

FLORIDA PUBLIC SERVICE COMMISSION



ANNUAL REPORT ON

Activities Pursuant to the

Florida Energy Efficiency and Conservation Act

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

FEBRUARY 2007

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Prepared by
Division of Economic Regulation
Florida Public Service Commission

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EXECUTIVE SUMMARY

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

Since the enactment of FEECA, utility-sponsored demand-side management (DSM) programs have reduced statewide summer peak demand by an estimated 4,983 megawatts (MW) and winter peak demand by 5,577 MW. Annual energy savings from utility-sponsored DSM programs were estimated to be 5,896 gigawatt-hours (GWh)² in 2006. The demand savings from these programs has deferred the need for ten typical 500 MW electric generating plants, or enough capacity to serve approximately 1.6 million households. By 2015, DSM programs are forecasted to further reduce aggregate peak demand and energy consumption, as summarized below.

Estimated Cumulative Savings from Utility-Sponsored DSM Programs Since 1980

	2006	By 2015
Summer Peak Demand	4,983 MW	6,062 MW
Winter Peak Demand	5,577 MW	6,447 MW
Energy Consumption (Annual)	5,896 GWh	7,342 GWh

The Commission has emphasized the need for a balanced fuel supply to meet the energy needs of Florida's growing population. To meet these growing energy needs while reducing ratepayer exposure to high rates for electricity, Florida's utilities must: 1) offer cost-effective conservation programs to customers, 2) install the most fuel-efficient generation, and 3) increase the use of renewable fuels. The Commission encourages Florida's utilities and consumers to view energy conservation as an essential starting point for achieving fuel diversity because it

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

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

eliminates the use of fuel and defers the need for additional generating capacity. Florida's electric utilities must demonstrate that all cost-effective conservation opportunities have been exhausted in order to obtain a determination of need from the Commission for new electric generating capacity.

Recent substantial increases in fuel prices, particularly for natural gas, coupled with increasing capital costs for new generating units, have augmented the potential benefit of energy conservation. Therefore, more utility-sponsored conservation programs may be cost-effective. Florida's two largest utilities, Florida Power & Light Company and Progress Energy Florida, recently received Commission approval of several new and revised DSM programs that are expected to result in additional summer peak demand savings of 798 MW, winter peak demand savings of 861 MW, and annual energy savings of 368 GWh by 2015.

Commission-required residential energy audits provide the first step for utilities and customers to assess conservation opportunities for Florida's individual homeowners. Florida's investor-owned utilities offer a menu of conservation programs for residential and commercial customers. In order to obtain cost recovery, Florida's investor-owned utilities must show that each program is cost-effective not only to the participating customer, but to the general body of ratepayers as well. In special circumstances, the Commission may approve programs that have a minimal affect on rates, but offer a large potential for energy savings. In 2005, Florida's investor-owned electric utilities recovered over \$228.2 million in conservation program expenditures from ratepayers, while investor-owned natural gas utilities recovered approximately \$14.9 million in conservation program expenditures.

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

Consistent with the goals of FEECA, generating electricity with renewable fuels can also reduce the state's dependence on expensive fossil fuels. The Commission continues to develop policies designed to encourage renewable generation within the state. In 2001, the Commission approved Rule 25-6.065, Florida Administrative Code, to facilitate the interconnection of customer-owned small photovoltaic systems to the electric grid. During 2006,

the total number of small photovoltaic systems and associated capacity interconnected more than doubled.³ On January 9, 2007, the Commission adopted new requirements for utility purchased power contracts with renewable generators which will enhance the ability to finance new projects and maintain the viability of existing renewable generating facilities. The Commission has also held a workshop on January 19, 2007, to obtain further information on the potential for the development of renewable generation within Florida.

Conservation and renewable energy are expected to continue to play a vital role in meeting the needs of Florida's growing population. The Commission will continue its efforts to encourage conservation and renewable energy to reduce the use of fossil fuels and defer the need for new generating capacity. The Commission will diligently review utility proposals for conservation programs and renewable purchased power contracts to ensure that these actions are in the best interest of Florida's ratepayers.

³ Currently, 46 small photovoltaic systems with a combined capacity of 155.6 kilowatts have been interconnected to the electric grid as a result of the rule.

TABLE OF CONTENTS

INTRODUCTION	2
SECTION 1: OVERVIEW OF FLORIDA’S ELECTRICITY MARKET	3
1.1 Energy Demand in Florida.....	3
1.2 Florida's Electric Generating Resources	5
SECTION 2: THE FLORIDA ENERGY EFFICIENCY AND CONSERVATION ACT ...	7
2.1 History of FEECA.....	7
2.2 Commission Rules Implementing FEECA	8
2.3 Conservation Cost-Effectiveness Requirement	10
2.4 Conservation Achievements	11
2.5 Conservation Cost Recovery.....	13
2.6 Generation Related Conservation Measures.....	14
SECTION 3: CONSERVATION ACTIVITIES OF ELECTRIC UTILITIES	22
3.1 Types of Conservation Programs.....	22
3.2 Conservation Activities of FEECA Utilities.....	23
A. Florida Power & Light Company	23
B. Progress Energy	27
C. Gulf Power Company	33
D. Tampa Electric Company.....	36
E. Florida Public Utilities Company	40
F. JEA.....	41
G. Orlando Utilities Commission.....	42
3.3 Conservation Efforts of Non-FEECA Utilities	43
SECTION 4: CONSERVATION ACTIVITIES OF NATURAL GAS UTILITIES	45
SECTION 5: EDUCATING FLORIDA’S CONSUMERS ON CONSERVATION	47
APPENDIX: RELATED WEBSITES	50

INTRODUCTION

This report fulfills the requirements of Sections 366.82(4) and 377.703(3)(f), 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 an annual report to the Legislature and the Governor with the DSM goals it has adopted under FEECA and the progress toward meeting these goals. Section 377.703(3)(f), Florida Statutes, directs the Commission to provide an annual report to the Department of Environmental Protection on “electricity and natural gas and information on energy conservation programs.”

SECTION 1: OVERVIEW OF FLORIDA’S ELECTRICITY MARKET

1.1 Energy Demand in Florida

Understanding the nature and extent of customer electrical demand in Florida is essential to fully comprehending the importance of conservation. Florida’s electrical demand and energy usage are somewhat unique because the state’s customer base is heavily weighted toward residential customers. As shown in Table 1, residential customers make up over 88 percent of Florida’s electricity customers, purchasing about 53 percent of the state’s total electrical energy. At approximately 11 percent, Florida’s industrial electrical energy usage is much smaller than the national average of 28 percent.

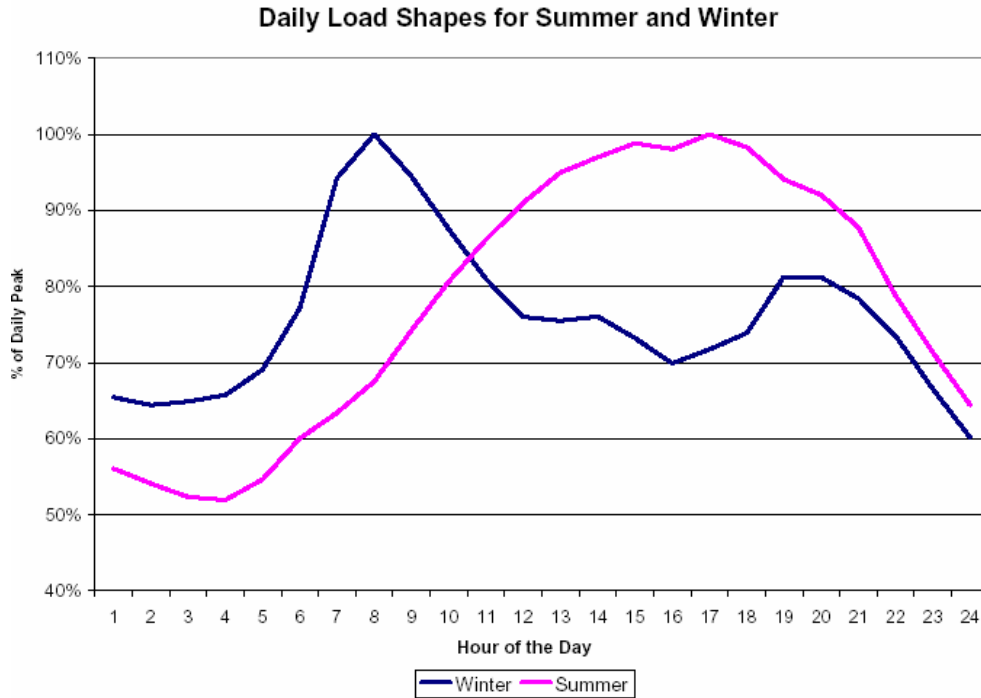
Table 1: Florida’s Electric Customers by Class and Consumption - 2005

Customer Class	Number of Customers	% of Customers	Energy Sales (gigawatt-hours)	% of Sales
Residential	7,962,111	88.7	114,156	52.8
Commercial	981,885	10.9	78,809	36.4
Industrial	36,188	0.4	23,431	10.8
Total	8,980,184	100.0	216,396	100.0

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 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 peak summer and winter days in Florida. As can be seen, in the summer, customer demand begins to climb in the morning and peaks in the early evening, a pattern which corresponds to the sun heating buildings and 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, both corresponding to heating loads.

Figure 1: Typical Florida Daily Electric Load Shapes



Florida’s electric demand is typically highest in the summer. Summer peak electric demand in 2005 reached 48,688 megawatts (MW), and has increased an average 3.88 percent per year over the past decade. Winter peak demand reached 44,871 MW in 2005, and has increased an average 2.19 percent per year over the past decade. This increase in peak demand is due primarily to high population growth. The growth in total electrical energy consumption has averaged 3.00 percent per year over the past decade, exceeding Florida’s average population growth rate. Florida’s population is expected to grow at 1.93 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 2.39 and 2.36 percent, respectively, over the next ten years. Total electrical energy consumption is projected to grow at an average 2.74 percent per year over the next ten years.

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

1.2 Florida's Electric Generating Resources

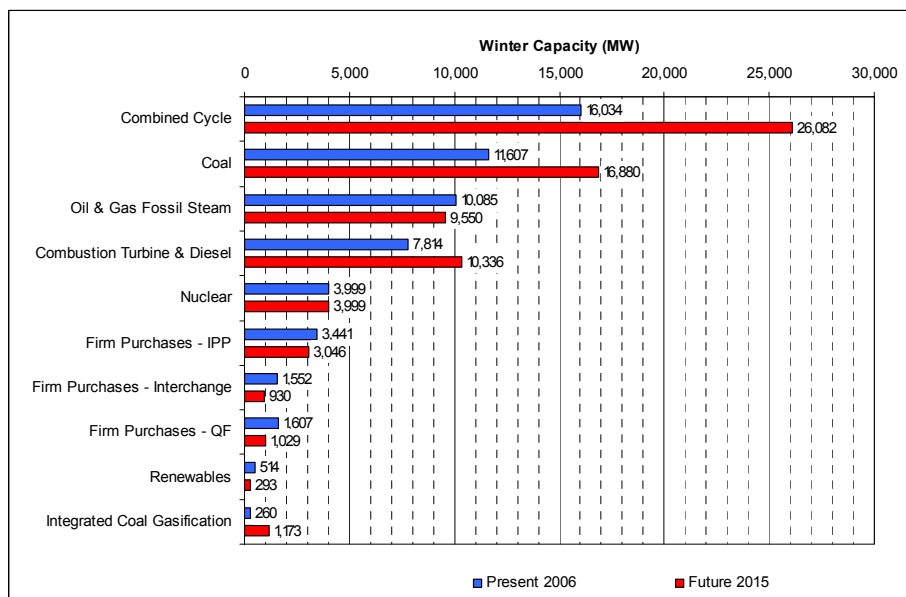
Utility conservation efforts can best be understood when placed in the context of Florida's electricity generation market. Florida's electrical energy needs are met by the following:

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

Combined, these utilities currently have 48,436 MW of summer electric generating capacity and 51,593 MW of winter generating capacity. Non-utility generators in the state have an additional 4,683 MW of summer electric generating capacity and 4,445 MW of winter generating capacity. Based on the latest utility planning documents, Florida's utilities are expected to add a net generating capacity of 16,632 MW over the next 10 years. This capacity increase is net of the retirement of existing generating units and expired long-term purchased power agreements. The planned generating capacity will serve new load growth in the state.

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

Figure 2: Florida's Electric Utility Capacity Mix

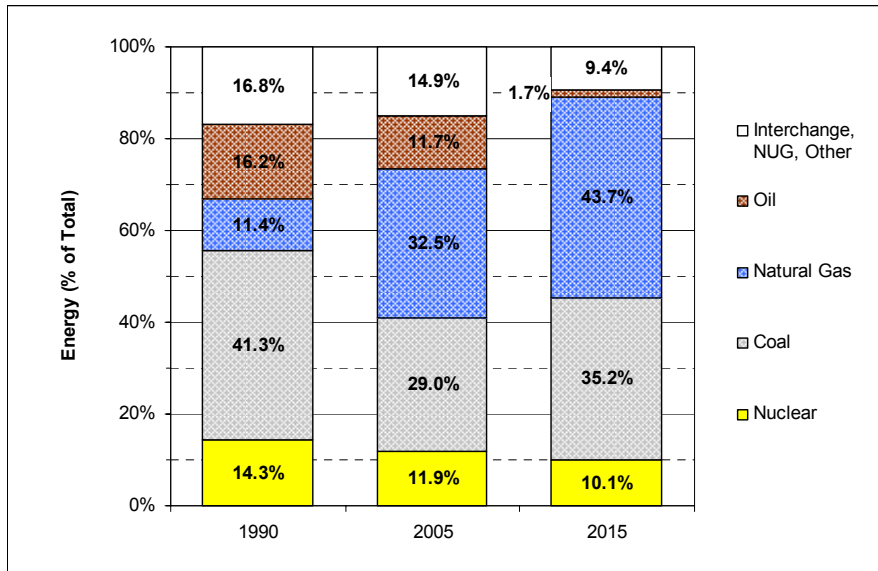


Note: IPP denotes Independent Power Producer

QF denotes Qualifying Facility

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 2005, the vast majority of new generating capacity constructed in Florida was natural gas-fired, leading to an increase in the percentage of the state’s energy generated by gas. This trend is projected to continue in the near future. 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 32.5 percent of the total energy generated in 2005 to 43.7 percent in 2015.

Figure 3: Energy Generation by Fuel Type - 1990, 2005 and 2015



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 2005 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 86.4 percent of the state's total electrical energy sales.

Table 2: Energy Sales by Florida’s Electric Utilities - 2005

Florida’s Electric Utilities	Energy Sales GWh	% of Total State Energy Sales
<i>Utilities Subject to FEECA</i>		
FPL	102,296	46.0 %
Progress Energy	39,178	17.6 %
TECO	18,911	8.5 %
Gulf	11,239	5.1 %
FPUC	825	0.4 %
JEA	13,696	6.2 %
OUC	5,852	2.6 %
FEECA Total	191,997	86.4%
Non-FEECA Total	30,311	13.6%
State Total	222,308	100.0%

2.2 Commission Rules Implementing FEECA

In 1980, the Commission adopted Rules 25-17.001 through 25-17.015, Florida Administrative Code, requiring all electric utilities to implement cost-effective DSM programs. In June 1993, the Commission revised its rules, requiring the establishment of numeric DSM goals for summer and winter demand (MW) and annual energy sales (GWh). These rules now apply to the seven Florida utilities subject to FEECA. The Commission reviews DSM goals for each utility at least once every five years and sets numeric demand and energy sales goals which extend 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 and which 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 goals established in 2004 for several of the investor-owned utilities are lower than the goals approved by the Commission in 1999 because of 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. However, the Commission has seen this trend begin to reverse. 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 requirements on heating, ventilating, and air conditioning systems (HVAC) were made more stringent. For example, 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 new standards reduced the potential for achieving demand savings in utility-sponsored DSM programs designed to encourage consumers to replace inefficient HVAC equipment.

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.

Since avoided costs have been on the rise due to increasing fuel prices and plant construction costs, the FEECA utilities have begun to re-evaluate the cost-effectiveness of all current DSM programs. Increased avoided costs should lead to larger numbers of cost-effective DSM programs that use higher rebate levels to encourage greater participation by utility customers. For example FPL filed two new DSM programs and eight modified programs, all of which the Commission approved in August 2006. Through greater customer participation, caused in part by higher customer incentives, FPL expects its new and revised programs to lead to additional summer peak demand savings of 454 MW, winter peak demand savings of 310 MW, and annual energy savings of 54 GWh. Progress Energy and TECO also received Commission approval during 2006 for modifications to their DSM programs. As a result, Progress Energy will offer its residential load control program on a year-round basis rather than only during the winter months. The Commission approved the permanent status for FPL's and TECO's green pricing pilot programs in which voluntary contributions fund utility purchases of clean renewable energy. Overall, demand and energy savings from utility-sponsored conservation programs are expected to surpass current goals by as much as 50 percent. The Commission will continue to explore means of cost-effectively increasing the amount of DSM savings available from utility conservation programs.

2.3 Conservation Cost-Effectiveness Requirement

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 assist program participants by reducing their electric bills. Cost-effective DSM programs favor the general body of electric utility ratepayers by (1) deferring the need for future power plant construction, (2) reducing current production cost, and (3) improving reliability.

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, 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 Measure (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, since the Commission does not regulate the rates of municipal utilities, the Commission does not address cost recovery of the DSM costs of these utilities' DSM programs.

The Commission also requires investor-owned utilities to address the dynamic nature of the cost-effectiveness of DSM programs by reevaluating the programs on a regular basis. If a program is no longer 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 price 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 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. Because of higher energy costs consumers may benefit from 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, Florida’s utilities have been successful in meeting the overall objectives of FEECA. Since FEECA’s enactment, utility-sponsored DSM programs have reduced statewide summer peak demand by an estimated 4,983 MW and winter peak demand by 5,577 MW, as well as reduced annual energy consumption by an estimated 5,896 GWh in 2006. 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, DSM programs have deferred the need for ten typical 500 MW plants, or enough capacity to serve approximately 1.6 million households. By 2015, 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

	2006	By 2015
Summer Peak Demand	4,983 MW	6,062 MW
Winter Peak Demand	5,577 MW	6,447 MW
Energy Consumption (Annual)	5,896 GWh	7,342 GWh

Table 4 displays the reported DSM demand and energy achievements of the five investor-owned utilities in 2005, compared to their DSM goals set by the Commission in 2004.

Table 4: Comparison of Cumulative DSM Achievements with Approved Goals - 2005

	Winter MW Goals	Reported Winter MW Reduction	Summer MW Goals	Reported Summer MW Reduction	Annual GWh Goals	Reported Annual GWh Reduction
FPL						
Residential	26.0	21.4	47.8	49.8	90.3	91.6
Commercial/Industrial	12.8	14.9	26.3	26.3	31.5	92.6
Progress Energy						
Residential	43.0	48.0	13.0	18.0	21.0	29.0
Commercial/Industrial	3.0	6.0	4.0	8.0	3.0	3.0
TECO						
Residential	4.0	4.2	2.4	2.8	7.0	7.1
Commercial/Industrial	1.0	3.4	2.1	4.3	6.7	7.9
Gulf Power						
Residential	7.0	4.0	6.0	3.0	3.0	3.2
Commercial/Industrial	5.0	6.0	11.0	11.25	2.0	14.5
FPUC						
Residential	.11	.20	.08	.12	.16	.26
Commercial/Industrial	.09	.08	.15	.11	.40	.35

Progress Energy and TECO met or surpassed all of the Commission-approved cumulative demand and energy goals in 2005. FPL met or surpassed all of its 2005 DSM goals with the exception of the residential winter demand goal. FPL experienced lower than predicted participation levels in its Residential Building Envelope program, which offers incentives to residential customers to install energy efficient roof and ceiling insulation measures. FPL expects that its two new DSM programs and modifications to eight existing programs, which were approved by the Commission in August 2006, will encourage additional customer participation and result in increased demand and energy savings. Gulf met or surpassed all its 2005 commercial/industrial goals and its residential energy goal. Gulf Power did not meet its 2005 residential demand goals due to market changes which resulted in lower than expected participation in residential conservation programs. According to Gulf, the primary reason for lowered participation was the impact of Hurricanes Ivan, Dennis, and Katrina on customer participation and retention in the GoodCents Select program. After the landfall of Hurricane Ivan in September 2004, Gulf experienced a noticeable decrease in both GoodCents Select contracts and installations and an increase in customer requests to be removed from the program. FPUC met or surpassed all of its 2005 residential DSM goals. FPUC did not meet its 2005 commercial/industrial goals due primarily to lower than anticipated participation in FPUC's GoodCents Building and GoodCents Indoor Efficient Lighting Rebate programs.

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). Utilities are required to present evidence that new DSM programs are cost-effective and therefore benefit the general body of ratepayers prior to seeking cost recovery through the ECCR clause. Program modifications must also be approved by the Commission prior to a utility seeking cost recovery through the ECCR clause.

During the ECCR proceedings in November each year, 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 30, 2006. These factors take effect with the first billing cycle of 2007. 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 - 2007

	Residential Conservation Cost Recovery Factor (cents per kWh)	Typical Residential Monthly Bill Impact (based on 1,000 kWh)
FPL	.169	\$1.69
Progress	.196	\$1.96
TECO	.073	\$0.73
Gulf	.088	\$0.88
FPUC	.060	\$0.60

Since 1981, Florida's investor-owned electric utilities have recovered over \$4.15 billion of conservation program expenditures through the ECCR clause, with nearly \$2.54 billion of that amount in the last ten years. 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 last ten years.

Table 6: DSM Expenditures Recovered Through the ECCR Clause

	FPL	Progress Energy	TECO	Gulf	FPUC	Total
1996	179,009,536	80,423,465	19,273,026	2,635,285	\$125,688	281,467,000
1997	170,921,157	74,359,150	18,462,512	2,689,297	223,589	266,655,705
1998	164,483,007	77,936,016	19,421,194	2,356,560	284,326	264,481,103
1999	158,376,162	68,431,962	18,129,268	2,963,888	300,415	248,201,695
2000	158,312,902	66,052,277	16,656,250	3,872,004	323,102	245,216,535
2001	157,660,093	64,831,597	17,600,060	4,984,286	358,054	245,434,090
2002	162,062,655	63,150,036	16,970,240	5,436,083	418,498	248,037,512
2003	150,026,657	62,156,585	17,518,874	7,313,033	381,563	237,396,712
2004	145,679,192	60,072,362	16,357,137	7,619,637	382,504	230,110,832
2005	144,192,696	59,143,076	15,583,727	8,826,754	473,610	228,219,863

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 to further 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 facilitates 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 the 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 and which is primarily used to offset all or part of the customer's current electricity requirements. The rule establishes standards for the interconnection of an SPS with the electric grid and requires 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 the 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. In 2006, the total number of small photovoltaic systems and associated capacity interconnected more than doubled to 46 small photovoltaic systems, with a combined capacity of 155.6 kilowatts.

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

Florida Power & Light - FPL reported that it has connected 23 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. No new systems were connected in 2005. In 2006, fifteen residential customers were connected and the systems range in capacity from 1.0 kW to 7 kW. The total capacity for the twenty-three active systems is 81.1 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.

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 17 SPS interconnection

agreements, with a total capacity of 58 kW, since the inception of the program, with six SPS interconnections in 2006. These systems range in capacity from 1.2 to 9.9 kW. Participating customers receive a credit to their bills at Progress Energy's avoided cost for any excess kWh supplied to the grid.

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. In 2006, this customer, along with three additional residential customers were connected. These systems range in capacity from 1.3 to 4.3 kW, with a total capacity of 11.7 kW. Participating customers receive a credit to their bills at TECO's avoided cost for any excess kWh supplied to the grid.

Gulf Power Company - Prior to 2006, Gulf had interconnected one SPS system. 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. In 2006, one residential customer was connected with a system capacity of 3.5 kW. Participating customers receive a credit to their bills at Gulf's avoided cost for any excess kWh supplied to the grid.

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 to the Commission in January 2005.

Renewable Energy

In Florida, renewable energy comes primarily from waste-to-energy, phosphate processes, landfill gas, and hydroelectric sources. Electric utilities and non-utility generators produce over 1,100 MW of renewable energy in Florida. Renewable energy facilities currently produce 603 MW of non-firm energy for internal use (self-service) or for sale to utilities on an as-available basis. As a result, the state's utilities do not count on this non-firm energy for reliability purposes. Renewable energy facilities also provide firm capacity benefits to the state. Florida's electric utilities currently purchase 511 MW of firm capacity from renewable energy sources.

Despite generating over 1,100 MW of renewable energy these facilities do not account for a large portion of Florida's energy generation. Historically, relatively high capital and operating costs, as well as limited applications, have hampered the development of renewable energy in the state. The percentage contribution of renewable energy to net energy for load (NEL) since 2000, for the reporting utilities, is shown in Table 7.

Table 7: Reporting Utilities – Contribution of Renewable Energy to Net Energy for Load

UTILITY	2000	2001	2002	2003	2004	2005
Florida Power & Light Company	1.6%	1.4%	1.5%	1.5%	1.5%	1.4%
Progress Energy Florida	3.9%	3.5%	3.4%	3.3%	3.1%	2.8%
Tampa Electric Company	1.5%	1.7%	1.9%	1.8%	1.7%	2.2%
Gulf Power Company	< 1.0%	< 1.0%	< 1.0%	< 1.0%	< 1.0%	< 1.0%
JEA	< 1.0%	< 1.0%	< 1.0%	< 1.0%	< 1.0%	< 1.0%
Orlando Utilities Commission	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Gainesville Regional Utilities ⁴	---	---	---	---	0.2%	0.3%
City of Lakeland	< 1.0%	< 1.0%	< 1.0%	< 1.0%	< 1.0%	< 1.0%
City of Tallahassee	< 1.0%	< 1.0%	< 1.0%	< 1.0%	< 1.0%	< 1.0%
Seminole Electric Cooperative	2.8%	2.6%	2.4%	2.3%	2.4%	2.7%

⁴ GRU only reported data for 2004 and 2005.

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

Table 8: State of Florida - Self-Service and Non-Firm Renewable Energy Sources for 2006.

UTILITY	FACILITY	FUEL TYPE	CAPACITY (MW)
FMPA	Metro Key West	MSW	2.5
MSW Subtotal			2.5
FPL	Tomoka Farms	Landfill Gas	3.8
TECO	City of Tampa	Landfill Gas	1.4
Landfill Gas Subtotal			5.2
Progress	Potash Corp. of Saskatchewan	Waste Heat	42.0
TECO	Cargill Millpoint	Waste Heat	41
TECO	Cargill Ridgewood	Waste Heat	57.1
TECO	CF Industries	Waste Heat	27.4
TECO	Greenbay	Waste Heat	25.1
TECO	IMC New Wales	Waste Heat	50.8
TECO	IMC South Pierce	Waste Heat	28.5
Waste Heat Subtotal			271.9
FMPA	US Sugar	Biomass	26.5
FPL	Georgia Pacific	Biomass	52.0
FPL	Okeelanta	Biomass	70.0
FPL	US Sugar Bryant	Biomass	20.0
Gulf	International Paper Company	Biomass	78.2
Gulf	Stone Container Company	Biomass	39.0
Progress	Proctor & Gamble (Buckeye)	Biomass	38.0
Biomass Subtotal			323.7
TOTAL NON-FIRM ENERGY RENEWABLES			603.3

Table 9 is a list of all renewable energy facilities that sell firm capacity to Florida's electric utilities.

Table 9: State of Florida - Renewable Energy Sources Providing Firm Capacity in 2006.

UTILITY	FACILITY	FUEL TYPE	CAPACITY (MW)
FPL	Broward North	MSW	56.0
FPL	Broward South	MSW	54.1
FPL	Palm Beach County Solid Waste Authority	MSW	47.5
Progress	Bay County (Montenay Bay)	MSW	11.0
Progress	Dade County	MSW	43.0
Progress	Lake County (Covanta Lake)	MSW	12.8
Progress	Pasco County (Covanta Pasco)	MSW	23.0
Progress	Pinellas County	MSW	54.8
TECO	City of Tampa (McKay Bay)	MSW	15.5
TECO	Hillsborough County	MSW	23.0
SEC	Lee County	MSW	35.0
MSW Subtotal			375.7
Progress	Jefferson Power	Biomass	2.0
Progress	Ridge Generating Station	Biomass	39.6
SEC	Telogia Power	Biomass	12.0
Biomass Subtotal			53.6
Progress	Cargill Fertilizer	Waste Heat	15.0
Progress	US Agri-Chem	Waste Heat	5.6
Waste Heat Subtotal			20.6
TAL	C. H. Corn Dam	Hydro	11.0
Fed. Govt. (SEPA)	Jim Woodruff Dam	Hydro	43.5
Hydro Subtotal			54.5
SEC	BioEnergy Partners	Landfill Gas	7.0
TOTAL FIRM CAPACITY RENEWABLES			511.4

Several renewable capacity contracts are scheduled to expire during the planning horizon, causing the amount of firm renewable capacity purchases to decrease by 220 MW by 2015. If new contracts are signed in the future, these resources will continue to contribute firm capacity from renewable sources to the state's capacity mix.

Although Florida's utilities purchase firm capacity and energy from non-utility renewable energy providers, utility research into renewable energy has resulted in several self-generation projects which contribute additional capacity and energy. During 2006, the Commission gathered additional data on these self-generation projects as well as purchases from renewable energy providers. Florida's utilities generate approximately 16 MW of renewable capacity and energy, with 15.5 MW from turbines fueled by landfill or sewer gas, 0.4 MW from solar and photovoltaic resources, and 0.1 MW from solar water heating. The utilities also indicate that a small handful of customers own their own solar thermal and photovoltaic equipment to produce renewable energy to offset all or part of their utility service requirements. Energy production from these solar facilities averages approximately 2.5 KW per installation. Many of the small photovoltaic systems were interconnected as a result of the Commission's recent Small Photovoltaic rule. As part of the Ten-Year Site Plan process, the Commission continues its ongoing efforts to gather data on renewable energy developments in the state.

Several utilities in the state encourage the development of renewable resources by offering voluntary green pricing programs in which interested consumers have the option to pay an additional fee on their utility bills to fund renewable generation. Several Florida utilities also participate in the market for Tradable Renewable Energy Credits (TRECs). These credits are financial instruments which represent the environmental attributes associated with the generation of renewable energy, and provide an additional revenue source for renewable generators. FPL purchases these credits as part of its green pricing program, while other utilities reported that they sell the credits to provide additional funds for their own renewable generation.

Legislative and Commission Actions to Encourage Renewables

The 2005 Florida Legislature enacted Section 366.91, Florida Statutes, requiring the FEECA utilities to continuously offer to purchase capacity and energy from renewable energy resources. To further encourage the development of renewable generation in Florida, the 2006 Legislature enacted Section 366.92, Florida Statutes, authorizing the Commission to adopt goals, as appropriate, to increase the use of existing and new renewable energy resources in the state. The intent of both statutes is to protect the economic viability of Florida's existing renewable energy facilities and promote further development of renewable energy resources in the state while minimizing costs to ratepayers.

The Commission has initiated a multi-faceted approach to implement these statutes. In an effort to encourage renewables beyond the requirements of Section 366.91, Florida Statutes, in 2006, the Commission directed the IOUs to file standard offer contracts for renewable energy providers based on a portfolio of generating unit types. A portfolio approach for renewable energy contracts will encourage renewables to play a greater role in enhancing fuel diversity for Florida. FPL, Progress Energy, and TECO were required to file a standard offer contract based on the first coal, combined cycle, combustion turbine, or integrated coal gasification combined cycle unit contained in the Ten-Year Site Plan. The Commission's approval was protested by a group of industrial cogenerators, making the tariffs unavailable and preventing other renewable generators from taking advantage of standard offer contracts. Rather than acting on the proposed tariffs, the Commission decided first to pursue proposed revisions to its standard offer contract rules to codify the Legislature's intent to encourage renewable generation. The Commission held a hearing on the proposed rule in November 2006, and adopted a final rule on January 9, 2007. Upon final rule adoption, the Commission will again direct the IOUs to file standard offer contracts for renewable energy providers as early as February 2007.

The Commission conducted a public workshop on January 19, 2007, to investigate further promotion and development of renewable generation in the state. The workshop provided a forum for the Commission to gather more information regarding the types of renewable generation that can be feasibly developed in Florida and to discuss measures to encourage such development in Florida.

SECTION 3: CONSERVATION ACTIVITIES OF ELECTRIC UTILITIES

3.1 Types of Conservation Programs

Each FEECA utility offers some form of energy conservation education as well as energy audits. Educational programs and announcements give consumers basic techniques to conserve energy and to receive information on the utility's available energy programs. As a result of an energy audit, utility representatives give a customer specific recommendations on energy-saving practices, home improvements, and appliances that can reduce the customer's energy usage and electric bill. Energy audit programs 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, and most utilities also provide energy audits for commercial/industrial customers. Some utilities also have programs to educate the construction industry on the Florida Energy Efficiency Code for Building Construction.

Specific conservation programs such as ceiling insulation upgrade, residential energy management, window film and duct leak testing are offered, with the utility paying a financial incentive to the customer for installing qualified energy-efficient measures. Utilities also offer cash incentives programs 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 give 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 any utility energy conservation plan. 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 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. Some of the earlier research programs have recently been approved by the Commission for permanent program status. Florida's utilities continue to conduct research programs to identify customer interest in renewable energy and the cost and technical feasibility of implementing new technologies.

3.2 Conservation Activities of FEECA Utilities

A. Florida Power & Light Company

On August 9, 2004, by Order No. PSC-04-0763-PAA-EG, the Commission set new numeric goals for Florida Power & Light for the period 2005 through 2014. The Commission also required FPL to file a DSM plan, containing programs designed to meet these goals. As displayed in Table 10, FPL's newly established residential demand goals are higher than its previous goals, while the 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 10: Comparison of FPL's Previous and Revised DSM Goals

<i>Year</i>	<i>Residential</i>			<i>Commercial/Industrial</i>		
	Summer MW	Winter MW	Annual GWh	Summer MW	Winter MW	Annual GWh
Previous Goals <i>(cumulative 2000-2009)</i>	485.9	372.4	943.2	278.8	133.0	343.4
Revised Goals <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. In August 2006, FPL received Commission approval for two new DSM programs and eight modified programs. Through greater customer participation, caused in part by higher customer incentives, FPL expects its new and revised programs to lead to additional summer peak demand savings of 454 MW, winter peak demand savings of 310 MW, and annual energy savings of 54 GWh. FPL's DSM plan, which incorporates the changes approved in 2006, includes the following programs.

Residential Programs

1. *Residential Building Envelope* - This program offers incentives to residential customers to install energy efficient roof and ceiling insulation measures. A maximum incentive of \$1,676 per summer kW demand reduction is offered for ceiling insulation. The program also includes a maximum incentive of \$706 per summer kW for reflective roof installation, and a maximum of \$1,518 per summer kW reduction for installation of light colored thermoplastic membranes and reflective roof coating.
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 with a SEER rating of 14 or higher, and includes incentives for plenum repair. For straight cool and heat pump units, the maximum incentive range is \$1,429 to \$1,643 per summer kW reduction. Additional incentives for the purchase of high efficiency equipment include a maximum of \$206 per summer kW reduction for air handler units with a variable speed motor, and a maximum incentive of \$272 per summer kW reduction for units that are sized using approved software.
4. *Residential Load Management Program (On Call Program)* - This existing load management program has direct load control equipment installed on selected customer end-use equipment, allowing FPL to control the 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. Recent revisions to the approved cycling interruption schedule have increased the demand reduction capability and mitigated the number of times air conditioners may be continuously interrupted. 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.
6. *Residential Low Income Weatherization Program* - This program combines energy audits and incentives to encourage low income housing administrators to retrofit homes with energy efficiency measures. Following an energy audit, local providers of approved weatherization service may receive incentives of \$45 for HVAC maintenance, \$60 maximum for reduced air infiltration, and \$25 for replacement of a room air conditioner.
7. *Residential Conservation Service* - 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.

8. *Sunshine Energy* - This recently approved program is based on results of the Green Power Pricing Research Project. The voluntary program open to both residential and commercial customers, affords customers the opportunity to pay a monthly fee of \$9.75 for a block of 1,000 tradable renewable energy credits, which represents the environmental attributes of 1,000 kWh of renewable energy. 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 program encourages renewable generation development nationwide, with a preference for renewable generation within Florida. By the end of June 2006, more than 25,200 participants provided funds in excess of \$4.1 million.

Commercial/Industrial Programs

1. *Business HVAC Program* - This program offers financial incentives to upgrade to higher efficiency HVAC equipment. Revised minimum qualifying SEER levels reflect recent changes to the U.S. Department of Energy efficiency standards. Both refrigeration and direct expansion units are allowed for the maximum incentive of \$898 per summer kW reduction for thermal storage systems. Direct expansion units qualify for \$168 per summer kW reduction, and adding efficient room air conditioning units to a direct expansion program qualifies for a maximum incentive of \$498 per summer kW reduction. For chillers, the maximum incentive is \$99 per summer kW reduction. The maximum incentive for an energy recovery ventilator unit is \$417 per summer kW reduction, and \$627 per summer kW reduction for demand control ventilation systems. A maximum incentive of \$102 per summer kW is offered for a variable speed motor in an air conditioning system.
2. *Business Efficient Lighting Program* - The Efficient Lighting program offers C/I customers financial incentives to install high efficiency lighting measures at the time of replacement. The maximum incentive for reduction in demand is \$132 per summer kW.
3. *Business 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 that will increase building efficiency in order to reduce HVAC loads. Recent program modifications make available maximum incentives of \$185 per summer kW reduction for ceiling insulation, \$219 per kW reduction for roof insulation, \$579 per summer kW reduction for reflective roofs, and \$429 per summer kW reduction for qualified window treatments.
4. *Business Custom Incentive Program* - This existing “catch-all” program is for cost-effective C/I efficiency measures which are not included in other FPL programs. DSM measures must reduce or shift at least 25 kW during peak hours, have verifiable demand and energy savings, and pass the RIM test.
5. *Business On Call Program* - This existing program offers incentives to General Service and General Service Demand customers for the direct control of the participants’ direct expansion, central air conditioners. Recently approved modifications to the schedule of allowed interruptions will mitigate cycling of the interrupted equipment and allow for continuous interruption under force majeure conditions.

6. *C/I Demand Reduction Program* - This program reduces peak demand by allowing the direct control of customer loads of 200 kW or greater during periods of extreme demand or capacity shortages. Participants contract for a firm demand level which may not be exceeded during capacity shortage periods. Participants receive a monthly credit in exchange for allowing FPL to directly control their electrical loads during periods of extreme demand, capacity shortages, or system emergencies. Customers must give a five-year termination notice to discontinue service under this rider.
7. *Business Energy Evaluation* - This C/I audit program offers free standard level energy evaluations. More detailed evaluations are available with costs shared between FPL and the participating customer. Participation in FPL's other C/I DSM programs is promoted through this program.
8. *C/I Load Control (CILC)* - The CILC program reduces peak demand by controlling customer loads of 200 kW or greater during peak periods, and in return, participating customers receive service under a reduced rate. Pursuant to Order No. PSC-99-0505-PCO-EG, issued March 10, 1999, the program has not been offered to new participants since December 31, 2000, even though the program will continue for prior customers.
9. *Curtable Service Program* - This program provides a monthly credit for business customers who can agree to reduce load by at least 200 kW upon notice from FPL. The customer receives \$1.56 applied to the demand subject to curtailment and is required to give three-years notice to exit the program. The change from the one year's notice requirement allows FPL to reduce peak demand by 30 megawatts of curtable load and permits the program to be included as a DSM program.
10. *Business Water Heating* - This new program provides incentives for the installation of heat recovery or heat pump water heaters. Both types of equipment reduce the electrical demand and energy consumed. The incentive is determined from equipment specifications and is based on reduction to peak load, not to exceed \$881 per summer kW reduction.
11. *Business Refrigeration Program* - This program is designed for stores, distribution centers and restaurants having freezers and refrigerated display cases. Using advanced control systems allows the staggering of heating cycles and using reclaimed hot gas as a replacement for strip heaters prevents condensation. Incentives are based on a cost-effectiveness analysis for each system and will not exceed \$80 per summer kW reduction.

Research & Development and Pilot Programs

1. *Conservation Research and Development Program (CRD)* - An umbrella research program under which new DSM technologies are analyzed.
2. *Residential On Call Pilot Project* - The project began April 1, 2003, and has been extended through August 31, 2007. The Pilot is similar to the On Call Program except for a reduced incentive rate schedule. The On Call Program was closed to new participants when the Pilot began, and FPL planned to monitor dropout rates. Recent modifications to the Pilot interruption schedule are the same as for the On Call Program, increasing demand reduction

capability and mitigating the number of cycles when air conditioners may be continuously interrupted.

B. Progress Energy Florida

On August 9, 2004, by Order No. PSC-04-0769-PAA-EG, the Commission set new numeric goals for Progress Energy for the period 2005 - 2014. As seen in Table 11, 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 11: Comparison of Progress Energy's Previous and Revised DSM Goals

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

On July 26, 2006, by Order No. PSC-06-0537-PAA-EG, revised measures were set in response to the new minimum SEER 13 requirement for air conditioning equipment and rising costs for equipment installations. Further cost effective modifications to programs, approved on December 11, 2006, by Order No. PSC-06-1018-TRF-EI, increased program incentives that will take effect on August 1, 2007. Progress Energy expects the new incentives will result in increased program participation. The following are Progress Energy's approved programs:

Residential Programs

1. *Home Energy Check* - Under this residential energy audit program, a company auditor examines the home and makes recommendations on low-cost or no-cost energy-saving practices and measures. Six types of audits are offered: a free walk-through, a customer-completed mail-in survey, a customer-completed online survey, a phone-assisted customer survey, a paid walk-through (\$15), and a home energy rating analysis.

2. *Home Energy Improvement* - This 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 for up to \$500 of project costs. The program promotes the following energy-efficiency measures:

- Attic Insulation Upgrade - Encourages customers who have electric space heat to add ceiling insulation. An incentive is paid for a portion of the installed cost for R-19 or R-30 attic insulation, up to \$100 for a residence up to 1500 square feet. Beginning August 1, 2007, R-30 will be required for an incentive of \$75 for a residence up to 1500 square feet, with an allowance of \$0.07 per square foot for larger homes. Additionally, an incentive of \$0.20 per square foot, with a maximum of \$300, will be paid for spray-in wall insulation.
- Duct Test and Repair - Promotes energy-efficiency by reducing energy loss through air leakage in the central duct system. Progress pays 50 percent of the cost, up to \$30, for testing the first unit at an address, and up to \$20 for additional units at the same address. In Order No. PSC-06-0537-PAA-EG, a maximum incentive payment of \$125 for half the cost of duct repair was approved, with an additional incentive of \$25 for work done during off-season shoulder months. Beginning August 1, 2007, by Order No. PSC-06-1018-TRF-EI, the incentive payment of \$50 will apply only to new heating/cooling systems with a qualifying SEER rating of 14 or better.
- High Efficiency Electric Heat Pumps - Pays a financial incentive, not exceeding \$350 per unit when both the indoor air handler and outdoor condenser components are replaced and the new equipment is rated at SEER 14 or better. The specific incentive is based on minimum heating and/or cooling efficiency levels. Beginning August 1, 2007, Order No. PSC-06-1018-TRF-EI approved incentives of \$75 for analytical work to properly size a high efficiency air conditioner, and \$50 for the completion of recommendations produced by approved software evaluation of an HVAC system. Furthermore the Order approves an incentive of \$50 for the installation of central air conditioning rated at SEER 14 or better with existing non-electric heat.
- 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.
- Roof and Window Upgrades - New measure approved by Order No. PSC-06-1018-TRF-EI also provides incentives, beginning August 1, 2007, for the installation of reflective roof and window upgrades. For manufactured homes, the incentive is \$40; for a single family residence, an incentive of \$0.15 per square foot is paid for an installation of light colored roof; the maximum incentive is \$150 per residence. An incentive of \$1 per square foot of window area is paid for replacing windows by installing new high performance windows, and half the cost of installing qualifying screen or film up to a maximum of \$100 per residence.

3. *Residential New Construction* - This umbrella program promotes energy efficient construction which exceeds the building code requirements for new home construction, including single, multi-family, and manufactured homes. It provides information, education, and advice to home builders and contractors on energy-related issues and efficiency measures. Revised standards offer incentives for energy-efficient electric heat pumps, rated SEER 14 or better, that are identical to those offered in the Home Energy Improvement program for existing homes. Beginning August 1, 2007, a \$50 incentive per system will be paid for software evaluation and implementation of the recommendations; a \$50 incentive will be paid for an air handler placed in conditioned space; energy recovery ventilation will receive a \$150 incentive; a \$100 incentive will be paid for a reflective roof on each single family residence; a \$100 incentive will be paid for attic spray-on foam insulation; a \$200 incentive per residence will be paid for the insulation of a block wall adjacent to conditioned space; and a \$100 incentive will be paid for high performance windows and screens.

4. *Low-Income Weatherization Assistance* - This umbrella program operated through community action agencies under the Department of Community Affairs helps improve the energy-efficiency of low-income homes. The agencies arrange for improvements and financing and then receive the incentives as an offset to costs. 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. This plan provides a \$100 incentive for each heat recovery unit and \$200 per unit for each dedicated heat pump water heater unit.

 - Heating and Air Conditioning Maintenance - A \$40 incentive is paid for service/tune-up maintenance on an existing electric central heating and air conditioning system.

 - Low Flow Shower Heads - An \$18 incentive is paid for each low flow shower head with maximum of two per residence.

 - Replacement of Incandescent Lamps with Compact Fluorescent - An incentive of \$4 per lamp, with a maximum of three per household.

 - Faucet Aerators - An incentive of \$2 each, with maximum of three per household.

- Refrigerator Coil Cleaning - The coil cleaning brush is provided and demonstrated, and an incentive of \$7 is paid.
5. *Residential Energy Management* - In this voluntary load control program, Progress Energy reduces winter peak demand by interrupting electric service to water heaters and central electric heating units. The program began in 1993 and gives a maximum monthly bill credit of \$11.50. Since April 2001, new participants have been limited to winter months (November through March) when customer usage exceeds 600 kWh per month. Recently, Progress Energy has determined that adding new participants to the Residential Year Round Energy Management program is cost-effective. This modification will be available to customers beginning August 1, 2007.
 6. *Neighborhood Energy Saver* - This new program was approved by order PSC-06-1018-TRF-EI to extend the success of the low income programs to all residents of the neighborhoods served. Beginning August 1, 2007, the following measures will be offered by utility personnel on site at each residence, at no charge to the customer:
 - Water heater temperature check and adjustment
 - Five compact fluorescent bulbs to replace incandescent bulbs with identical lumen output
 - Low flow faucet aerators and showerheads, two maximum
 - Refrigerator coil cleaning brush
 - Refrigerator thermometer
 - Water closet leak detection tablets and instructions on leak detection
 - HVAC filters
 - Magnetic calendar to remind customer to change filters
 - Weatherization kit installed for maximum of three wall or window AC units along with explanation of use and value for reducing air infiltration
 - Wall plate thermometer
 - Weatherization measures to be used to reduce air infiltration around doors, windows and pipe entries; includes weather stripping, door sweeps, caulk, foam sealant and tape
 7. *Renewable Energy Program* - Beginning August 2007, this new program will be offered in conjunction with energy management. Solar energy will replace a portion of consumer demand, and the interruption of selected electrical equipment will reduce peak demand. The program will offer two measures:
 - Solar Water Heater with Energy Management - The installation of solar water heating equipment becomes cost-effective through a direct incentive of \$450 plus an ongoing incentive based on participation in the energy management program.
 - Solar Photovoltaics with Energy Management – Under this program, customers can sign up for Energy Management and direct their monthly credits for funding the development of solar energy systems in schools. Credits are escrowed until there is enough to fund the installation of solar energy systems in schools; ten percent of the credits will be used for renewable energy education.

Commercial/Industrial Programs

1. *Business Energy Check* - This C/I energy audit program offers a free walk-through inspection audit, a paid walk-through energy analysis audit, and an online customer-completed internet audit.
2. *Better Business* - This umbrella efficiency program is for existing C/I buildings 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. Better Business promotes the following energy-efficiency measures:
 - HVAC Equipment - Pays a 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 in order 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 the air leakage rate through the central duct system. The customer must have electric heating and a centrally-ducted cooling system in order 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 since additional insulation results in heating and/or cooling use reductions. Progress Energy pays a portion of the installed cost. 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 a “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 the cool roof coating installed, up to a maximum of \$1,000.

Beginning August 1, 2007, the following additional measures will be offered:

- Roof Insulation Upgrade - Offers an incentive of \$0.07 per square foot up to \$5,000 maximum per building.
- Thermal Energy Storage with Time-of-Use Rate - Offers a \$300 incentive per kW of reduced cooling load at peak.

- Green Roof - Offers an incentive of \$0.25 per square foot for installation of an approved green roof.
 - Efficient Compressed Air System - Offers an incentive of \$50 per kW reduction.
 - Occupancy Sensors - Offers an incentive of \$50 per kW of lighting load controlled.
 - Roof Top Unit Reconditioning - Offers an incentive of \$15 per ton of roof top unit for maintenance to assure the unit is operating at optimal efficiency.
 - HVAC Steam Cleaning - Offers a one-time incentive of \$15 per unit.
 - Efficient Indoor Lighting - Offers an incentive of \$50 per kW reduction, with a minimum of 1 kW reduction required per incentive application.
 - Demand Control Ventilation - Offers an incentive of \$50 per ton reduction.
 - Efficient Motors - Offers an incentive of \$1.75 to \$2.75 per horsepower based upon motor size and efficiency.
 - Window Film - Offers an incentive of \$0.75 per square foot of window film installed on windows facing east, west, and south, with a maximum incentive of \$55. For hotels and similar facilities, the maximum applies to each room.
3. *C/I New Construction* - This umbrella efficiency program for new C/I buildings gives information, education, and advice on energy-related issues and efficiency measures. The program allows Progress Energy to be involved early in the building's design process 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. Beginning August 1, 2007, identical additional incentives will be added for new construction as are added to the Better Business program at that time, with the exception of the cleaning and reconditioning measures.
 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. Beginning August 1, 2007, the customers who have demonstrated the ability to reduce demand upon notice from Progress Energy will receive a monthly credit on their energy bills, with an additional credit of \$0.05 per kWh for the energy which the customer provides to serve load.

6. *Interruptible Service* - In this 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 the level of billing demand and load factor.
7. *Curtable Service* - This direct load control program 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 is paid to the customer based on the level of curtable demand.

C. Gulf Power Company

On August 9, 2004, by Order No. PSC-04-0764-PAA-EG, the Commission set new numeric goals for Gulf for the period 2005 - 2014. The Commission also ordered Gulf to file a DSM plan consisting of programs designed to meet the newly established goals. As seen in Table 12, 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 primarily due 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 12: Comparison of Gulf’s Previous and Revised DSM Goals

<i>Year</i>	<i>Residential</i>			<i>Commercial/Industrial</i>		
	Summer MW	Winter MW	Annual GWh	Summer MW	Winter MW	Annual GWh
Previous Goals <i>(cumulative 2000-2009)</i>	125.9	145.9	113.1	44.8	35.8	19.3
Revised Goals <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 expects to file a petition for modifications to its DSM programs in early 2007. Gulf’s 2005 DSM plan contains the following DSM programs:

Residential Programs

1. *GoodCents Select Program* - This real-time pricing program 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 the week, and season. Each participating customer pays a fee of \$4.95 per month.
2. *GoodCents Home/Energy Star Program* - This program encourages the design and construction of energy efficient homes by providing energy efficiency information to builders and offering a rating system. If a builder constructs a home to a specified level of efficiency which is beyond the requirements of the Florida Model Energy Code, Gulf will certify the home as a GoodCents Home. In addition, Gulf signed an agreement with the Environmental Protection Agency in 2004 to participate in its Energy Star Program as an Energy Efficiency Program Sponsor, allowing Gulf the ability to offer ratings under the Energy Star Program.
3. *Residential Geothermal Heat Pump Program* - This program offers customers an incentive to install geothermal HVAC systems. The program 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 energy audit program for new and existing homes 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.
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.

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 new program promotes the installation of specified geothermal HVAC systems in commercial buildings. Gulf will provide participating customers with information on potential energy savings and a \$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 C/I energy audit program identifies potential energy saving measures for C/I customers. Customer options include a basic Energy Analysis Audit performed with an on-site survey, mail-in survey, or a more detailed Technical Assistance Audit. Gulf has deleted the Tier 2 Commercial Energy Analysis and combined several C/I energy survey programs into this umbrella program to increase administrative efficiency and Gulf also plans to add an online 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 at least 2,000 kW. Participating customers must sign a one-year contract.
5. *Energy Services Program* - This program is a catch-all 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 more than two years. Participation is limited to customers with a minimum peak demand of 20 kW.

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 donating \$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 - 2014. The Commission also ordered TECO to file a DSM plan with programs designed to meet these goals. As displayed in Table 13, 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 13: Comparison of TECO's Previous and Revised DSM Goals

<i>Year</i>	<i>Residential</i>			<i>Commercial/Industrial</i>		
	Summer MW	Winter MW	Annual GWh	Summer MW	Winter MW	Annual GWh
Previous Goals <i>(cumulative 2000-2009)</i>	40.3	109.1	75.3	30.8	13.4	114.1
Revised Goals <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. In 2006, TECO received Commission approval for permanent status of its pilot green pricing program. TECO's DSM Plan 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 comprehensive energy audit analyzes specific data on home structure and customer lifestyle to calculate installation cost, investment payback period, and estimated energy savings of available conservation programs. There is a \$15.00 charge for this audit.
3. *Residential On-Line Audit* - In this replacement program for the former mail-in audit program, customers access TECO's website to answer questions about their homes and energy usage. Personalized audit results are displayed for customer review and implementation.
4. *Residential Duct Repair* - This program checks 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 uses incentives to encourage new home construction above the minimum energy efficiency levels required in the Florida Energy Efficiency Code. 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 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 a heating source other than 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 by using a rebate to encourage the installation of high efficiency heat pumps and/or central air conditioning (without oil or resistance heat). The program offers two types of equipment replacement in single family dwellings: (1) heat pump replacing resistance heat and a \$250 rebate and (2) heat pump replacing heat pump with a \$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 reduces 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)* - In this voluntary load control program, TECO reduces peak demand by interrupting electric service to water heaters, pool pumps, and central electric heating/air conditioning units. The monthly credit for central heating and cooling appliances is \$12.00 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.
9. *Renewable Energy Program* - Beginning January 1, 2007, customers participating in this green pricing program may choose to pay \$5.00 to purchase a 200 kWh block of energy generated from renewable sources located in the TECO service area. The new program was developed from a pilot program offering renewable energy that began November 1, 2000. The program and the associated marketing techniques were modified over time to increase customer participation. Through September 2006, 1,402 customers purchased 1,890 blocks of energy each month. Currently, company-owned resources include two photovoltaic generating facilities and a micro-turbine fueled by landfill gas. A third photovoltaic installation is to be installed at the TECO's Manatee Viewing Center. TECO anticipates growth in program participation and is investigating additional sources of cost-effective renewable generation.

Commercial/Industrial Programs

1. *Commercial/Industrial Audit* - In this free energy audit program, auditors recommend energy-efficiency measures and equipment. The resulting demand and energy savings are dependent upon the customer's implementation of the auditor's recommendations.
2. *Comprehensive Commercial/Industrial Audit* - This detailed audit may involve monitoring specific equipment on the customer's premises. Auditors recommend additional energy-efficiency measures. Depending on the customer's rate class, fees for this audit range from \$15 to \$75. The resulting demand and energy savings are dependent upon customer implementation of the audit recommendations.

3. *Commercial Cooling* - This program provides an incentive for the installation of high efficiency direct expansion (DX) cooling systems that exceed minimum product manufacturing standards in commercial buildings. Eligible equipment must have a minimum energy efficiency rating (EER) of 10.0 and 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 encourages 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.
5. *Commercial Load Management (GSLM-1 tariff)* – In this voluntary load control program, 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 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 uses the on-site generation of C/I facilities to reduce weather-sensitive peak demand. Participating customers are given a one-hour notice to start their generators and arrange for an 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 encourages 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 and 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 direct load control program is for large industrial customers on a firm rate tariff with interruptible loads of at least 500 kW. Participation is for a 36-month term and customers must give TECO at least 36 months notice prior to terminating their program participation. 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)* – In this pilot program, 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.

E. Florida Public Utilities Company

On August 9, 2004, by Order No. PSC-04-0766-PAA-EG, the Commission set new numeric goals for FPUC for the period 2005 - 2014. FPUC’s newly-approved goals are comparable to, and in some instances higher than, its previous goals, as shown in Table 14.

Table 14: Comparison of FPUC’s Previous and Revised DSM Goals

<i>Year</i>	<i>Residential</i>			<i>Commercial/Industrial</i>		
	Summer MW	Winter MW	Annual GWh	Summer MW	Winter MW	Annual GWh
Previous Goals <i>(cumulative 2000-2009)</i>	1.26	1.50	2.73	1.22	0.73	3.02
Revised Goals <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 and 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) and offers two types of equipment replacements: replacement of resistance-heating systems (Type 1) and replacement of lower-efficiency heat pump systems (Type 2). FPUC pays rebates to the customer (\$100) and the 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 those required by the current building code. Homes may also qualify to receive the nationally recognized Energy Star efficiency label.

4. *GoodCents Energy Survey* - In this residential walk-through energy audit program, the FPUC auditor examines the home and makes recommendations on energy-saving practices and measures, including identifying 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 at least R-11 ceiling insulation.

Commercial/Industrial Programs

1. *GoodCents Commercial Buildings* - This efficiency program certifies that commercial buildings meet efficiency requirements higher than Florida Model Energy Code standards. Both HVAC efficiency and thermal envelope standards are included.
2. *Technical Assistance Audit* - This interactive program assists commercial customers in identifying energy conservation opportunities. In customizing the program to meet individual needs of large customers, FPUC evaluates the 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. 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 – 2014; however, JEA has continued its existing DSM programs.

1. *Green Power Program* - This program encourages the widespread application of renewable energy technology in JEA's service territory by setting minimum levels of renewable capacity for 2007 and 2015. The Green Power Program 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 uses 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 and 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, in which 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* - In this energy audit program, the JEA auditor examines the home or business and makes recommendations on low-cost or no-cost energy-saving practices and measures. The program offers walk-through, customer-completed (online), and video-assisted audits.
6. *Low-Income Residential Audit* - This program is similar to the traditional energy audit. In addition, JEA, in partnership with local housing agencies, funds energy-saving practices and measures and also provides customer education presentations.

G. Orlando Utilities Commission

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

Residential Programs

1. *Energy Survey Program* - This energy audit program provides walk-through, video and compact disk, and online energy surveys for all residential customers.
2. *Energy Efficiency Rebate Program* - This program gives incentives to customers to implement building envelope efficiency improvements as recommended in an energy audit.
3. *Low-Income Home Energy Fix-Up Program* - This program offers 85 percent of the cost of specified home weatherization measures recommended in an energy audit to residential customers who have an annual income less than \$25,000.
4. *Insulation Billed Solution Program* - This program provides a \$100 incentive and two-year financing for R-19 level attic insulation installation.
5. *Efficient Electric Heat Pump Program* - This program provides incentives for customers to replace an inefficient existing HVAC system with energy-efficient heat pumps.

6. *Gold Ring Program* - This new construction efficiency program provides a free Energy Star Rating and blower door test to new homes which meet specified efficiency standards.
7. *Energy Conservation Rate* - In October 2002, OUC implemented a two-tier residential rate to encourage energy conservation. Customers using more than 1,000 kWh per month pay a higher rate for electricity above 1,000 kWh.

Commercial/Industrial Programs

1. *Energy Survey Program* - This walk-through energy audit provides detailed written recommendations to increase energy and water use efficiency.
2. *Indoor Lighting Retrofit Program* - This program provides discounted installation and special financing for replacing 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 reducing air conditioning, capital, and operating costs for participating businesses.

Green Pricing - OUC recently began developing a green pricing program. While the program had not been officially launched as of August 2006, six customers had signed up to participate in the purchase of green energy for an additional \$5 monthly charge. OUC expects to officially begin the program in its fiscal year 2006/2007.

3.3 Conservation Efforts of Non-FEECA Utilities

Although the Commission does not set numeric DSM goals for the non-FEECA electric utilities, pursuant to Section 366.82(1), Florida Statutes, 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 and renewable energy green pricing programs to their customers.

In addition to the potential demand and energy savings, these utilities recognize that offering DSM programs may play a key role in increasing customer satisfaction.

SECTION 4: CONSERVATION ACTIVITIES OF NATURAL GAS UTILITIES

Historically, conservation programs offered by participating gas utilities were used to reduce Florida's reliance on foreign oil, the growth rates of electric consumption, and weather-sensitive peak demand. Gas conservation programs were designed to increase gas use 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, although additional growth has occurred in the direct end-use consumption of natural gas for heating, cooling, and industry. Increases in the direct end-use of natural gas reduce demand on the electric grid.

The price of natural gas delivered to Florida, which was approximately \$2 per million BTU only eight years ago, exceeded \$6 per million BTU by February 2005, increased to \$10 per million BTU in the days just prior to Hurricane Katrina, and then jumped immediately to more than \$15 per million BTU after the hurricane struck the Gulf Coast. As of November 2006, BTU's *Daily Gas Wire* reported prices in Florida Gas Transportation zones 1-3 gas were approximately \$7 per million BTU. 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. Several of Florida's investor-owned natural gas utilities have modified their residential programs to provide higher rebates for natural gas storage water heaters, dryers, stoves, and heating, and have added a rebate for higher efficiency tankless water heaters. 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 insulation, and adding weatherstripping to windows and doors.

Under the Commission's Energy 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 savings for the average residential natural gas customer.

Table 15 summarizes the conservation expenditures of Florida's natural gas utilities in 2005.

Table 15: Natural Gas Conservation Cost Recovery - 2005

	NUMBER OF CUSTOMERS	EXPENDITURES
Chesapeake Utilities	12,760	\$1,154,646
City Gas Company	101,979	\$2,153,309
Florida Public Utilities	50,242	\$2,189,813
Peoples Gas System	318,378	\$9,387,318
St. Joe Natural Gas	3,195	\$10,975
Total:	486,554	\$14,896,061

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 and energy issues.

One of the more effective Consumer Outreach Team's programs is the Library Outreach program. In this ongoing program, the Consumer Outreach Team provides 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 libraries contacted. Some recent survey comments indicate the educational materials have been helpful to library patrons and that library administrators 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 Commission. The program is open to all fifth grade classes in Florida, and its mission is to teach students about the environment. The Commission has distributed its energy and water conservation 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 2007.

The Commission's Web site, www.floridapsc.com, has been expanded and redesigned to supply consumers with more information about energy conservation and the conservation efforts of Florida's electric and gas utilities. The Consumer E-Newsletter on the Web page often 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 the following titles:

- 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 available at each of the Commission's customer meetings, hearings, and other events held throughout Florida. The Commission's Outreach Team also helped to develop an interactive, online Energy Conservation House that provides informative "point and click" conservation tips for the home and gives consumers ways to reduce their monthly utility charges. In addition, the Commission provides conservation information to consumers who file a complaint with the Commission regarding high electric or natural gas bills. The Commission also supplies 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 premiered its conservation video, *Turn It On; Turn It Off*, on April 13, 2006, at the Mary Brogan Museum of Art and Science, in recognition of Earth Day. Local Tallahassee elementary school students and City of Tallahassee officials were special guests for the premiere. Tallahassee's Chiles High School drama students performed the original play, *Turn It On; Turn It Off*, to show what happens to a family's energy use when the Energy Hog comes for an unexpected visit. WFSU Public Television representatives recently taped a staged production of *Turn It On; Turn It Off* in their Tallahassee studios, and the video taping was produced in a final DVD format for distribution to interested schools. The Mary Brogan Museum subsequently featured the *Turn It On; Turn It Off* DVD in its ongoing Energy Exhibit. The program has received positive feedback from School Board members, the Superintendent of Schools, teachers, and students. Plans are still being made to determine how the energy awareness program could be included as a possible curriculum unit in Florida's elementary and middle schools. As a part of Earth Day 2007 activities, the Commission is partnering with Progress Energy to have *Turn It On; Turn It Off* performed for several schools in Seminole County, and, as part of a continuing program, students will learn how to do home

energy audits. To date, more than 30 DVDs of *Turn It On; Turn It Off* and a water conservation program DVD, *Water Wiser*, have been distributed to area schools and have also been sent to 16 Government-Access television stations in Florida.

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

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/default.htm>

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

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

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

U.S. Agencies and National Organizations:

National Energy Foundation – <http://www.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/

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.cfgas.com/index.asp>

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/>