s design process. The plan gives incentives for energy-efficient equipment, such as

HVAC equipment, energy recovery ventilation, cool roof coating, green roof, efficient compressed air, window film, roof insulation, efficient motors, indoor lighting, and occupancy sensors.

4. *Innovation Incentive*: Provides incentives for customer-specific demand and energy conservation projects, on a case-by-case basis, where cost-effective to all Progress Energy customers. Major equipment replacement or other actions that substantially reduce PEF peak demand requirements are evaluated to determine their impact on Progress Energy's system. To be eligible, projects must reduce or shift a minimum of 10 kW of peak demand, have a useful life of 15 years, and have simple payback greater than 2 years. Other requirements may apply. Examples include refrigeration equipment replacement, thermal energy storage, microwave drying systems, and inductive heating (to replace resistance heat). This program continues to recognize specialized, customer specific energy efficiency measures not covered through the company's other DSM programs.
5. *Standby Generation*. Standby generation is a voluntary demand control program available to all commercial, industrial, and governmental customers who have standby generation that will allow facility demand reduction of 50 kW or more when requested by Progress Energy. The monthly credit is calculated based on a formula factoring in the load (kW) removed, the time load was removed (kWh), and the length of time of the Progress Energy request. The current tariff pays \$2.30 per kW and \$0.05 per kWh.
6. *Interruptible Service*. The Interruptible Service tariff is an optional rate which allows Progress Energy to switch off electrical service to Commercial, Industrial, Governmental (CIG) customers during times of capacity shortages. In return for contracting for this rate, customers receive a monthly credit based on their kW demand charge. The IS-1 rate is closed to new participants, but new CIG customers who meet qualifications and agree to the terms and conditions can contract for the IS-2 tariff.
7. *Curtable Service*. The Curtable Service tariff is an optional rate for CIG customers. Customers contract to curtail or remove a portion of their load during times of capacity shortages when notified by Progress Energy. Meeting the contracted curtailment requirement is the responsibility of the customer. The customer receives a monthly credit for the curtable portion of their load. Failure to meet the curtable requirement incurs a penalty. The CS-1 tariff is closed to new participants. However, new customers who meet the eligibility requirements and agree to the terms and conditions can contract to be on the CS-2 or CS-3 rates.
8. *Technology Development Program*. Progress Energy will research, develop, and demonstrate potential cost-effective conservation programs. The annual cap for a single project is \$100,000, and the program expenses are capped at \$800,000 total per year. Any savings of kW or kWh from the Technology Development Program are not counted toward meeting the numeric conservation goals. If a cost-effective demand reduction and energy efficiency program is developed from Progress Energy's research efforts, the

program would be incorporated into the DSM plan and the resulting kW and kWh savings would be applied towards the goals.

C. Gulf Power Company

On August 9, 2004, by Order No. PSC-04-0764-PAA-EG, the Commission set new numeric goals for Gulf for the period 2005 - 2014. The Commission issued Order No. PSC-05-0273-PAA-EG on March 14, 2005, approving Gulf's 2005 DSM plan. On May 29, 2007, the Commission approved Gulf Power Company's modification to its Residential and Commercial Geothermal Heat Pump programs. In order to increase participation in the programs, Gulf proposed to increase the incentives offered to participants. Below is a description of Gulf's DSM programs:

Residential Programs

1. *GoodCents Select Program.* This real-time pricing program includes an interactive energy management system. The system allows customers to program their HVAC system, electric water heater, and pool pump to automatically respond to varying prices of electricity depending on the time of day, day of the week, and season. Each participating customer pays a fee of \$4.95 per month.
2. *GoodCents Home/Energy Star Program.* This program encourages the design and construction of energy efficient homes by providing energy efficiency information to builders and offering a rating system. If a builder constructs a home to a specified level of efficiency which is beyond the requirements of the Florida Model Energy Code, Gulf will certify the home as a GoodCents Home. In addition, Gulf signed an agreement with the Environmental Protection Agency in 2004 to participate in its Energy Star Program as an Energy Efficiency Program Sponsor, allowing Gulf the ability to offer ratings under the Energy Star Program.
3. *Residential Geothermal Heat Pump Program.* This program offers customers an incentive to install geothermal HVAC systems. The program offers a \$400 per ton rebate for systems installed in single-family and multi-family dwellings. Single-family systems above 10 tons and multi-family systems above 50 tons are subject to having the incentive offer based on a cost-effectiveness analysis.
4. *Residential Energy Survey Program.* This energy audit program for new and existing homes offers an on-site energy survey of the home, as well as a mail-in or online survey option. Qualifying new home owners and contractors may request a survey of their final construction plans.
5. *Low-Income Energy Education Program.* The program is designed to assist low-income customers in managing energy costs by providing basic energy education, information on

available utility-sponsored conservation programs, and information on low- or no-cost energy conservation measures.

6. *Affordable Housing Builders and Providers Program.* In this program, Gulf encourages affordable housing builders to attend education seminars on energy-efficient construction, retrofit programs, and financing programs and to participate in the GoodCents Home Program. Gulf works with seminar sponsors to reduce or eliminate attendance fees.

Commercial/Industrial Programs

1. *GoodCents Commercial Buildings Program.* This program promotes the construction of commercial buildings and retrofit of existing commercial buildings with energy efficiency levels above the Florida Model Energy Code standards. The program provides GoodCents certifications to buildings which meet specified standards for HVAC efficiency and thermal envelope requirements which are above code.
2. *Commercial Geothermal Heat Pump Program.* This new program promotes the installation of specified geothermal HVAC systems in commercial buildings. Gulf will provide participating customers with information on potential energy savings and a \$400 per ton incentive for commercial full closed loop geothermal HVAC projects or \$200 per ton for hybrid closed loop projects. These incentive amounts are offered for projects up to 50 tons.
3. *Commercial/Industrial Energy Analysis Program.* At no cost to the customer, this energy audit program is designed to identify potential energy saving measures for C/I customers. Customer options include a basic Energy Analysis Audit performed with an on-site survey or mail-in survey or a more detailed Technical Assistance Audit. The C/I Analysis Program includes several energy efficiency survey programs.
4. *Real Time Pricing Program.* This program provides large C/I customers with hourly energy prices. The program is limited to customers with an annual peak demand at least 2,000 kW. Participating customers must sign a one-year contract.
5. *Energy Services Program.* In catch-all program for cost-effective demand reduction and efficiency measures which are not included in other Gulf programs, efficiency measures are identified under Gulf's Energy Analysis Program, and customized energy services are offered on a project-specific basis. Projects having a payback period of greater than two years may be eligible for an incentive payment to reduce the payback period for the customer. Participation is limited to customers with a minimum peak demand of 20 kW.

Research and Development Program

1. *Conservation Demonstration and Development.* Gulf plans to pursue research, development, and demonstration projects designed to promote energy efficiency and conservation. Gulf will notify the Commission of projects with expenditures in excess of \$25,000 and will maintain the limit on annual spending of \$250,000.

2. *Renewable Energy.* The Renewable Energy Program is designed to encompass a variety of voluntary renewable and green energy programs under development by Gulf Power Company. The voluntary pricing options for customers will include, but not be limited to, EarthCents *Solar* (Photovoltaic Rate Rider) and the Solar for Schools program. Additionally, this program will include expenses necessary to prepare and implement a renewable energy pilot program using landfill gas, wind, solar, or other renewable energy sources.

D. Tampa Electric Company

On August 9, 2004, by Order No. PSC-04-0765-PAA-EG, the Commission set new numeric goals for TECO for the period 2005 - 2014. The Commission approved TECO's DSM plan with modifications on February 1, 2005. In 2006, TECO received Commission approval for permanent status of its pilot green pricing program. In October 2007, TECO received Commission approval for twelve new DSM programs and nine modified programs. One program however, the Commercial Demand Response Program was granted limited authorization for a maximum four-year period. Another program, the Prime Time Load Control Program, was given authorization to allow continued participation by current customers. In addition, TECO was not allowed to transfer the program to a new occupant or apply the demand and energy savings impacts of the Prime Time program towards its Commission-authorized numeric conservation goals. Tampa Electric's modified plan is expected to result in additional summer peak demand savings of 66.3 MW, winter peak demand savings of 66.5 MW, and annual energy savings of 110 GWh by 2014. TECO's current DSM Plan includes the following programs:

Residential Programs

1. *Residential Walk-Through Audit.* In this free residential energy audit, a company auditor examines the home and makes recommendations on low-cost or no-cost energy-saving practices and measures. The audit includes six fluorescent lamps to replace incandescent bulbs, also at no charge to the customer.
2. *Residential Computer-Assisted Audit.* This comprehensive energy audit analyzes specific data on home structure and customer lifestyle to calculate installation cost, investment payback period, and estimated energy savings of available conservation programs. There is no charge to the customer.
3. *Residential On-Line Audit.* In this replacement program for the former mail-in audit program, customers access TECO's Web site to answer questions about their homes and energy usage. Personalized audit results are displayed for customer review and implementation.

4. *Residential Duct Repair.* Designed to save demand and energy by decreasing the load on heating, ventilating, and air conditioning (HVAC) equipment, this program eliminates or reduces HVAC losses by sealing and repairing the home air distribution system. Repairs are assigned to a TECO-appointed HVAC contractor. The incentive offered is repair of the ductwork for a customer-paid fee of only \$50 for a typical single family application, while TECO pays the contractor the remainder of the actual cost. However, extensive repairs to or replacement of the existing air duct system will cost more, and customers are provided with an estimate prior to work being performed. TECO's incentive is included in the payment to the participating contractor performing the repair
5. *Residential Heating and Cooling.* This program is designed to reduce the growth of peak demand (particularly winter) and energy by using a rebate to encourage the installation of high efficiency heat pumps and/or central air conditioning (without oil or resistance heat). The program offers two types of equipment replacement in single family dwellings: (1) heat pump replacing resistance heat and a \$275 rebate and (2) heat pump replacing heat pump with a \$125 rebate. Both types require new equipment to have a minimum SEER of 14.0.
6. *Residential Building Envelope Improvement.* In this improvement program designed to reduce demand and energy by decreasing the load on residential air conditioning and heating equipment, customers can add a minimum of R-11 insulation in order to qualify for up to a \$200 incentive, depending on the size of the home. In addition, the program offers an incentive of \$200 for insulation of exterior walls, \$350 for energy efficient window replacement, and \$1 per square foot for application of energy efficient window film to a maximum of \$200.
7. *Residential Prime Time.* In this voluntary load control program, TECO reduces peak demand by interrupting electric service to water heaters, pool pumps, and central electric heating/air conditioning units. The monthly credit for central heating and cooling appliances is \$12 per month for a continuous 3-hour interruption and \$6 per month for summer cycle interruption. Water heater and swimming pool pump monthly credits are \$4, and \$3 respectively. Program is closed to new participants, but current participants are allowed to continue on the program.
8. *Renewable Energy Program.* Beginning January 1, 2007, the program provides funding for administration, evaluation, and market research to assist in the delivery of renewable energy. Residential, commercial, and industrial customers may volunteer to participate by purchasing a 200 kWh block of renewable energy for \$5; the customers are served from the existing electrical system, but renewable generation of 200 kWh is purchased to displace energy that would have been produced from traditional fossil fuels.
9. *Residential Phone-Assisted Audit.* Customers speak with a company representative who inputs information about their home and energy use and then discusses results with the customer. Results and recommendations are provided to the customer by e-mail or regular mail. There is no charge to the customer.

10. *Residential Price-Responsive Load Management.* This program uses price signals and a multi-tiered rate structure to alert participating customers to reduce load and energy consumption during high-cost periods. The program provides customers with a “smart” thermostat which can be programmed to switch controlled equipment on or off, or automatically change the temperature setting. Customers can also manually adjust the smart thermostat in response to either the multi-tiered rates or critical price signals.
11. *Residential Low Income.* This new program provides items at no cost to customer: six fluorescent lamps, one water heater wrap, three faucet aerators, two showerheads, two weather stripping kits for window HVAC, wall plate thermometer, HVAC filters, weather stripping and caulking, and ceiling insulation up to R-19. Eligibility is through referral by a participating agency.
12. *Educational Energy Awareness.* This new 3-year pilot program is in partnership with service area schools to provide supplemental energy efficiency information for eighth-grade science classes. The program plan includes offering extra credit for students who participate in an online telephone audit of the student's home.
13. *Residential New Construction.* This program is designed to reduce the growth of peak demand and energy in the residential new construction market through the installation of high efficiency equipment and building envelope options. The program uses incentives to encourage the construction of new homes to be above the minimum energy efficiency levels required in the Florida Energy Efficiency Code for new construction. Separate incentives will be offered to the home buyer for the following installations:

Duct closure: \$50 incentive

Attic Insulation: \$75 for R-30

HVAC: \$100 for minimum SEER of 14

Windows: \$350 incentive for energy efficient windows

Alternative Water Heating: \$100 incentive for heat recovery unit or heat pump water

Certification: \$75 for Energy Star HERS index < 85

Commercial/Industrial Programs

1. *Commercial/Industrial Audit.* In this free energy audit program, auditors recommend energy-efficiency measures and equipment. The resulting demand and energy savings are dependent upon the customer’s implementation of the auditor’s recommendations.
2. *Comprehensive Commercial/Industrial Audit.* This detailed audit may involve monitoring specific equipment on the customer’s premises. Auditors recommend additional energy-efficiency measures. Depending on the customer’s rate class, fees for this audit range from \$15 to \$75. The resulting demand and energy savings are dependent upon customer implementation of the audit recommendations.
3. *Commercial Cooling.* This program provides an incentive for installation of high efficiency cooling systems in commercial buildings, including both direct expansion

(DX) and package terminal air conditioners (PTAC) under 15,000 Btu. The plan encourages customers to replace worn out, inefficient cooling equipment with high efficiency equipment that exceeds minimum product manufacturing standards. Equipment must have a minimum energy efficiency rating (EER) of 11.5 for PTAC units and DX units under 65,000 Btu/h, and 10.5 for larger units up to 760,000 Btu/h. Customer incentive is \$0.0025 per Btu, or approximately \$30 per ton.

4. *Commercial Indoor Lighting.* This incentive program encourages investment in more efficient fluorescent lighting technology within conditioned or unconditioned space. The customer receives a \$150 per kW incentive by achieving a minimum of 1 kW in lighting reduction from any lighting source retrofitted with a more efficient fluorescent lighting system (ballast and lamps).
5. *Commercial Load Management.* TECO reduces peak demand by interrupting electric service to end-use equipment in this voluntary load control program. Extended control is for large loads, such as walk-in freezers, which are interrupted for up to three hours. Extended control customers receive a \$3.00 per kW monthly credit. Cyclic control is for commercial air conditioning equipment, and this option is available only during the summer season. Cyclic control customers receive a \$2.50 per kW monthly credit.
6. *Commercial Standby Generator.* Using the on-site generation of C/I facilities to reduce weather-sensitive peak demand, participating customers are given a 1-hour notice to start their generators and arrange for orderly transfer of load from TECO. Standby generators are metered to determine the average portion of customer load served by the generators when called on by TECO. Participants receive a monthly credit of \$3.50 per kW.
7. *Conservation Value.* This incentive program is designed to encourage investment in demand shifting or demand reduction measures. Measures funded through this program will not be covered under other TECO C/I conservation programs. A participant must be a C/I customer on firm rates, and approved measures require a minimum summer and/or winter demand savings of 5 kW. TECO pays an incentive of up to \$250 per average kW of savings above a baseline case. The customer payback period, including the incentive, must be at least two years.
8. *Industrial Load Management.* This direct load control program for large industrial customers on a firm rate tariff and having interruptible loads of at least 500 kW requires participation for a 36-month term. Customers must give TECO at least 36 months notice prior to terminating participation in the program. Participants pay an additional customer charge of \$200 per month. The contracted credit value (CCV) paid for this service is established annually as part of TECO's ECCR filing. The monthly CCV value for 2005 is \$4.46 per kW.
9. *Commercial Duct Repair.* This new program provides an incentive of \$200 for duct repair, by a TECO-designated contractor of HVAC systems no larger than 65,000 Btu for commercial or industrial customers.

10. *Commercial Building Envelope*. This new program provides an incentive of \$1.00 per square foot for solar film on eastern and western exposure windows, \$0.05 per square foot for adding at least R-11 ceiling insulation to achieve a total of R-23 to R-29, and \$0.20 for adding at least R-6 wall insulation. Certificates for participation are issued through energy audits or direct evaluation by TECO.
11. *Energy Efficient Motors*. This new program provides up to \$2.50 per horsepower for new, energy efficient motor upgrades that operate over 2,000 hours annually.
12. *Commercial Demand Response*. This 4-year program provides a monthly incentive to commercial/industrial participants based on the kW reduction made available. TECO contracts with a demand response vendor who secures participants and operates the program.
13. *Commercial Chillers*. This new program will provide \$100 per kW reduction over baseline for energy efficient chillers.
14. *Commercial Lighting Occupancy Sensors*. This new program provides \$75 per kW of lighting controlled where a 1 kW lighting reduction is achieved.
15. *Commercial Refrigeration*. This new program provides an incentive of \$135.00 per kW for installation of anti-condensate heat controls when refrigeration equipment is installed or retrofitted.
16. *Commercial Water Heating*. This new program provides an incentive of \$60 per ton for heat pump water heaters or heat recovery units.

Research and Development Programs

1. *Conservation Research and Development (CRD)*. Under this program, TECO is permitted to research, develop, and demonstrate potential cost-effective DSM programs. There is a 5-year cap of \$500,000, based on an estimate of \$100,000 annual expense. TECO does not apply any kW or kWh savings from the CRD program toward its numeric conservation goals. If research efforts indicate success for a project, the CRD program would be incorporated into the DSM programs and the savings would be applied toward the goals. Technologies eligible for study include renewable and green energy sources, fuel cells, thermal energy storage, and energy efficient construction, heat recovery, space conditioning and ventilation, refrigeration, cooking, pumps and fans, and water heating.

E. Florida Public Utilities Company

On August 9, 2004, by Order No. PSC-04-0766-PAA-EG, the Commission set new numeric goals for FPUC for the period 2005-2014. The Commission approved FPUC's DSM plan on August 9, 2004. FPUC's DSM plan includes the following programs:

Residential Programs

1. *Geothermal Heat Pump.* This program promotes the installation of advanced and emerging geothermal systems. Participants in single-family dwellings are guaranteed heating and cooling costs for two years. Multi-family installations receive a \$500 rebate. New unit must have a Seasonal Energy Efficiency Ratio (SEER) of 13.0 or higher.
2. *Heating & Cooling Efficiency Upgrade.* This program promotes the installation of high-efficiency heat pump systems (SEER of at least 12.0) and offers two types of equipment replacements: replacement of resistance-heating systems (Type 1) and replacement of lower-efficiency heat pump systems (Type 2). FPUC pays rebates to the customer (\$100) and dealer (\$25-75).
3. *GoodCents Home/Energy Star.* This program promotes the design and construction of energy-efficient homes. Certification requires the installation of measures with efficiencies higher than required by the current building code. Homes may also qualify to receive the nationally recognized Energy Star efficiency label. Customers will realize lower utility bills, increased comfort, and eligibility to use energy efficient home mortgage products.
4. *GoodCents Energy Survey.* This residential walk-through energy audit program comes at no cost to the customer. A company auditor examines the home and makes recommendations on energy-saving practices and measures, including identification of potential duct leakage.
5. *Ceiling Insulation Upgrade.* The program encourages customers who have electric central air conditioning to add ceiling insulation. FPUC pays \$100 to customer for adding an amount of ceiling insulation equal to or greater than R-11.

Commercial/Industrial Programs

1. *GoodCents Commercial Buildings.* This efficiency program certifies commercial buildings meeting efficiency requirements higher than Florida Model Energy Code standards. The program includes both HVAC efficiency and thermal envelope standards by evaluating ceiling and wall insulation, windows, and installed HVAC equipment. Increased construction costs are offset by the reduced size of HVAC equipment, savings on utility bills, and increased comfort.
2. *Technical Assistance Audit.* This interactive program assists commercial customers in identifying energy conservation opportunities, and is customized to meet individual needs of large customers. FPUC evaluates a customer's facility operation, equipment, and energy usage pattern.
3. *Indoor Efficient Lighting Rebate.* This program promotes efficient lighting retrofit applications having demand savings of at least 1000 watts per lighting source (lamp and ballast). FPUC pays cash allowance of \$.10 per watt reduced.

Educational and Research Programs

1. *Low Incomes.* This program provides basic energy education on low-cost or no-cost energy conservation measures and informs customers of other services provided by FPUC, including no-cost energy surveys.
2. *Affordable Housing Builders and Providers.* The program provides educational seminars to affordable housing contractors in FPUC's territory. FPUC works with the Florida Energy Extension Service and other seminar sponsors to offer a minimum of two seminars per year. Seminar topics include energy efficient construction, retrofit programs, and financing programs. FPUC works with seminar sponsors to reduce or eliminate attendance fees.
3. *Conservation Demonstration and Development (CDD).* This comprehensive program provides for the identification, development, demonstration, and evaluation of promising new end-use energy efficiency and conservation technologies. Program expenses are capped at \$75,000 per year. The FPSC will be notified of individual projects in excess of \$15,000.

F. JEA

On August 9, 2004, by Order No. PSC-04-0768-PAA-EG, the Commission set numeric goals of zero for JEA for the period 2005-2014; however, JEA has continued its existing DSM programs.

1. *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 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 heater collectors. A maximum of \$25,000 is paid for each project.
2. *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 the customer's system is generating more energy than the customer is using. Thus, the amount of electricity billed is reduced by the amount of electricity exported to the JEA system.
3. *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.

4. *Performance Contracting.* The 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.
5. *Lighting Solutions.* This plan offers lighting energy audits and associated energy use analysis. The consumer has access to opportunities for financing projects and installing equipment to reduce energy costs, increase energy efficiency, and enhance energy management.
6. *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 these installations is capped at 150 per year, consistent with the Housing Partnership mission focus on major repairs for the residential customer served.
7. *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. This 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.
8. *Free Energy Audits.* These audits are offered to both residential and commercial customers and may be in person, online, or by video. JEA maintains the “ENERGYsmart Library” which provides overview information on a wide range of energy usage and technologies. The library covers a wide range of topics associated with energy consumption, including food storage, water heating technologies and temperature selection, three phase motors, light industrial equipment, the Energy Star label, and types of weatherization.

G. Orlando Utilities Commission

On July 20, 2004, in Docket No. 040035-EG, the Commission approved numeric DSM goals of zero for OUC for the period 2005 through 2014. However, OUC continues to offer the following DSM programs:

Residential Programs

1. *Energy Survey Program.* This energy audit program provides walk-through, video and compact disc, and online energy surveys for all residential customers.
2. *Energy Efficiency Rebate Program.* This program gives incentives to customers to implement building envelope efficiency improvements as recommended in an energy audit.

3. *Low-Income Home Energy Fix-Up Program.* This program offers 85 percent of the cost of specified home weatherization measures recommended in an energy audit to residential customers who have an annual income less than \$25,000.
4. *Insulation Billed Solution Program.* This program provides a \$100 incentive and two-year financing for R-19 level attic insulation installation.
5. *Efficient Electric Heat Pump Program.* This program provides incentives for customers to replace an inefficient existing HVAC system with energy-efficient heat pumps.
6. *Gold Ring Program.* This new construction efficiency program provides a free Energy Star Rating and blower door test to new homes which meet specified efficiency standards.
7. *Energy Conservation Rate.* In October 2002, OUC implemented a two-tier residential rate to encourage energy conservation. Customers using more than 1,000 kWh per month pay a higher rate for electricity above 1,000 kWh.

Commercial/Industrial Programs

1. *Energy Survey Program.* This walk-through energy audit provides detailed written recommendations to increase energy and water use efficiency.
2. *Indoor Lighting Retrofit Program.* This program gives discounted installation and special financing for replacing inefficient lighting with more efficient lighting technologies.
3. *OUCconsumption Online Program.* This program helps customers analyze energy usage and demand for multiple locations from a desktop computer. Customers benefit by the increased ability to manage their electric load. Participating customers are responsible for the costs of the additional infrastructure and must pay a \$35 monthly fee.
4. *OUConvenient Lighting Program.* This program provides complete efficient outdoor lighting services for commercial applications including industrial parks, sports complexes, and residential developments. Program participants are responsible for the costs of each fixture.
5. *OUCooling.* Under this program, OUC will fund, install, and maintain a central chiller plant for each participating business district, reducing air conditioning, capital, and operating costs for participating businesses.
6. *Green Pricing.* OUC recently began developing a green pricing program. While the program had not been officially launched as of August 2006, six customers had signed up to participate in the purchase of green energy for an additional \$5 monthly charge. OUC expects to officially begin the program in its fiscal year 2006/2007.

3.3 Conservation Efforts of Non-FEECA Utilities

Although the Commission does not set numeric DSM goals for the non-FEECA electric utilities, pursuant to Section 366.82(1), Florida Statutes. Many of the non-FEECA utilities offer additional DSM programs and renewable energy green pricing programs to their customers. In addition to the potential demand and energy savings, these utilities recognize that offering DSM programs may play a key role in increasing customer satisfaction.

Section 4. Conservation Activities Of Natural Gas Utilities

Natural gas conservation programs offered by participating Local Distribution Companies (LDCs) are designed to increase natural gas use so that Florida can reduce its reliance on foreign oil and defer the construction of additional electric generation facilities. Today, any conservation program offered by Florida's investor-owned gas utilities must pass two economic tests to ensure the program is beneficial to (1) the company's ratepayers and (2) the customer participating in the program.

Much of the recent growth in natural gas usage in Florida has been at the wholesale level (i.e., pipeline) due to the growth in natural gas-powered electricity generation. In addition, growth has occurred in the direct end-use consumption of natural gas for heating, cooling, and industry. Increases in the direct end-use of natural gas reduce demand on the electric grid.

Under the Commission's Energy Conservation Cost Recovery (ECCR) clause, companies petition the Commission for approval to implement natural gas conservation programs. Each of Florida's LDCs offer conservation programs and are authorized to participate in ECCR. Cost-effective programs that are approved often provide customers with rebates to help defray the cost of appliances which, over time, save the customer money. Energy efficiency investments typically reduce future bills, which translates into savings for the average residential natural gas customer. LDCs are spending the majority of their conservation program costs to promote the use of natural gas to residential home builders by providing rebates that support the installation of energy efficient appliances. Over the past year, several of Florida's natural gas LDCs have modified their residential programs to provide higher rebates for natural gas storage water heaters, dryers, stoves, and heating appliances, and have added a rebate for higher efficiency tankless water heaters. In addition, natural gas LDCs have been engaging in informational advertising regarding measures customers can follow to reduce the amount of natural gas they use. For example, GetGasFl.com has become an effective tool that Florida natural gas LDCs are using to educate customers on the types of energy efficiency programs they offer. The website promotes the use of natural gas to offset electric consumption. Included in the Web site are conservation tips, information on each participating LDC's conservation programs, and the incentive amounts available for customers choosing to purchase natural gas appliances.

Table 11 summarizes the conservation expenditures of Florida's natural gas utilities in 2006.

Table 11. Natural Gas Conservation Cost Recovery in 2006

Utility	Number of Customers	Expenditures
Chesapeake Utilities	13,731	\$966,017
City Gas Company	103,427	\$2,167,483
Florida Public Utilities	51,207	\$2,123,687
Peoples Gas System	329,035	\$8,934,625
St. Joe Natural Gas	3,140	\$9,175
Total:	500,540	\$14,200,987

Section 5. Educating Florida's Consumers On Conservation

The Commission continues its effort to educate Floridians on energy efficiency and water conservation. The Commission's Office of Public Information complements existing conservation activities of the FEECA utilities and also serves as a consumer resource for information on energy and water conservation.

One of the more effective consumer programs is Library Outreach. Through this program, the Commission provides more than 280 public and branch libraries across the state with publications highlighting practical energy and water conservation measures. Results from periodic surveys to library administrators indicate their continuing support for the program and their willingness to partner with the Commission on future outreach projects.

The Commission is again participating in the Jiminy Cricket's Environmental Challenge, a partnership between the Walt Disney World Company and various organizations, including the Commission. The program is open to all fifth grade classes in Florida, and its mission is to teach students about the environment. The Commission has distributed its energy and water conservation brochure, *Conserve Your World* (English and Spanish versions), to the program. The Commission is also listed as a resource in the Jiminy Cricket's Environmental Challenge's *Get Back to Nature* brochure, which is distributed to fifth grade teachers. The Commission will continue to work with the Walt Disney World staff to provide energy conservation materials to the schools and students involved in this program in 2008.

The Commission's Web site, www.floridapsc.com, has been expanded and redesigned to supply consumers with more information about energy conservation and the conservation efforts of Florida's electric and gas utilities. The Consumer E-Newsletter on the Web page often highlights information about green power and green pricing, peak shifting, residential water conservation, and fuel diversity. The Web site also has weekly consumer tips on energy and water conservation measures. Weekly Consumer Tips include:

- Save Money with a Clean Air Filter
- Tax Credits for Energy Efficiency
- Water Wiser: Low-Flow Toilets
- Be Your Own Energy Manager
- Green Pricing
- Water Heater Safety and Efficiency
- Weatherization Assistance Program

- Practice Peak Shifting
- Save Money With a Programmable Thermostat
- High Water Bill? You Might Have a Leak
- Start Saving Energy Now
- How Much Water is Enough?

The Web site includes copies of brochures that have been prepared by the Consumer Outreach Team to educate Florida's consumers on energy efficiency measures. These brochures are available at each of the Commission's customer meetings, hearings, and other events held throughout Florida. The Commission's Outreach Team helped to develop an interactive, online Energy Conservation House that provides informative "point and click" conservation tips for the home and gives consumers ways to reduce their monthly utility charges. In addition, the Commission provides conservation information to consumers who file a complaint with the Commission about high electric or natural gas bills. The Commission supplies conservation information regularly to consumers by meeting periodically with them in different regions of the state as an ongoing outreach initiative.

As a part of its Energy Awareness and Earth Day 2007 activities, the Commission worked with two schools in Central Florida to teach students how to conserve energy. The Commission wrote, produced, and directed the play, *Turn It On; Turn It Off*, which has been performed by students in Leon County (Tallahassee) for several school assemblies. In May the play was performed by students at the Lake Wales Charter Schools-Polk Avenue Elementary School in Seminole County. For Energy Awareness Month in October, the play was performed for students at the Lakeview Fundamental Elementary School in St. Petersburg. The Commission, local governmental officials, and Progress Energy were also in attendance to promote energy conservation. The Commission continues to help organize school assembly programs to teach Florida's children about the importance of energy conservation now and encourage them to choose and use energy wisely in the future. More than 35 DVDs of *Turn It On; Turn It Off* and a water conservation program, *Water Wiser*, have been distributed to Tallahassee-area schools and teachers and have been sent to 16 Government-Access television stations in Florida. To supplement the conservation school outreach program, the Office of Public Information is currently compiling a Student Resource Booklet for elementary and middle school students to highlight the importance of energy and water conservation.

The Commission continues to partner with the National Energy Foundation (NEF), <http://www.nef1.org>, a nonprofit 501(c)3 educational organization dedicated to the development, dissemination, and implementation of supplementary educational materials,

programs, and courses. The NEF received a grant to present a series of workshops throughout Florida to prepare teachers to teach conservation in their courses. In cooperation with NEF, the Commission is providing educators with printed materials focusing on Florida-specific energy and water conservation in the home.

Section 6. Florida Energy Conservation Standards Act

Pursuant to Sections 553.975, Florida Statutes, the Commission must prepare a biennial report on the savings derived from the efficiency standards for lighting equipment, showerheads, refrigerators, refrigerator-freezers, and freezers enumerated in Section 553.963, Florida Statutes, the Energy Conservation Standards Act. Standards for refrigerators, refrigerator-freezers, and freezers went into effect January 1, 1993. Estimated savings for these appliances amount to 1,978 GWh through 2006. Lighting equipment standards, effective January 1, 1989, have resulted in an estimated 1,010 GWh in energy savings through 2006. Standards for showerheads went into effect January 1, 1988 and are estimated to have saved 2,339 GWh through 2006.

In the 2006 FEECA report, Commission staff reported that Florida's efficiency standards had been superseded by federal efficiency standards. Since then, the Department of Community Affairs (DCA) has been working to determine whether maintaining the Energy Conservation Standards Act would be meaningful. Currently, the DCA has contracted with the Florida Solar Energy Center (FSEC) to identify potential energy efficiency standards for products and systems components that use electricity, energy efficiency improvements, and anticipated costs of implementing and enforcing standards for certain appliances. The FSEC will report its findings to the DCA on or before February 1, 2008. Commission staff will continue to monitor this issue.

Appendix: 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 Office – <http://www.dep.state.fl.us/energy/default.htm>

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

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/>

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

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

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

JEA – <http://www.jea.com/>

Orlando Utilities Commission – <http://www.ouc.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/>