

FLORIDA PUBLIC SERVICE COMMISSION



ANNUAL REPORT ON

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Activities Pursuant to the

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# Florida Energy Efficiency and Conservation Act

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

FEBRUARY 2006

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Florida Energy Efficiency  
and  
Conservation Act

Prepared by  
Division of Economic Regulation  
Florida Public Service Commission

FEBRUARY 2006

## EXECUTIVE SUMMARY

Florida's utilities have been successful in meeting the overall objectives of the Florida Energy Efficiency and Conservation Act (FEECA). Utility-sponsored demand-side management (DSM) programs have reduced statewide summer peak demand by an estimated 4,951 megawatts (MW), winter peak demand by 5,563 MW, and energy consumption by an estimated 5,488 gigawatt-hours (GWh) since 1980. This has deferred the need for eleven typical 500 MW electric generating plants, or enough capacity to serve approximately 1.6 million households. By 2014, DSM programs are forecasted to further reduce aggregate peak demand and energy consumption, as summarized below. The Florida Public Service Commission (Commission) will continue to encourage conservation and demand-side management programs where beneficial to all utility customers.

### Estimated Cumulative Savings from Utility-Sponsored DSM Programs Since 1980

	2005	By 2014
<b>Summer Peak Demand</b>	4,951 MW	5,511 MW
<b>Winter Peak Demand</b>	5,563 MW	6,068 MW
<b>Energy Consumption</b>	5,488 GWh	6,883 GWh

Conservation has had a vital role in maintaining a balanced fuel supply in Florida by deferring the need for additional generating units and reducing the demand for scarce fuel resources. Historically, Florida's electric utilities have pursued fuel diversity by maintaining a balanced fuel supply in terms of the types of fuel used to generate electricity. Florida's utilities had a relative balance of energy generation from coal, nuclear, natural gas, oil, and other sources. However, due to continued growth in the state's electricity demand and relatively low natural gas prices, between 1990 and 2004, over 90 percent of new generating capacity constructed in Florida was natural gas-fired. As more natural gas plants were placed in service throughout the United States, gas prices increased dramatically. Faced with these high prices and tight gas supplies, Florida's utilities included several additional coal-fired units in their latest *Ten-Year Site Plans*. The long lead time required to construct coal plants means that these plants will not come into service until at least 2012, placing additional pressure on natural gas supplies and prices. The importance of conservation in today's energy market is twofold: (1) reducing the demand for high priced natural gas and (2) deferring the need for additional generating capacity, including high capital cost coal capacity.

Some utility-sponsored conservation programs have been superseded by improved state building codes and federal equipment efficiency standards. However, conservation remains a

critical component in meeting Florida's energy needs and will play a key role in reducing Florida's reliance on scarce resources, such as natural gas, in the future.

In order to obtain cost recovery, Florida's investor-owned utilities must show that each program is cost-effective, such that all ratepayers benefit, not just those ratepayers participating in the programs. As utility plans include more high capital cost solid fuel generation options, the cost-effectiveness of DSM programs should be enhanced. Florida's electric utilities must also provide evidence to the Commission that all cost-effective conservation and DSM opportunities have been exhausted in order to obtain a need determination order for new electric generating capacity. However, unless overall load growth declines, utilities must build new generation to satisfy Florida's enormous appetite for electricity. In 2004, Florida's investor-owned electric utilities recovered over \$230.1 million in conservation program expenditures from ratepayers.

In addition to establishing conservation goals, the Commission has approved Rule 25-6.065, Florida Administrative Code, to facilitate the interconnection of customer-owned small photovoltaic systems to the electric grid. These systems reduce the state's reliance on fossil-fueled electric generation. As a result of the rule, 22 small photovoltaic systems, with a combined capacity of 72.8 kilowatts, have been interconnected to the transmission system since 2001.

The Commission also reviews the conservation programs of Florida's investor-owned natural gas utilities. Historically, natural gas conservation programs were used to increase gas usage so that Florida could 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 be found to be cost-effective, to ensure the program is beneficial to the gas company's ratepayers and the customers participating in the program, prior to receiving authorization for cost recovery. In 2004, Florida's investor-owned gas utilities recovered over \$17.6 million in conservation program expenditures from ratepayers.

The Commission continues its effort to educate Floridians on topics related to energy efficiency and the need for conservation. The Commission's Outreach Team in the Division of Regulatory Compliance and Consumer Assistance complements existing conservation activities of the FEECA utilities and also serves as a central resource center for consumer information related to conservation issues.

**TABLE OF CONTENTS**

**INTRODUCTION..... 1**

**SECTION 1: OVERVIEW OF FLORIDA’S ELECTRICITY MARKET ..... 2**

    1.1 ENERGY DEMAND IN FLORIDA ..... 2

    1.2 FLORIDA'S ELECTRIC GENERATING RESOURCES ..... 4

**SECTION 2: THE FLORIDA ENERGY EFFICIENCY AND CONSERVATION ACT.... 6**

    2.1 HISTORY OF FEECA ..... 6

    2.2 COMMISSION RULES IMPLEMENTING FEECA ..... 7

    2.3 CONSERVATION COST-EFFECTIVENESS REQUIREMENT ..... 8

    2.4 CONSERVATION ACHIEVEMENTS ..... 9

    2.5 CONSERVATION COST RECOVERY..... 11

    2.6 GENERATION RELATED CONSERVATION MEASURES ..... 12

**SECTION 3: CONSERVATION ACTIVITIES OF ELECTRIC UTILITIES ..... 16**

    3.1 TYPES OF CONSERVATION PROGRAMS ..... 16

    3.2 CONSERVATION ACTIVITIES OF FEECA UTILITIES..... 17

        A. Florida Power & Light Company..... 17

        B. Progress Energy..... 20

        C. Gulf Power Company..... 24

        D. Tampa Electric Company..... 27

        E. Florida Public Utilities Company..... 31

        F. JEA ..... 33

        G. Orlando Utilities Commission ..... 34

    3.3 CONSERVATION EFFORTS OF NON-FEECA UTILITIES..... 35

**SECTION 4: CONSERVATION ACTIVITIES OF NATURAL GAS UTILITIES ..... 36**

**SECTION 5: EDUCATING FLORIDA’S CONSUMERS ON CONSERVATION..... 38**

**SECTION 6: FLORIDA ENERGY CONSERVATION STANDARDS ACT ..... 41**

**APPENDIX: RELATED WEBSITES ..... 42**

## INTRODUCTION

The purpose of this report is to fulfill 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 (FEECA), 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 expensive 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 the Legislature and the Governor an annual report of 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. In the process of revising this report, the Commission’s staff determined that these state efficiency standards have been superseded by federal efficiency standards. Therefore, this reporting requirement may no longer be meaningful in the future. The Department of Community Affairs (DCA) has been given the jurisdiction by the Legislature to implement the Energy Conservation Standards Act. The DCA is currently reviewing whether the Energy Conservation Standards Act should be repealed. Staff will continue to work with the DCA to determine whether the Commission’s reporting requirement should be repealed.

# SECTION 1: OVERVIEW OF FLORIDA’S ELECTRICITY MARKET

## 1.1 ENERGY DEMAND IN FLORIDA

An understanding of the nature and extent of customer electrical demand in Florida is essential to fully comprehend 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 over 88 percent of Florida’s electricity customers, purchasing 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 31 percent.

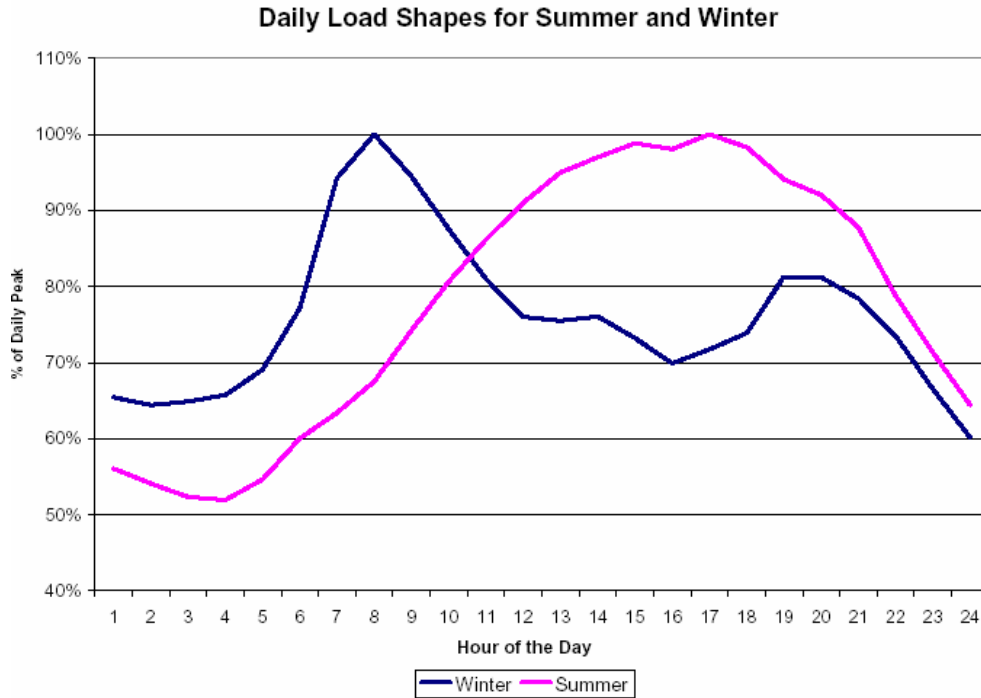
**Table 1: Florida’s Electric Customers by Class and Consumption - 2004**

<b>Customer Class</b>	<b>Number of Customers</b>	<b>% of Customers</b>	<b>Energy Sales (gigawatt-hours)</b>	<b>% of Sales</b>
Residential	7,762,998	88.7	110,383	53.1
Commercial	958,450	10.9	75,077	36.1
Industrial	32,850	0.4	22,485	10.8
<b>Total</b>	<b>8,754,298</b>	<b>100.0</b>	<b>207,945</b>	<b>100.0</b>

Residential customers’ electrical energy usage typically varies more throughout the day than industrial customers’ usage and shows more pronounced peaks in the early evening in the summer, and in the mid-morning and late evening in the winter. In contrast, industrial customers’ electrical energy usage is more uniform throughout the day. Therefore 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 depicts an example of daily load shape curves for a peak summer and winter day in Florida. As can be seen, in the summer, customer demand begins to climb in the morning and peaks in the early evening, which corresponds to the sun heating buildings, resulting in increased 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, which corresponds to heating loads.

**Figure 1: Typical Florida Daily Electric Load Shapes**



Florida’s peak electric demand in 2004 reached 44,957 megawatts (MW) in the summer and 43,932 MW in the winter months, increasing an average 2.2 percent per year over the past decade due primarily to high population growth. The growth in total electrical energy consumption has averaged 2.64 percent per year over the past decade, exceeding Florida’s average population growth rate. Florida’s population is expected to grow at 1.72 percent per year over the next decade, indicating a continued strong growth in electrical energy consumption within the state. According to the Florida Reliability Coordinating Council, summer and winter peak demand are expected to grow at an average annual rate of 2.24 and 2.21 percent, respectively, over the next ten years. Total electrical energy consumption is projected to grow at 2.46 percent per year over the next ten years.

The growth in peak demand is the primary driver of the need for new electric generating capacity. Electric utilities’ resource planning processes are designed to result in sufficient installed capacity to meet the highest projected customer demand and to provide a reserve for contingencies. As discussed further in Section 2, utility-sponsored conservation programs serve to reduce peak demand and energy consumption, with the goal of avoiding or deferring the need for new generating capacity.



## 1.2 FLORIDA'S ELECTRIC GENERATING RESOURCES

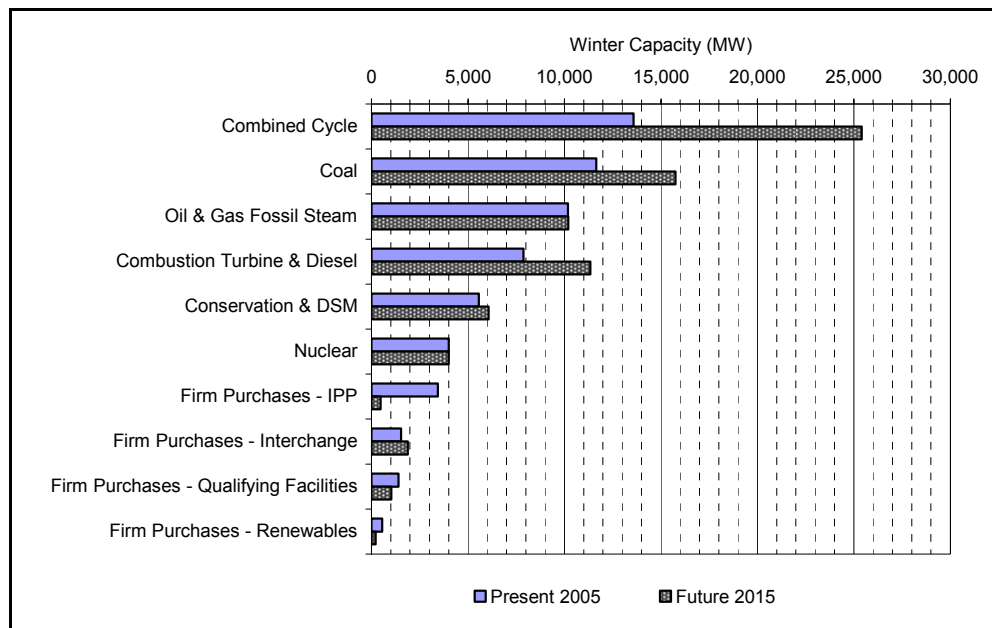
Utility conservation efforts can best be understood when placed in the context of Florida's electricity generation market. Florida's electrical energy needs are met by:

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

Combined, these utilities currently have 45,874 MW of summer electric generating capacity and 49,004 MW of winter generating capacity. During the last 10 years, Florida's electric utilities have added an average of approximately 900 MW of new generating capacity per year. Based on the latest planning documents, Florida is expected to add an average of 1,500 MW of new capacity per year for the next 10 years. This additional capacity will serve new load growth and replace capacity from retired generating units and expired long-term purchased power contracts.

Figure 2, shown below, represents Florida's existing and planned electric resource mix. These resources include the capacity from electric utility generators, conservation and DSM, purchased power contracts, and renewable generators. The electricity produced or avoided by each of these resources plays a key role in meeting Florida's growing electrical energy needs.

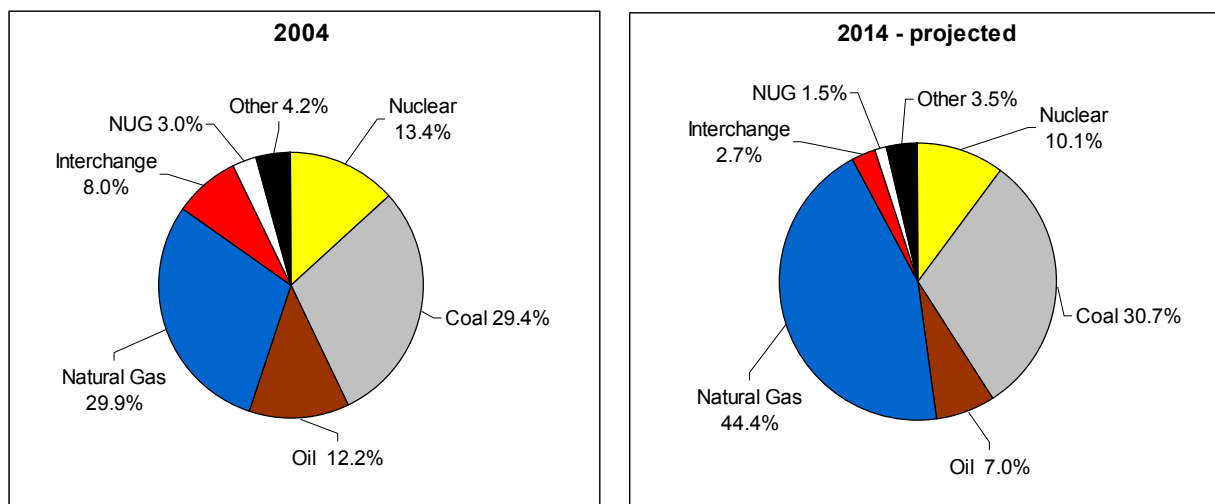
**Figure 2: Florida's Electric Utility Resource Mix**



Note: IPP denotes Independent Power Producer

Historically, Florida’s electric utilities have pursued fuel diversity by maintaining a balanced fuel supply in terms of the types of fuel used to generate electricity. Florida’s utilities had a relative balance of energy generation from coal, nuclear, natural gas, oil, and other sources. However, 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 2004, over 90 percent of the new generating capacity constructed in Florida was natural gas-fired. This trend is projected to continue. While the current *Ten-Year Site Plans* of Florida’s generating utilities include several additional coal-fired units, the long lead time required to construct coal plants means that they will not come into service until at least 2012. As depicted in Figure 3, natural gas is projected to increase from 30 percent of total energy generated in 2004 to 44 percent by 2014.

**Figure 3: Energy Generation by Fuel Type - 2004 & 2014**



Note: NUG denotes Non-Utility Generator

Pursuant to Section 403.519, Florida Statutes, the Commission is responsible for reviewing Florida's need for new supply-side sources of electricity. Any proposed steam or solar electrical generating facility larger than 75 MW is subject to a Commission need determination. As a part of this need determination proceeding, Florida’s electric utilities must provide evidence to the Commission that all cost-effective conservation and DSM opportunities have been exhausted in order to obtain a need determination order for new electric generating capacity. DSM programs can play a key role in reducing Florida’s reliance on scarce fuel resources, such as natural gas, in the future. As utility plans include more coal-fired generation options, the cost-effectiveness of DSM is likely to improve. However, unless overall load growth declines, utilities must build new generation to satisfy Florida’s enormous appetite for electricity.

## **SECTION 2: THE FLORIDA ENERGY EFFICIENCY AND CONSERVATION ACT**

### **2.1 HISTORY OF FEECA**

The Florida Energy Efficiency and Conservation Act (FEECA) 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 expensive resources such as petroleum fuels. To accomplish this goal, FEECA required the Commission to adopt rules requiring electric utilities to implement cost-effective conservation and DSM programs.

All of Florida's electric utilities were initially 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 they were 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 2004 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 86.5 percent of the state's total electrical energy sales.

**Table 2: Energy Sales by Florida’s Electric Utilities - 2004**

<b>Florida’s Electric Utilities</b>	<b>Energy Sales GWh</b>	<b>% of Total State Energy Sales</b>
<i>Utilities Subject to FEECA</i>		
FPL	99,095	46.0 %
Progress Energy	38,193	17.7 %
TECO	18,473	8.6 %
Gulf	11,046	5.1 %
FPUC	766	0.4 %
JEA	13,243	6.1 %
OUC	5,646	2.6 %
<b>FEECA Total</b>	<b>186,462</b>	<b>86.5%</b>
Non-FEECA Total	29,172	13.5%
<b>State Total</b>	<b>215,634</b>	<b>100.0%</b>

## **2.2 COMMISSION RULES IMPLEMENTING FEECA**

To meet the requirements of the newly-enacted FEECA statute, 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 10 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 that are designed to generate the demand and energy savings required by each utility’s DSM goals. The rules also require annual reporting, allowing the Commission to more closely monitor and evaluate the DSM activities of the FEECA utilities.

DSM goals were most recently established for the seven utilities subject to FEECA on August 9, 2004, in Dockets 040029-EG through 040035-EG. The Commission voted to maintain the numeric goals set at zero for JEA and OUC because these two utilities could not identify any additional cost-effective DSM programs to offer. The current levels of demand and energy goals for several of the investor-owned utilities subject to FEECA are lower than the goals approved by the Commission in 1999. One of the primary reasons for decreased numeric goals was the declining cost of proposed new generating units at the time the goals were revised. For example, the lower expected cost of highly-efficient combined cycle generation technology reduced the potential cost reduction benefits resulting from the deferral of generating capacity. Without a

corresponding decrease in the cost of delivering DSM programs, fewer utility-sponsored DSM programs were cost-effective. Also, expected changes in the building code reduced the potential for utility-sponsored DSM program demand and energy savings by increasing the energy-efficiency level required in new construction. In addition, federal manufacturing efficiency on heating, ventilating and air conditioning systems (HVAC) were made more stringent. As of January 2006, the federal manufacturing efficiency standard for HVAC systems was increased from a minimum seasonal energy efficiency level of 10 to a minimum level of 13.

The Commission approved DSM plans filed by Progress Energy and FPUC and acknowledged the DSM plans of OUC and JEA, on August 9, 2004. The Commission approved TECO's DSM plan with modifications and FPL's DSM plan on February 1, 2005. Two programs in FPL's DSM plan, the BuildSmart and Residential Conservation Services programs, were subsequently protested. The Commission issued a final order which approved 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.

### **2.3 CONSERVATION COST-EFFECTIVENESS REQUIREMENT**

Historically, investor-owned utility DSM programs approved by the Commission for cost-recovery have benefited all utility ratepayers, not just those ratepayers participating in the programs. DSM programs benefit program participants by reducing their electric bills. Cost-effective DSM programs benefit the general body of electric utility ratepayers by: (1) deferring the need for future power plant construction, (2) reducing current production cost, and (3) improving reliability.

The Commission is required by Section 366.82, Florida Statutes, to review and approve cost-effective utility conservation programs. As part of the implementation of this statute the Commission adopted Rule 25-17.008, Florida Administrative Code, and the Cost-Effectiveness Manual directing utilities seeking approval of DSM programs on the cost-effectiveness methodologies which must be submitted to the Commission. In order to obtain cost recovery, utilities must provide a cost-effectiveness analysis of each program using the Ratepayer Impact (RIM), Total Resource Cost and Participant tests. The Participant test reviews costs and benefits from a program participant's point of view. The RIM test and Total Resource Cost test take a much broader view of costs and benefits, and include the utility's transmission and generation savings and the costs to administer the program. The RIM test also includes the costs associated with incentive payments to participants and lost revenues to the utility. The RIM test, in

particular, ensures that all ratepayers benefit from a proposed DSM program, not just the program's participants. Because all customers pay the costs of DSM programs, the RIM test ensures that rates to all customers are lower than they would have been without the DSM program. As discussed above, the Commission sets numeric DSM goals for the two municipal utilities currently subject to FEECA, OUC and JEA. However, the Commission does not regulate the rates of municipal utilities. Therefore, the Commission does not address cost recovery of the DSM costs of these utilities' DSM programs.

The Commission also requires investor-owned utilities to address the dynamic nature of the cost-effectiveness of DSM programs by re-evaluating the programs on a regular basis. If a program is found to no longer be cost-effective, the utility should file a petition before the Commission requesting changes to, or discontinuation of, the program. The cost-effectiveness of DSM programs will change over time due, in part, to changes in each utility's expected customer participation levels, generation plans, and forecasted fuel prices. For example, due to the recent high and volatile prices of natural gas, several of Florida's utilities are considering the addition of coal-fired generating plants. These generating plants are more expensive to build than the natural-gas fired plants built in recent years. Consequently, the cost-effectiveness of DSM programs could be expected to increase if the programs defer the need for higher-priced coal-fired capacity relative to natural gas fired capacity. In contrast, the recent high fuel costs have not impacted the cost-effectiveness of existing DSM programs to the same degree. While DSM programs do decrease utility fuel costs by reducing customer energy usage, the primary cost-reduction benefit of a DSM program is the deferral of new generating capacity. However, increasing fuel costs and energy costs should encourage customers to implement energy efficiency measures, with or without utility-sponsored DSM programs, due to the higher potential bill savings. Higher energy costs could point to the benefit of additional consumer education programs on those energy efficiency measures which are not cost-effective under the RIM test.

## **2.4 CONSERVATION ACHIEVEMENTS**

As a whole, utility-sponsored DSM programs have reduced statewide summer peak demand by an estimated 4,951 MW, winter peak demand by 5,563 MW, and energy consumption by an estimated 5,488 GWh since 1980. These estimated savings include DSM programs sponsored by both the FEECA utilities and those that are not currently covered under FEECA. Based on the winter demand reduction, this has deferred the need for eleven typical 500 MW plants, or enough capacity to serve approximately 1.6 million households. By 2014, DSM programs are forecasted to further reduce aggregate peak demand and energy consumption,

as summarized in Table 3. This will benefit Florida's ratepayers by deferring the need for additional generating capacity.

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

	<b>2005</b>	<b>By 2014</b>
<b>Summer Peak Demand</b>	4,951 MW	5,511 MW
<b>Winter Peak Demand</b>	5,563 MW	6,068 MW
<b>Energy Consumption</b>	5,488 GWh	6,883 GWh

Table 4 displays the reported cumulative DSM achievements of the five investor-owned utilities for 2000 through 2004, compared to the utilities' DSM goals as set by the Commission in 2000. Each utility's DSM goals were re-set by the Commission in 2004. The revised 2004 goals for each utility subject to FEECA are presented in Section 3.

**Table 4: Comparison of Cumulative DSM Achievements with Approved Goals 2000 - 2004**

	<b>Winter MW Goals</b>	<b>Reported Winter MW Reduction</b>	<b>Summer MW Goals</b>	<b>Reported Summer MW Reduction</b>	<b>Annual GWh Goals</b>	<b>Reported Annual GWh Reduction</b>
<b>Progress Energy</b>						
Residential	185	186	58	74	88	114
Commercial/Industrial	18	52	19	59	10	21
<b>FPL</b>						
Residential	230.1	273.6	256.6	338.9	448.9	526.2
Commercial/Industrial	70.1	148.2	153.8	266.1	188.8	437.8
<b>Gulf Power</b>						
Residential	124.6	41.6	107.5	30.4	78.9	31.0
Commercial/Industrial	40.7	30.7	41.4	57.7	10.4	28.8
<b>TECO</b>						
Residential	70.7	62.6	25.0	27.2	45.3	70.8
Commercial/Industrial	7.3	8.9	16.7	18.2	61.9	65.5
<b>FPUC</b>						
Residential	.64	.62	.53	.52	1.12	1.00
Commercial/Industrial	.29	.41	.49	.73	1.21	2.06

Progress Energy and FPL met or surpassed all of the Commission-approved cumulative demand and energy goals for 2000 through 2004. Gulf Power did not meet its cumulative residential demand or energy goals, due primarily to lower than expected results from two

programs, the GoodCents Select and Ground Source Heat Pump programs. Gulf lowered the expected participation levels for these two programs in its newly revised goals, which were approved by the Commission on August 9, 2004. This resulted in significantly lower DSM goals for Gulf for 2005 through 2009. Staff intends to closely monitor Gulf's progress towards meeting its revised goals. TECO met or surpassed all of its cumulative DSM goals with the exception of the residential winter demand goal. TECO experienced lower than predicted participation levels in its residential programs. However, TECO's residential program participation improved in 2004. TECO's most recently approved goals have been reduced to reflect current residential participation levels. FPUC met or surpassed all of its cumulative commercial/industrial DSM goals. FPUC did not meet its cumulative residential goals due primarily to low participation in the GoodCents Loan Program. FPUC's 2005 DSM goals have been reduced to reflect the lowered expected participation in this program.

## **2.5 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 clause (ECCR). As discussed above, utilities are required to present evidence that these 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.

The Commission conducts ECCR proceedings during November each year. During these proceedings, 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 29, 2005. These factors take effect with the first billing cycle of 2006. Table 5 displays the current conservation cost recovery factors, which are applied to residential customers' bills. These factors were applied to a bill based on 1,000 kilowatt-hour (kWh) energy usage to estimate the impact on a typical residential customer's monthly bill.



**Table 5: Residential Conservation Cost Recovery Factors - 2006**

	<b>Residential Conservation Cost Recovery Factor (cents per kWh)</b>	<b>Typical Residential Monthly Bill Impact (based on 1,000 kWh)</b>
<b>FPL</b>	.142	\$1.42
<b>FPUC</b>	.046	\$0.46
<b>Gulf</b>	.088	\$0.88
<b>Progress</b>	.169	\$1.69
<b>TECO</b>	.076	\$0.76

Since the enactment of FEECA in 1980, investor-owned electric utilities have recovered over \$4.15 billion of conservation program expenditures through the ECCR clause. Table 6 depicts the annual DSM expenditures which have been recovered from customers by Florida’s investor-owned utilities through the ECCR clause over the past ten years.

**Table 6: DSM Expenditures Recovered Through the ECCR Clause**

	<b>FPL</b>	<b>Gulf</b>	<b>Progress</b>	<b>TECO</b>	<b>FPUC</b>	<b>Total</b>
<b>1995</b>	\$168,281,117	\$2,364,898	\$86,088,341	\$17,593,583		\$274,327,939
<b>1996</b>	179,009,536	2,635,285	80,423,465	19,273,026	\$125,688	281,467,000
<b>1997</b>	170,921,157	2,689,297	74,359,150	18,462,512	223,589	266,655,705
<b>1998</b>	164,483,007	2,356,560	77,936,016	19,421,194	284,326	264,481,103
<b>1999</b>	158,376,162	2,963,888	68,431,962	18,129,268	300,415	248,201,695
<b>2000</b>	158,312,902	3,872,004	66,052,277	16,656,250	323,102	245,216,535
<b>2001</b>	157,660,093	4,984,286	64,831,597	17,600,060	358,054	245,434,090
<b>2002</b>	162,062,655	5,436,083	63,150,036	16,970,240	418,498	248,037,512
<b>2003</b>	150,026,657	7,313,033	62,156,585	17,518,874	381,563	237,396,712
<b>2004</b>	145,679,192	7,619,637	60,072,362	16,357,137	382,504	230,110,832

## 2.6 GENERATION RELATED CONSERVATION MEASURES

### *Interconnection of Small Photovoltaic Systems*

In addition to establishing conservation goals, the Commission adopted a rule regarding small photovoltaic systems which furthers the goals of FEECA. On October 2, 2001, the Commission approved Rule 25-6.065, Florida Administrative Code, Interconnection of Small Photovoltaic Systems (SPS). The SPS rule was adopted to facilitate the interconnection of small solar powered generators to the electric grid, reducing the need for fossil-fueled generation.

Previously in Florida, consumers interested in interconnecting a small photovoltaic system to the grid were forced to negotiate this interconnection with a utility on an individual basis. In order to reduce the costs of this process for consumers, the Commission approved the SPS rule. The rule defines an SPS as a solar powered generating system with a capacity of 10 kW or less which is primarily used to offset all or part of the customer's current electricity requirements. The rule facilitates the interconnection of these systems by establishing standards for the interconnection of an SPS with the electric grid and by requiring investor-owned electric utilities to file a standard interconnection agreement with the Commission. Pursuant to the rule, if the photovoltaic system is 10 kW or less and the owner has signed an interconnection agreement with the utility in accordance with Commission Order No. PSC-02-0109-FOF-EU, then the photovoltaic installation may be interconnected with that utility's grid. The rule further encourages interconnection by allowing net metering of the electrical energy generated from such systems and by reducing the insurance requirements for participating customers.

The rule provides utilities two options for accounting for any power that is delivered to the utility by the SPS. The SPS customer may "net meter" any excess energy delivered to the utility by using a single standard watt-hour meter capable of reversing directions to offset recorded consumption by the customer. Any excess energy may be accumulated over a 12-month period. Alternatively, at the option and expense of the utility, the utility may install additional metering equipment on the customer's premises to measure any excess energy produced by the SPS and delivered to the utility. The value of such excess generation is credited to the customer's bill based on the host utility's COG-1 tariff (the rate paid to qualifying facilities for as-available energy) or by other applicable tariffs approved by the Commission.

The standardized Interconnection Agreements for each investor-owned utility (IOU) were administratively approved in 2002, and incorporated into each of the IOU's tariffs. All of the SPS tariffs provided for the use of a single meter with dual metering capability. These meters are used to measure any energy which is delivered to the grid from a customer's SPS. Customers are compensated for any energy which is delivered to the grid according to each IOU's SPS interconnection tariff.

On July 15, 2003, the Commission directed its staff to continue to monitor the success of the rule and to provide an update to the Commission after 18 months. As a continuation of the monitoring process, the following is a description of the progress of each IOU in interconnecting customer-owned SPS.

*Florida Power & Light* - FPL reported that since its SPS standard interconnection agreement was approved on February 22, 2002, FPL has connected 11 small photovoltaic systems. Five

residential customers were interconnected in 2002; one of these systems was removed by the customer in 2003. In 2003, two residential and two commercial customers were connected, and in 2004, two additional residential customers were connected. There were no new systems connected in 2005. The systems range in capacity from 1.2 kW to 7 kW. The total capacity for the ten active systems is 33 kW, with 10.3 kW owned by the commercial customers. FPL credits each customer's electric bill for any excess kWhs supplied to the grid based on as-available energy according to its COG-1 tariff.

Florida Public Utilities Company - FPUC has received one inquiry on SPS interconnection since its SPS interconnection agreement was approved on April 29, 2002. This inquiry did not result in interconnection. No additional requests for interconnection have been made since FPUC's last update was provided to the Commission in January 2005.

Gulf Power Company - Gulf has interconnected one SPS since its SPS agreement was approved on June 28, 2002. The 2.4 kW capacity system is owned by a residential customer. Gulf voided this agreement in November 2005, however, because the customer allowed the agreement's required insurance policy to lapse. Gulf is also in the process of contacting the owners of several other recently installed photovoltaic systems to determine whether interconnection agreements are appropriate for each system.

Progress Energy Florida - Progress Energy's SPS interconnection agreement was approved by the Commission on August 19, 2002. Progress has entered into a total of 11 SPS interconnection agreements since the inception of the program with one 1.8 kW capacity system interconnected in 2005. These systems range in capacity from 1.2 to 5 kW, with a total capacity of 38.46 kW. Participating customers receive a credit to their bill at Progress Energy's avoided cost for any excess kWh supplied to the grid. Progress Energy currently has a total peak interconnected photovoltaic capacity of 331.3 kW. In addition to the small photovoltaics program, this total includes several other programs with interconnected photovoltaic systems that Progress has implemented. These programs are discussed further in Section 3.

Tampa Electric Company - TECO reported that since its SPS interconnection agreement was approved on May 14, 2002, the company has received 32 SPS interconnection inquiries. Twenty of these inquiries were received in 2005. TECO entered into its first agreement in December 2005 to interconnect a 1.3 kW capacity system. According to TECO, the company is currently working with several interested customers, which may result in additional interconnection agreements in 2006.

### ***Renewable Standard Offer Contracts***

In 2005, the legislature enacted Section 366.91, Florida Statutes, which requires all utilities subject to FEECA to continuously offer a purchase contract to producers of renewable energy. Qualified generation resources listed in the statute include biomass, solar energy, geothermal energy, wind energy, hydroelectric power, ocean energy, waste heat produced in the sulfuric acid manufacturing process, and hydrogen produced from sources other than fossil fuels. The renewable standard offer statute furthers the goals of FEECA by potentially reducing the need for fossil-fueled generation. Each utility's renewable standard offer contract must be priced based on a utility's full avoided costs with a minimum contract term of 10 years. Contracts were required to be in place by January 1, 2006.

The Commission's staff held a workshop in September 2005, to discuss the implementation of the statute. At the workshop, staff suggested that the statute's requirements could be implemented initially under the Commission's existing Rule 25-17.0832(4-5), Florida Administrative Code, pertaining to standard offer contracts. This approach was suggested in an effort to meet the January 1, 2006, implementation date contained in the statute. All of the workshop participants agreed that the Commission's standard offer rule could be used to implement the statute. The investor-owned electric utilities also agreed to file petitions for approval of renewable standard offer tariffs by October 14, 2005. Section 366.91(4), Florida Statutes, does not require Commission approval of renewable standard offer tariffs for municipal and cooperative utilities subject to FEECA; however, JEA and OUC agreed and subsequently filed their tariffs for informational purposes prior to the implementation date of January 1, 2006.

Each of the investor-owned utilities filed their standard offer tariffs on October 14, 2005. On December 20, 2005, the Commission approved these tariffs with several modifications, including that the contracts should close on June 1, 2006. The Commission requested that one or more workshops be held in the interim period to further discuss implementation of the statute. A workshop has been scheduled for March 6, 2006.

## **SECTION 3: CONSERVATION ACTIVITIES OF ELECTRIC UTILITIES**

### **3.1 TYPES OF CONSERVATION PROGRAMS**

Each FEECA utility offers some form of education on energy conservation as well as energy audits. Educational programs and announcements provide consumers with basic information on techniques to conserve energy as well as information on energy programs available through the utility. As a result of an energy audit, utility representatives give customers specific recommendations on energy-saving practices, home improvements, and appliances that can reduce the customer's energy usage and electric bill. Energy audit programs also serve as the foundation for all other DSM programs by helping customers determine which utility-sponsored conservation programs may be appropriate for their needs. Each utility subject to FEECA is required to offer energy audits to residential customers, pursuant to Section 366.82(5), Florida Statutes. Most utilities also provide energy audits for commercial/industrial customers. Some utilities also have programs designed to educate the construction industry on the Florida Energy Efficiency Code for Building Construction.

A variety of specific conservation programs are offered by the utilities. Programs such as ceiling insulation upgrade, residential energy management, window film and duct leak testing programs are offered, with the utility paying a financial incentive to the customer for installing qualified energy-efficient measures. Programs are also offered in which cash incentives are paid by the utility to encourage the purchase of energy-efficient equipment for new installations or retrofit, such as heating, air cooling, water heating and lighting equipment. Several utilities offer incentives to commercial and industrial customers to support their investment in capital equipment with the potential for substantial demand and energy savings.

Load management is an important part of the utilities' energy conservation plans. Participants are paid 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 few hours translate into 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 do not readily observe is research and development. Promising technologies currently being investigated are photovoltaics and additional uses of thermal storage. The next generation of approved conservation programs in Florida may come in large measure from the investment utilities are making today in research and development. For example, several Florida utilities are conducting

research programs to identify customer interest in renewable energy and the cost and technical feasibility of implementing these 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 also required FPL to file a DSM plan, containing programs designed to meet these goals. As displayed in Table 7, FPL’s newly established residential demand goals are higher than its previous goals, while FPL’s new energy and commercial/industrial (C/I) demand goals are lower. FPL attributed the decrease primarily to the new minimum efficiency levels in the Florida State Energy Code, which became effective in 2005. The increased efficiency level required by Florida’s energy code will reduce the potential demand and energy savings of several of FPL’s programs. The greatest impact of the building code changes can be seen in FPL’s C/I Building Envelope; Heating, Ventilating, and Air-Conditioning; and Efficient Lighting Programs.

**Table 7: Comparison of FPL’s Previous and Revised DSM Goals**

<i>Year</i>	<i>Residential</i>			<i>Commercial/Industrial</i>		
	<b>Summer MW</b>	<b>Winter MW</b>	<b>Annual GWh</b>	<b>Summer MW</b>	<b>Winter MW</b>	<b>Annual GWh</b>
<b>Previous Goals</b> <i>(cumulative 2000-2009)</i>	485.9	372.4	943.2	278.8	133.0	343.4
<b>Revised Goals</b> <i>(cumulative 2005-2014)</i>	586.9	405.1	931.0	214.9	107.3	127.6

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. FPL’s 2005 DSM plan includes the following DSM programs.

#### ***Residential Programs***

1. *Residential Building Envelope* - This program offers incentives to residential customers to install energy efficient roof and ceiling insulation measures. An incentive of \$570 per

summer kW demand reduction is offered. The program also includes reflective roof measures, with a maximum incentive of \$461 per summer kW.

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 HVAC equipment. FPL has expanded the program to include plenum repair measures, with a maximum incentive level of \$412 per summer kW reduction. FPL has also increased incentive levels for straight cool and heat pump units to a range not exceeding \$356 to \$490 per summer kW reduction.
4. *Residential Load Management Program (On Call Program)* - This is an existing load management program in which direct load control equipment is installed on selected customer end-use equipment, allowing FPL to control these customer loads as needed. Qualifying end-use equipment includes central electric air conditioners, central electric space heaters, conventional electric water heaters and swimming pool pumps. As part of its approved Residential Load Control Pilot Project, FPL has closed the On Call Program to new participants.
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, construction design reviews and home inspections, and an energy rating system. FPL proposed no changes to this program as modified by Order No. PSC-04-1046-PAA-EG, issued in Docket No. 040660-EG, in its 2005 DSM plan.
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. FPL offers incentives for HVAC maintenance and reduced air infiltration measures.
7. *Residential Conservation Service* - This program 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.

### ***Commercial/Industrial Programs***

1. *C/I HVAC Program* - This is an existing program which offers C/I customers financial incentives to upgrade to higher efficiency HVAC equipment. FPL has made several changes to the program in its 2005 DSM plan, including: (1) decreasing the maximum thermal storage incentive from \$367 per kW to \$350 per summer kW reduction, (2) decreasing the maximum incentive for chillers from \$77 per kW to \$75 per summer kW, (3) adopting minimum program efficiencies using ASHRAE 90.1 2001 as a baseline, (4) adding incentives for

energy recovery ventilator units with a maximum incentive of \$399 per summer kW reduction, and (5) eliminating incentives for rooftop unit sealing.

2. *C/I Efficient Lighting Program* - The Efficient Lighting program offers C/I customers financial incentives to install high efficiency lighting measures at the time of replacement. FPL offers an incentive of \$101 per summer kW reduction.
3. *C/I Building Envelope Program* - This existing program offers financial incentives to C/I customers to install high efficiency building envelope measures such as roof/ceiling insulation and reflective roof coatings. FPL offers an incentive not exceeding \$181 per kW. FPL has eliminated incentives for window-related technologies.
4. *Business Custom Incentive Program* - This is an existing “catch-all” program 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 is an existing program which offers incentives to General Service and General Service Demand customers for the direct control of participating customers’ direct expansion, central air conditioners.
6. *C/I Demand Reduction Program* - This is an existing program designed to reduce 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. 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. Participants must provide a five-year termination notice to discontinue service under this rider.
7. *Business Energy Evaluation* - This is a C/I audit program which offers free standard level energy evaluations. 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. 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. However, the program will continue for customers participating prior to December 31, 2000.

### ***Research & Development and Pilot Programs***

1. *Conservation Research and Development Program (CRD)* - This is an umbrella research project under which new DSM technologies are analyzed.
2. *Residential On Call Pilot Project* - Under this project, approved by the Commission on March 31, 2003, FPL has opened a new pilot project rate schedule with reduced incentives



(compared to the existing On Call rate schedule) for all new residential load control participants. FPL has also closed the existing On Call rate schedule to additional participants. FPL will monitor dropout rates and response rates of new participants. As of July 2004, FPL had over 141,000 participants, with a savings to the ECCR clause (as compared to incentives offered under the On Call Program) of \$4.6 million. FPL has experienced few customer complaints regarding the reduced incentives. The project was approved through March 31, 2006.

3. *Green Power Pricing Research Project* - This voluntary program provides interested residential customers with the opportunity to support renewable energy development. The three-year pilot program was approved by the Commission on January 16, 2004, and includes a special tariff, under which participating residential 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 also install 150 kW of solar generation or purchase a comparable level of solar energy from a Florida solar generator. The research project will be completed in December 2006, and has a Commission-approved spending cap of \$1.5 million over the study period. As of July 30, 2005, FPL had 21,012 participating customers. Program revenues for the period of January 2005 through June 2005 were \$953,420, while program costs for the same period were \$862,986. Due to the 2005 hurricane season, FPL experienced delays in siting new solar projects, resulting in no new solar projects being brought on-line in 2005. FPL has secured host sites for two solar projects, including a small site at the Museum of Science in Dade County and a second site in Sarasota County for a 250 MW project. FPL expects to send out bids for the construction of the Dade County site in January 2006. FPL expects approval of the Sarasota County site by the Sarasota County Commission by the end of the first quarter 2006, with construction commencing thereafter.
4. *Business Green Energy Research Project* - Under the newly-approved Business Green Energy Research Project, FPL will investigate its business customers' preferences regarding renewable energy and their willingness to pay the incremental costs of such energy. If it is determined to be feasible, FPL plans to design and implement a green pricing program that addresses the interests of its business customers. FPL expects that the development and analysis phase of the project will be completed within 2 years, and has requested recovery of expected expenditures capped at \$700,000 over the life of the project.

## **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 through 2014. As seen in Table 8, with the exception of the C/I energy goal, the Commission approved slight reductions in each of Progress Energy's numeric goals as compared to its previous goals. The primary reasons for the reduced goals are (1) the forecasted impact of more stringent energy codes, particularly on residential air conditioning systems and (2) decreased participation in certain existing DSM programs due to saturation.

**Table 8: Comparison of Progress Energy’s Previous and Revised DSM Goals**

<i>Year</i>	<i>Residential</i>			<i>Commercial/Industrial</i>		
	<b>Summer MW</b>	<b>Winter MW</b>	<b>Annual GWh</b>	<b>Summer MW</b>	<b>Winter MW</b>	<b>Annual GWh</b>
<b>Previous Goals</b> <i>(cumulative 2000-2009)</i>	125	389	185	38	37	19
<b>Revised Goals</b> <i>(cumulative 2005-2014)</i>	92	366	161	36	34	29

The Commission also approved Progress Energy’s DSM plan on August 9, 2004, which includes the following DSM programs.

***Residential Programs***

1. *Home Energy Check* – This is a residential energy audit program under which 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, including a free walk-through, a customer-completed (mail-in), customer-completed (online) survey, a phone-assisted customer survey, a paid walk-through (\$15 cost), and a home energy rating analysis.
  
2. *Home Energy Improvement* – This umbrella program for existing homes combines thermal envelope efficiency improvements with upgraded equipment and appliances and offers 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 pays a portion of the installed cost. The specific incentive amount is based on the increase in insulation level above a maximum of R-12, with a maximum incentive of \$100 per customer.
  - Duct Test and Repair - Promotes energy-efficiency through improved duct system sealing. The program helps identify and reduce energy loss by measuring the air leakage rate through the central duct system. The customer must have electric heating and a centrally-ducted cooling system to participate. Progress pays up to \$30 for the first unit and \$20 for each additional unit at the same address for duct leakage test and up to \$100 per unit for duct repair.
  - 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.
  - Supplemental Incentive Bonus - Encourages adoption of several energy-efficiency measures through an additional incentive of up to \$50. The 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 umbrella program is for new home construction, including multi-family and manufactured homes. It promotes energy-efficient construction which exceeds the building code and provides information, education, and advice to home builders and contractors on energy-related issues and efficiency measures. It also is designed to promote energy-efficient electric heat pumps with an incentive identical to that offered in the Home Energy Improvement program for existing homes.
4. *Low-Income Weatherization Assistance* – This umbrella program is designed to improve the energy- efficiency of low-income homes. The efficiency measures and incentives are identical to those offered in the 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. Provides incentive of \$100 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.
5. *Residential Energy Management* – This is a voluntary load control program in which Progress Energy reduces winter peak demand by interrupting electric service to water heaters and central electric heating units. The maximum monthly bill credit is \$11.50, but is paid only during winter months (November through March) when customer usage exceeds 600 kWh per month.

### ***Commercial/Industrial Programs***

1. *Business Energy Check* – This C/I energy audit program offers a free walk-through audit (inspection), a paid walk-through audit (energy analysis), and an online business energy check (customer-completed internet audit).
2. *Better Business* – This umbrella efficiency program is for existing C/I buildings. It gives customers information and advice on energy-related issues and efficiency measures and offers a choice of rebates, as described below, or interest-free installment billing over 12 months. It promotes the following energy-efficiency measures:

- HVAC Equipment - Pays financial incentive of up to \$100 per kW reduced for the purchase of high-efficiency HVAC equipment, such as packaged terminal heat pumps, packaged rooftop units, water-cooled and air-cooled chillers, and unitary heat pumps and air-conditioners.
  - Energy Recovery Ventilation - Pays a financial incentive of up to \$1,500 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 a duct leakage test and up to \$100 per unit for duct repair.
  - Roof Insulation Upgrade - Encourages customers who have electric space heat to add roof insulation. Progress Energy pays a portion of the installed cost. Eligibility is based on a demonstration that additional insulation results in heating and/or cooling use reductions. The specific incentive amount is based on the increase in insulation above a maximum of R-12, with maximum incentive of \$100 per customer.
  - 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 \$50 per 1,000 square feet of cool roof coating installed, up to a maximum of \$1,000.
3. *C/I New Construction* – This umbrella efficiency program for new C/I buildings provides information, education, and advice on energy-related issues and efficiency measures. It allows Progress Energy to be involved early in the building’s design process and also provides incentives for energy-efficient equipment, such as HVAC equipment, energy recovery ventilation, and cool roof coating. Incentive levels are identical to those offered in the Better Business program for existing buildings.
  4. *Innovation Incentive* – This program provides incentives for customer-specific demand and energy conservation projects, on a case-by-case basis, where cost-effective to all Progress Energy customers. To be eligible, projects must reduce or shift a minimum of 10 kW of peak demand. Rebates will be limited to \$150 per kW reduced or shifted. It focuses on measures not offered in Progress Energy’s other DSM programs. Examples include refrigeration equipment replacement, thermal energy storage, microwave drying systems, and inductive heating (to replace resistance heat).
  5. *Standby Generation* – This voluntary demand control program is available to all C/I customers having on-site generation capability. The customer controls the generation equipment but operates it as agreed when needed by Progress Energy. The incentive is based on the load served by the customer’s generator and on Progress Energy’s GSLM-2 rate schedule.
  6. *Interruptible Service* – This is a direct load control program. Progress Energy interrupts service by disconnecting electric service at the breaker during peak or emergency

conditions. Offered under Progress Energy's IS-2 and IST-2 tariffs and is available to any non-residential customer with an average billing demand of at least 500 kW. A monthly credit is paid based on level of billing demand and load factor.

7. *Curtable Service* – This is a direct load control program that is similar to interruptible service, except the customer's entire load is not shed. Offered under the CS-2 and CST-2 tariffs, it is available to any non-residential customer with an average billing demand of at least 500 kW. The customer must be willing to reduce 25 percent of its average monthly billing demand upon request by Progress Energy. A monthly credit paid to the customer based on the level of curtable demand.

*Renewable Energy* - Progress Energy has a total peak interconnected photovoltaic capacity of 331.3 kW. Including the small photovoltaic systems program, Progress Energy has implemented several other programs under which photovoltaic capacity has been interconnected. Progress Energy has joined with Palm Harbor Homes, a manufactured housing company, to study the operation of photovoltaic systems in manufactured homes. One of the objectives of the project is to research customer acceptance and the technical feasibility of offering a green pricing program to interested customers. The total installed capacity in this program is 6.5 kW. Progress also continues to conduct research on the potential of photovoltaics at the Econlockhatchee solar array in Orlando, which was originally commissioned in August 1988. This system has been re-commissioned and has a capacity of 3 kW. Progress has formed a partnership with Disney, installing 6.5 kW of photovoltaics at the Nature Conservancy. Progress has also worked with BP to interconnect photovoltaic systems with a total capacity of 260 kW at 16 BP gas stations.

### **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 through 2014. The Commission also ordered Gulf to file a DSM plan, consisting of programs designed to meet the newly established goals. As seen in Table 9, with the exception of the C/I energy goal, Gulf's goals were reduced compared to its previous goals. Gulf has reduced its expected residential demand and energy savings due primarily to lower than expected participation levels in the GoodCents Select and Ground Source Heat Pump programs. Gulf also reduced the expected C/I demand and energy savings for its C/I GoodCents Commercial Building Program due to future, more stringent requirements in the building code. In addition, Gulf included interruptible service in its previous goals, but has not included this program in its newly-approved goals. The demand savings from interruptible service in Gulf's previous goals was attributed to one customer with a special service agreement. This contract has expired and Gulf has not identified additional opportunities for interruptible service.

**Table 9: Comparison of Gulf's Previous and Revised DSM Goals**

<i>Year</i>	<i>Residential</i>			<i>Commercial/Industrial</i>		
	<b>Summer MW</b>	<b>Winter MW</b>	<b>Annual GWh</b>	<b>Summer MW</b>	<b>Winter MW</b>	<b>Annual GWh</b>
<b>Previous Goals</b> <i>(cumulative 2000-2009)</i>	125.9	145.9	113.1	44.8	35.8	19.3
<b>Revised Goals</b> <i>(cumulative 2005-2014)</i>	56.9	69.4	27.8	28.2	12.6	23.2

The Commission issued Order No. PSC-05-0273-PAA-EG, on March 14, 2005, approving Gulf's 2005 DSM plan. Gulf's 2005 DSM plan contains the following DSM programs.

***Residential Programs***

1. *GoodCents Select Program* – This is a real-time pricing program which includes an interactive energy management system. This 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 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 information to builders on energy efficiency 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, providing Gulf with the ability to offer ratings under the Energy Star Program. Gulf plans to increase the efficiency requirements under the GoodCents Home Program in 2006 to correspond with an update in the Florida Model Energy Code requirements. Gulf will not recover any expenses related to this program through the ECCR clause.
3. *Residential Geothermal Heat Pump Program* - This program offers customers an incentive to install geothermal HVAC systems. Gulf has proposed a change in the incentive structure of the program. The program currently offers a \$250 rebate for systems installed in multi-family dwellings and a guaranteed level of heating and cooling costs for single-family homes. Gulf proposes to simplify the incentive structure by providing a \$150-per-ton incentive for the installation of qualifying geothermal HVAC systems to single- or multi-family dwellings. Single-family systems above 10 tons and

multi-family systems above 50 tons are subject to incentives based on a cost-effectiveness analysis.

4. *Residential Energy Survey Program* – This is an energy audit program for new and existing homes which offers an on-site energy survey of the home, as well as a mail-in audit option. Gulf has combined several residential energy survey programs into this umbrella program, and added an on-line energy survey option to the program.
5. *Low-Income Energy Education Program* – This 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. Gulf has proposed no changes to this program.
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 has proposed no substantive changes to this program.

#### ***Commercial/Industrial Programs***

1. *GoodCents Commercial Buildings Program* - This existing 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. Gulf plans to increase the efficiency requirements of the program in 2006 to reflect an update in the Florida Model Energy Code requirements.
2. *Commercial Geothermal Heat Pump Program* - This is a new program which promotes the installation of specified geothermal HVAC systems in commercial buildings. Gulf will provide participating customers with information on potential energy savings and a \$150-per-ton incentive for commercial full closed loop geothermal HVAC projects or \$75-per-ton for hybrid closed loop projects.
3. *Commercial/Industrial Energy Analysis Program* - This is a C/I energy audit program 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. Gulf has combined several C/I energy survey programs into this umbrella program to increase administrative efficiency and deleted the Tier 2 Commercial Energy Analysis. Gulf also plans to add an on-line option.
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 of not less than 2,000 kW. Participating customers must sign a one-year contract. Gulf has proposed no changes to this program.

5. *Energy Services Program* - This is a catch-all program for cost-effective C/I 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 must have a payback period of greater than two years. Participation is limited to customers with a minimum peak demand of 20 kW. Gulf has proposed no changes to this program.

*Green Pricing* - Gulf has been participating in the EarthCents Solar green pricing program with its sister company, Alabama Power, since December 1999. The program is designed to install 1 MW of solar generation as soon as customers commit to provide \$6 per month for 10,000 100-watt blocks. At this time, Gulf has not received sufficient customer commitments to fund the installation of solar generation. Gulf will not begin charging customers for the program until enough commitments are obtained. Gulf also supports the Solar for Schools program, which promotes the installation of small photovoltaic generating facilities.

#### **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 through 2014. The Commission also ordered TECO to file a DSM plan, with programs designed to meet these goals. As displayed in Table 10, TECO's newly-approved goals are lower than its previous goals. The primary reasons for the reduced goals are: (1) the existing Residential Load Management program, a substantial contributor to demand savings in past years, is no longer cost-effective and is not included in TECO's new goals; (2) TECO expects decreased participation in existing DSM programs due to saturation; and (3) the cost of combustion turbine generating units has substantially declined in the last five years.

**Table 10: Comparison of TECO's Previous and Revised DSM Goals**

<i>Year</i>	<i>Residential</i>			<i>Commercial/Industrial</i>		
	<b>Summer MW</b>	<b>Winter MW</b>	<b>Annual GWh</b>	<b>Summer MW</b>	<b>Winter MW</b>	<b>Annual GWh</b>
<b>Previous Goals</b> <i>(cumulative 2000-2009)</i>	40.3	109.1	75.3	30.8	13.4	114.1
<b>Revised Goals</b> <i>(cumulative 2005-2014)</i>	15.2	20.1	43.5	15.3	8.2	41.5

The Commission approved TECO's DSM plan with modifications on February 1, 2005, which includes the following programs.



## ***Residential Programs***

1. *Residential Walk-Through Audit* – Under 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.
2. *Residential Computer-Assisted Audit* – This is a comprehensive energy audit where specific data on home structure and customer lifestyle is analyzed to calculate installation cost, investment payback period, and estimated energy savings of available conservation programs. There is a \$15.00 charge for this audit.
3. *Residential On-Line Audit* – This is a replacement program for the former mail-in audit program. Customers access TECO’s website to answer questions about their home and energy usage. Personalized audit results are displayed for customer review and implementation.
4. *Residential Duct Repair* – This purpose of this program is to check for losses in HVAC equipment by use of a blower door test. The customer receives an assessment of any problems discovered, and will receive a certificate, equal to 75% of the total repair cost up to a maximum of \$200, to be used towards HVAC system repairs. The customer cost for the blower door test is \$25.
5. *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 utilizes incentives to encourage the construction of new homes to be above the minimum energy efficiency levels required in the state of Florida Energy Efficiency Code for new construction. Incentives for qualifying levels will be offered to the home buyer for the following installations:
  - Level one - No incentive. Requires duct closure with mastic and must meet TECO guidelines for allowable duct leakage.
  - Level two - \$100 incentive. Must meet level one requirements plus requires one of the following two options: (1) installation of a heat pump with a minimum 12.0 Seasonal Energy Efficiency Rating (SEER) and a minimum 7.2 Heating Seasonal Performance Factor (HSPF) or (2) installation of an air conditioning system that has a minimum 12.0 SEER and heating source must not be electric resistance heat or fuel oil. TECO has petitioned the Commission to update the program’s required SEER level to 14.0 due to a change in the federal HVAC standards.
  - Level three - \$200 incentive. Must meet level one and two requirements plus requires the installation of R-30 ceiling insulation.
  - Level four - \$300 incentive. Must meet level one, two, and three requirements plus install a heat recovery unit or a heat pump water heater (applicable only when used with an electric water heater).

6. *Residential Heating and Cooling* – This program is designed to reduce the growth of peak demand (particularly winter) and energy. It uses 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; \$250 rebate and (2) heat pump replacing heat pump; \$100 rebate. Both types require new equipment to have a minimum SEER of 12.0. TECO has petitioned the Commission to increase the required SEER level to 14.0 due to a change in the federal HVAC standards.
7. *Residential Ceiling Insulation* – This program is designed to reduce demand and energy by decreasing the load on residential air conditioning and heating equipment. Customers must add a minimum of R-11 insulation in order to qualify for a \$100 incentive.
8. *Residential Prime Time (RSL-3 tariff)* – This is a voluntary load control program in which 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 \$12.00 per month for a continuous 3-hour interruption and \$6.00 per month for summer cycle interruption. Water heater and swimming pool pump monthly credits are \$4.00 and \$3.00, respectively. The program is not cost-effective under the RIM test; therefore, on February 1, 2005, the Commission ordered that the program be closed to new customers and to existing participants upon a change of address.

### ***Commercial/Industrial Programs***

1. *Commercial/Industrial Audit* – This is a free energy audit program under which auditors recommend energy-efficiency measures and equipment. The resulting demand and energy savings are dependent upon customer implementation of the auditor's recommendations.
2. *Comprehensive Commercial/Industrial Audit* – This is a detailed audit which may involve monitoring of specific equipment on 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 audit recommendations.
3. *Commercial Cooling* – This program provides an incentive for the installation of high efficiency direct expansion (DX) cooling systems in commercial buildings. This program 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 10.0. Eligible commercial cooling equipment must be sized between 65,000 and 240,000 British Thermal Units (BTU). The customer rebate is \$0.002083 per BTU, or approximately \$25 per ton.

4. *Commercial Indoor Lighting* – This incentive program is intended to encourage investment in more efficient fluorescent lighting technology within conditioned space. The customer receives a \$.10 per watt 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 (GSLM-1 tariff)* – This is a voluntary load control program in which TECO reduces peak demand by interrupting electric service to end-use equipment. 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/kW monthly credit. Cyclic control is for commercial air conditioning equipment, and this is available only during the summer season. Cyclic control customers receive a \$1.00/kW monthly credit.
6. *Commercial Standby Generator (GSSG-1 tariff)* – This program is designed to utilize the on-site generation of C/I facilities in order to reduce weather-sensitive peak demand. Participating customers are given a one-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 \$3.00 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. Participants must be C/I customers on firm rates. Approved measures require a minimum summer and/or winter demand savings of 5 kW. TECO pays an incentive of up to \$200 per average kW of savings above a baseline case. The customer's payback period, including incentive, must be at least two years.
8. *Industrial Load Management (GSLM-2 and GSLM-3 tariffs)* – This is a direct load control program for large industrial customers on a firm rate tariff and having interruptible loads of at least 500 kW. It 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/kW.

### ***Pilot Programs***

1. *Residential Price-Responsive Load Management Pilot (RSVP-1 tariff)* – This is a pilot program in which TECO 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.

2. *Green Pricing* - TECO instituted a customer optional three-year pilot green energy rate and rider program in November 2000. The program is designed to provide TECO's customers with an opportunity to purchase 50 kWh blocks of renewable energy from photovoltaic and biomass sources. Customer participation was less than predicted over the initial three-year period. In 2003, TECO petitioned the Commission to approve \$150,000 of customer funding to extend the program an additional three years, and requested that the energy block size be increased to 100 kWh for each customer contribution of \$5. On April 8, 2004, by Order No. PSC-04-0386-TRF-EI, the Commission approved TECO's request to extend the program, and required TECO to submit semi-annual progress reports. On December 14, 2005, TECO filed its third semi-annual progress report. During the previous six months, a total of 154 new blocks of renewable energy were added to the program, along with an additional 28 participating customers. This fell short of TECO's projected increase of 50 new blocks per month. However, TECO stated that it had met its goals in the revised pilot program. As of April 2004, TECO has added an additional 902 new blocks of renewable energy and 645 customers to the program, for a monthly average of 50 blocks and 36 customers. Through September 2005, participation in the program has grown to 878 customers purchasing 1,222 blocks of renewable energy. For the 18 month period since the revisions were approved, program costs of \$99,661 exceeded revenues of \$68,130. However, due to increased participation, in the previous six months, program revenues exceeded costs. Through 2004, TECO provided biomass, solar, and landfill gas fueled renewable energy from its own resources. In 2005, TECO added a purchase from an outside biomass facility to meet program growth requirements. TECO is currently evaluating potential sources of additional renewable energy, including the use of biodiesel in TECO's existing generating units.

#### **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 through 2014. FPUC's newly-approved goals are comparable to, and in some instances higher than, its previous goals, as displayed in Table 11.

**Table 11: Comparison of FPUC's Previous and Revised DSM Goals**

<i>Year</i>	<i>Residential</i>			<i>Commercial/Industrial</i>		
	<b>Summer MW</b>	<b>Winter MW</b>	<b>Annual GWh</b>	<b>Summer MW</b>	<b>Winter MW</b>	<b>Annual GWh</b>
<b>Previous Goals</b> <i>(cumulative 2000-2009)</i>	1.26	1.50	2.73	1.22	0.73	3.02
<b>Revised Goals</b> <i>(cumulative 2005-2014)</i>	1.00	1.92	2.26	1.69	1.04	4.51

The Commission also 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 units must have a Seasonal Energy Efficiency Ratio (SEER) of 13.0 or higher. Due to uncertainty over future customer participation, FPUC does not plan for this program to contribute towards its DSM goals.
2. *Heating & Cooling Efficiency Upgrade* - This program encourages the installation of high-efficiency heat pump systems (SEER of at least 12.0). 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.
4. *GoodCents Energy Survey* – This is a residential walk-through energy audit program in which FPUC's auditor examines the home and makes recommendations on energy-saving practices and measures, including identification of potential duct leakage. FPUC intends to study the potential of expanding this program to include internet audits in the future.
5. *Ceiling Insulation Upgrade* – This program encourages customers who have electric central air conditioning to add ceiling insulation. FPUC pays \$100 incentives to customers 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 that commercial buildings meet efficiency requirements higher than Florida Model Energy Code standards. It includes both HVAC efficiency and thermal envelope standards.
2. *Technical Assistance Audit* – This interactive program assists commercial customers in identifying energy conservation opportunities. The program is customized to meet individual needs of large customers. FPUC evaluates customer's facility operations, equipment, and energy usage pattern.
3. *Indoor Efficient Lighting Rebate* – This program encourages efficient lighting retrofit applications having demand savings of at least 1,000 watts per lighting source (lamp and ballast). FPUC pays a cash allowance of 10 cents per watt reduced.

## 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 through 2014. However, JEA has continued its existing DSM programs, including:

1. *Green Power Program* – This program encourages the widespread application of renewable energy technology in JEA’s service territory. It sets minimum levels of renewable capacity for 2007 and 2015. It provides incentives for solar photovoltaic (PV) and solar thermal systems, allows net metering for customer-generated electricity from PV systems, and encourages combustion of landfill gas at generating sites.
2. *District Chilled Water Storage* – This program utilizes an underground chilled water system to serve a group of adjacent buildings. The chilled water is used in place of central air conditioning systems and on-site chillers. It reduces capital costs as well as operating costs.
3. *Performance Contracting* – This program provides financing for customer-specific capital improvements, on a case-by-case basis, where the resulting demand and energy savings offset project costs. Systems targeted for improvements include lighting, heating and air-conditioning, controls and automation, process systems, and building envelope.
4. *Lighting Solutions* – This program encourages the installation of energy-efficient lighting by offering lighting energy audits, energy management programs, lighting design and retrofits, and maintenance.
5. *Residential and Commercial Audit* – This is an energy audit program in which JEA’s auditor examines the home or business and makes recommendations on low-cost or no-cost energy-saving practices and measures. It offers walk-through, customer-completed (online), and video-assisted audits.
6. *Low-Income Residential Audit* – This program is similar to traditional energy audit. In addition, JEA, in partnership with local housing agencies, funds energy-saving practices and measures. It also provides customer education presentations.

*Renewable Energy* - JEA does not currently have a green pricing program; however, as mentioned above, JEA has a green power program to encourage the application of renewable energy technology. A component of the green power program is a solar reimbursement program, under which JEA reimburses customers for a portion of the installation cost of solar photovoltaic and solar hot water systems. JEA’s customers have installed 101 eligible systems since the program’s inception, with a combined capacity of 539 kW.

JEA has committed to the Sierra Club and the American Lung Association to achieve 7.5 percent of summer peak capacity resources from clean power by 2015. This includes 6 percent, or 200 MW, of renewable capacity, and 1.5 percent, or 50 MW, of equivalent clean capacity. The equivalent clean capacity will consist of power generation efficiency measures, pollution control additions, and demand-side management programs. JEA plans to meter the energy produced from each renewable facility installed by the utility so that renewable energy credits can be sold to produce additional revenue.

## **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 five residential and one commercial/industrial DSM programs:

### ***Residential Programs***

1. *Energy Survey Program* – This energy audit program provides walk-through, video and compact disk, and online energy surveys for all residential customers.
2. *Energy Efficiency Rebate Program* – This program provides 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 with total 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 is a new construction efficiency program which 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 that energy which is 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 usage efficiency.
2. *Indoor Lighting Retrofit Program* – This program provides discounted installation and special financing for the replacement of inefficient lighting with more efficient lighting technologies.
3. *OUConsumption Online Program* – This program provides the ability for customers to 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. This reduces air conditioning, capital, and operating costs for participating businesses.

*Green Pricing* - OUC launched a green pricing pilot program in 2005 to determine customer response. As OUC evaluated the pilot program, OUC determined that it should pursue proposals from environmental energy companies as an alternative to self execution of the green pricing program. OUC solicited proposals from interested parties and is currently evaluating their responses and conducting negotiations. OUC anticipates that a final decision on an environmental energy company will be made by mid-2006 and the roll out of the green pricing program will follow.

### **3.3 CONSERVATION EFFORTS OF NON-FEECA UTILITIES**

Although the Commission no longer sets numeric DSM goals for the non-FEECA electric utilities, pursuant to Section 366.82(1), Florida Statutes, all Florida utilities are required to provide energy audits to residential customers at no charge. Many of the non-FEECA utilities offer additional DSM 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**

Historically, conservation programs offered by participating gas utilities were used to reduce Florida's reliance on foreign oil, reduce the growth rates of electric consumption, and reduce weather-sensitive peak demand. Gas conservation programs were used to increase gas usage so that Florida could 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 the company's ratepayers and the customer participating in the program.

Much of the recent growth in natural gas usage has been due to normal gas-powered peak electricity generation, though additional growth has occurred in the direct end-use consumption of natural gas for heating, cooling, and industrial uses. Increases in the direct end-use of natural gas serve to reduce demand on the electric grid.

The price of Florida natural gas, which was approximately \$2/million BTU only seven years ago, exceeded \$6/million BTU by February 2005, increased to \$10/million BTU in the days just prior to Hurricane Katrina, and then jumped immediately to more than \$15/million BTU after the hurricane struck the Gulf Coast. These price increases have placed pressure on gas-consuming customers to find ways to reduce their energy bills. To assist customers, natural gas utilities 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. In addition, gas companies have been engaging in informational advertising regarding measures customers can follow to conserve the amount of natural gas they use. Those suggestions include having furnaces checked by a professional once a year, turning down water heater thermostats to 120 degrees, checking insulations, and adding weather stripping to windows and doors.

Under the Commission's Conservation Cost Recovery Clause, companies petition the Commission for approval to implement natural gas conservation programs. Cost-effective programs that are approved often provide customers with rebates to help defray the cost of appliances which, over time, will save the customer money. Energy efficiency investments could reduce future bills which could translate into saving for the average residential natural gas customer.

Table 14 summarizes the conservation expenditures of Florida's natural gas utilities in 2004:

**Table 14: Natural Gas Conservation Cost Recovery - 2004**

	<b>Number of Customers</b>	<b>Expenditure</b>
Chesapeake Utilities	11,973	\$1,036,821
City Gas Company	101,268	\$3,237,145
Florida Public Utilities	48,702	\$2,229,427
Peoples Gas System	307,362	\$11,156,698
St. Joe Natural Gas	3,278	\$16,225
<b>Total</b>	472,583	\$17,676,316

## SECTION 5: EDUCATING FLORIDA'S CONSUMERS ON CONSERVATION

The Public Service Commission continues its effort to educate Floridians on topics related to energy efficiency and water conservation. The Commission's Consumer Outreach Team in the Division of Regulatory Compliance and Consumer Assistance complements existing conservation activities of the FEECA utilities and also serves as a central resource center for consumer information relating to conservation issues.

One of the more effective Consumer Outreach Team's programs is the Library Outreach program. In this ongoing program, the Consumer Outreach Team continues to provide more than 280 public libraries and branch libraries across the state with publications highlighting practical energy and water conservation measures. A survey has also been developed to obtain regular feedback from library administrators about this program, which has 100 percent participation among the 280 Florida libraries contacted. Some of the recent survey comments received from library administrators indicate the educational materials have been helpful to their library patrons and that they would be willing 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 PSC. 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 brochures, in particular, *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 2006.

The Commission's Web site, [www.floridapsc.com](http://www.floridapsc.com), has been expanded and redesigned to supply consumers with greater amounts of information about energy conservation and the conservation efforts of Florida's electric and gas utilities. The Chairman's monthly Consumer Bulletin on the Web page often focuses on conservation topics such as green power and green pricing, peak shifting, residential water conservation, fuel diversity, and how to respond to the rising cost of natural gas. The Web site also includes weekly consumer tips, which often focus on energy and water conservation measures. Weekly Consumer Tips have included:

- Save Money With a Clean Air Filter
- 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 also 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 also provided directly to consumers at each of the Commission's customer meetings, hearings, and other events held throughout Florida. In addition, the Commission provides conservation information to consumers who file a complaint with the Commission regarding high electric or natural gas bills. The Commission also provides conservation information directly to consumers by traveling to a different region of the state each quarter as a part of the Governor's Capital for a Day initiative.

This year the Consumer Outreach Team again, in recognition of the U.S. Department of Energy's "Energy Awareness Month (October)," worked with two schools in Leon County in a program to promote energy conservation awareness among the students. This was the second year for the pilot program, which has received positive feedback from School Board members, Superintendent of Schools, students, and teachers. Tallahassee's Chiles High School drama students performed an original play, *Turn It On; Turn It Off*, to show what happens to a family's energy usage when the Energy Hog comes for an unexpected visit. Plans are being made to determine how the energy awareness program could be included as a possible curriculum unit in Florida's elementary and middle schools. WFSU representatives recently taped a staged production of *Turn It On: Turn It Off* in their studios, and the video taping is now being edited for possible distribution to interested schools. The Mary Brogan Museum of Art and Science in Tallahassee is also interested in using the video tape/DVD of the play in a future interactive energy exhibit at the Museum.

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

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

## **SECTION 6: FLORIDA ENERGY CONSERVATION STANDARDS ACT**

Pursuant to Section 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 1,836 GWh through 2005. Lighting equipment standards, effective January 1, 1989, have resulted in an estimated 972 GWh in energy savings through 2005. Standards for showerheads went into effect January 1, 1988, and are estimated to have saved 2,262 GWh through 2005.

In the process of revising this report, the Commission's staff determined that these state efficiency standards have been superseded by federal efficiency standards. Therefore, this reporting requirement may no longer be meaningful in the future. The DCA has been given the jurisdiction by the Legislature to implement the Energy Conservation Standards Act. The DCA is currently reviewing whether the Conservation Standards Act should be repealed. Staff will continue to work with the DCA to determine whether to repeal the Commission's reporting requirement.

## **APPENDIX: RELATED WEBSITES**

### ***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/fla\\_energy/](http://www.dep.state.fl.us/energy/fla_energy/)

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

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

Florida's Local Weatherization Agencies List –  
<http://www.floridacommunitydevelopment.org/Community%20Assistance%20Contact%20List.pdf>

### ***U.S. Agencies and National Organizations:***

National Energy Foundation – <http://www.nef1.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/](http://www.eere.energy.gov/consumer/your_home/)

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

### ***Florida's Electric Utilities Subject to FEECA:***

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

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

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

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

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

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

JEA – <http://www.jea.com/>

***Florida's Investor-Owned Natural Gas Utilities:***

Chesapeake Utilities Corporation – <http://www.chpkgas.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/>