

FEBRUARY 2009

FLORIDA
PUBLIC SERVICE
COMMISSION



ANNUAL REPORT ON

Activities
Pursuant
to the
Florida
Energy
Efficiency and
Conservation
Act

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

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Prepared by
Florida Public Service Commission
Office of Strategic Analysis and
Governmental Affairs

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Executive Summary

Sections 366.80 through 366.85 and Section 403.519, Florida Statutes (F.S.), are known as the Florida Energy Efficiency and Conservation Act (FEECA). Originally enacted in 1980, FEECA places emphasis on reducing the growth rates of weather-sensitive peak demand, reducing and controlling the growth rates of electricity consumption, and reducing the consumption of scarce resources such as petroleum fuels. The 2008 legislative session brought about several changes to the FEECA statute, including establishing goals for demand-side renewable energy resources and consideration of efficiency investments in generation, transmission and distribution efficiency improvements. The Florida Public Service Commission (Commission) rules require the seven electric utilities subject to FEECA¹ to implement cost-effective demand-side management (DSM) programs. The Commission sets numeric electric peak demand and energy savings goals for each of the FEECA utilities and closely monitors their conservation achievements. The new statutory requirements will be implemented when the Commission sets revised goals by January 1, 2010.

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

Conservation Achievements

Florida’s utilities have generally been successful in meeting the overall objectives of FEECA. Residential energy audits provide the first step for utilities and customers to assess conservation opportunities. To date, Florida’s investor-owned utilities have performed over 300,000 residential energy audits. Florida’s investor-owned utilities offer over 71 conservation programs for residential and commercial customers.

Since 1980, utility-sponsored DSM programs have reduced statewide summer peak demand by an estimated 5,805 megawatts (MW) and winter peak demand by 6,245 MW. Annual energy savings from utility-sponsored DSM programs were estimated to be 7,250

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.

gigawatt-hours (GWh)² in 2008. The demand savings from these programs has deferred the need for over 30 typical 150 MW combustion turbine units, or enough capacity to serve approximately 1.6 million households. By 2017, 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

	2008	By 2017
Summer Peak Demand	5,805 MW	7,669 MW
Winter Peak Demand	6,245 MW	7,803 MW
Energy Consumption (Annual)	7,250 GWh	9,766 GWh

In 2007, Florida’s investor-owned electric utilities recovered over \$235 million in conservation program expenditures from ratepayers. Over the last ten years, the investor-owned utilities have recovered over \$2.4 billion dollars in conservation program expenditures.

In addition to the above-mentioned activities, the Commission informs consumers about conservation and energy efficiency issues on a daily basis. Section 4 of this report summarizes the Commission’s actions to educate Florida consumers on conservation.

FPL, Progress Energy, TECO, JEA and OUC met or surpassed all of the Commission-approved cumulative demand and energy goals in 2007. Gulf and FPUC both fell short of their goals for at least one customer class, as described below. More detail on each utility company’s progress in meeting its goals in 2007 is provided in Section 2.4.

Though it met or exceeded its goals for commercial/industrial customers, Gulf fell short in reaching its 2007 residential demand goals due to events beyond its control. For example, the dramatic downturn of new home construction in Gulf’s service territory has reduced participation in Gulf’s residential programs. Though FPUC significantly surpassed all of its 2007 residential DSM goals, the company did not meet its commercial/industrial goals. Though it appears that Gulf and FPUC’s failure to meet their 2007 goals may be due to events beyond their control, the Commission could choose to assess a penalty in accordance with the revisions to Section 366.82(8), F.S., should they not meet their Commission approved goals going forward.

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

2008 Amendments to FEECA

The 2008 legislative session brought about several changes to the FEECA statute. The Commission was directed to consider benefits and costs to program participants and ratepayers as a whole in developing the FEECA goals. The Commission was also charged with evaluating the technical potential of all demand-side and supply-side energy conservation measures, including demand-side renewable energy systems. Section 366.82(1)(b) defines demand-side renewable energy as “a system located on a customer’s premises generating thermal or electric energy using Florida renewable energy resources and primarily intended to offset all or a part of the customer’s electricity requirements provided such system does not exceed 2 megawatts.” The amended statute also allows the Commission to financially reward or penalize utilities over which it has rate-setting authority for exceeding or failing to meet the goals. Per the revised statute, investor-owned utilities may potentially receive an additional return on equity of up to 50 basis points for exceeding 20 percent of their annual load growth through energy efficiency and conservation measures.

In order to meet the statutory requirements of FEECA to review utility DSM goals no less often than every five years, the Commission must set new goals by January 1, 2010. In preparation for the new goal-setting process, the Commission has begun conducting a series of workshops regarding energy efficiency initiatives. These workshops are discussed in more detail in Section 2.6 of this report. Subsequent to the workshops, the utilities will file their proposed demand and energy goals on June 15, 2009. In 2008, the Legislature also authorized the Commission to spend up to \$250,000 from the regulatory trust fund to obtain technical consulting services. The Commission has retained a consulting firm, GDS Associates, to assist with the assessment of potential conservation measures and the goals to be filed by the FEECA utilities. The Commission will next hold a formal administrative hearing, currently scheduled for August 24-28, 2009 to take testimony on the utilities’ proposed goals. After completion of the evidentiary proceeding, the Commission will establish new goals for the next ten years.

Other Legislative Revisions

In 2008, Section 366.92, F.S., was amended to require the Commission to establish a Renewable Portfolio Standard (RPS). An RPS requires investor-owned utilities to supply a certain percentage of their retail sales from renewable energy resources located in Florida. As part of the rule development process, the Commission evaluated the current and forecasted installed capacity in kilowatts through 2020, and current and forecasted levelized cost in cents

per kilowatt-hour through 2020, for each renewable energy resource. The Commission will submit a draft rule to the Legislature for ratification by February 1, 2009.

Conclusion

Conservation, demand-side management (DSM), and renewable energy will continue to play important roles in meeting energy the needs of Florida's growing population. Although Florida's utilities have traditionally been successful in meeting the objectives of FEECA, customer participation in utility-offered DSM and energy conservation programs, along with individual efforts to use electrical energy wisely, remain fundamental elements for reducing demand for energy. As power plant sites and transmission corridors become more scarce, utility efforts to defer future generating units and transmission lines are increasingly important.

The inclusion of demand-side renewable energy systems as part of the FEECA goal setting process has further intertwined the FEECA statutes with Section 366.92, F.S. A balance must be established that will allow for both RPS (supply-side) and energy-efficiency and conservation (demand-side) goals that are realistic as well as attainable. The goals must complement each other to ensure that use of renewable energy sources will continue to increase while at the same time encouraging consumers to use less energy by practicing conservation and using energy efficient appliances.

Section 1. Overview of Florida's Electricity Market

1.1 Energy Demand in Florida

Understanding customer electrical demand in Florida is essential to comprehending the importance of conservation. Florida's electrical demand and energy usage patterns are somewhat unique because the state's customer base is heavily weighted toward residential customers, due in part to high air-conditioning use during hot summer months and widespread use of electricity for home heating during winter months. Table 1 illustrates that residential customers make up nearly 89 percent of Florida's electricity customers. These customers purchase about 52 percent of the state's total electrical energy. Florida's commercial electrical energy usage is approximately 37 percent, while industrial customers account for the balance of 10 percent of total Florida energy sales.

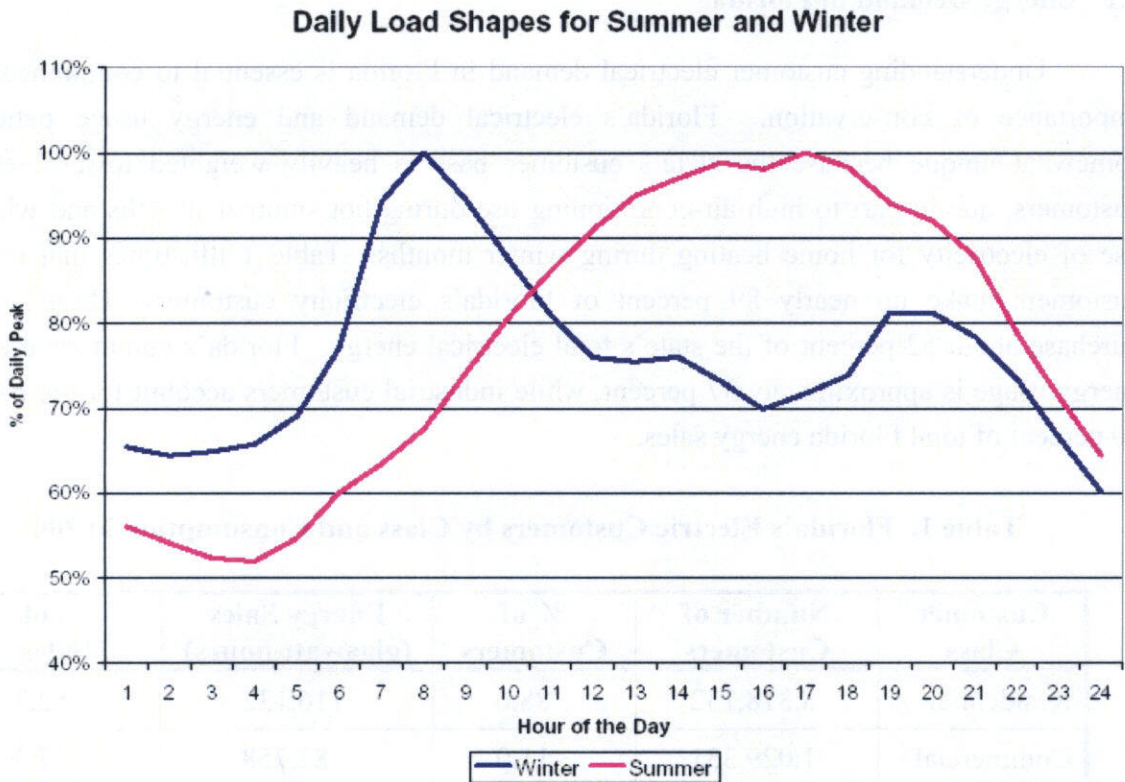
Table 1. Florida's Electric Customers by Class and Consumption in 2007

Customer Class	Number of Customers	% of Customers	Energy Sales (gigawatt-hours)	% of Sales
Residential	8,318,132	88.6	116,132	52.3
Commercial	1,029,331	11.0	82,758	37.3
Industrial	35,733	0.4	23,107	10.4
Total	9,383,196	100.0	221,997	100.0

Florida's warm and humid climate has a profound effect on residential electric usage. A typical residential customer's electrical usage varies more throughout the day than a commercial customer's usage and shows more pronounced peaks in the early evening in the summer and in the mid-morning and late evening in the winter. Electric energy usage in the industrial sector, however, is more uniform throughout the day. Compared to a state with a higher proportion of industrial customers, the summer and winter peak demands in Florida are more pronounced due to the patterns of energy use by residential customers.

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

Figure 1. Typical Florida Daily Electric Load Shapes



Historically, Florida’s electric demand has been highest in the summer. In 2007, peak electric demand reached 49,391 megawatts (MW) in the summer and 44,240 MW in the winter. In 2017, Florida’s peak electric demand is projected to increase to 57,305 MW in the summer and 58,953 MW in the winter, indicating a reversal of the historic trends.

1.2 Florida's Electric Generating Resources

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

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

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

Combined, these utilities currently have 50,326 MW of summer electric generating capacity and 53,932 MW of winter generating capacity. Non-utility generators in the state provide an additional 5,413 MW of summer electric generating capacity and 5,546 MW of winter generating capacity. Additional capacity is purchased from out-of-state utilities over the Florida-Georgia transmission interties.

Historically, Florida's electric utilities pursued fuel diversity by maintaining a balanced fuel supply with a relative balance of energy generation from coal, nuclear, natural gas, oil, and other sources. In the early 1990's, 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 2007, the majority of new generating capacity constructed in Florida was natural gas-fired, increasing the percentage of the state's total energy generated by gas from 11.4 percent in 1990 to approximately 39 percent in 2007.

Section 2. The Florida Energy Efficiency and Conservation Act

2.1 History of FEECA

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

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

The Legislature further revised the FEECA statute in 1996. This revision increased the minimum retail sales threshold for municipal and cooperative utilities subject to FEECA to 2,000 GWh. Pursuant to the statute, retail sales for each municipal and cooperative utility were measured as of July 1, 1993, to determine whether the company was subject to FEECA. The two municipal utilities currently subject to FEECA are Orlando Utilities Commission (OUC) and JEA. No rural electric coops are subject to FEECA. 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 2007 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 86.3 percent of the state's total electrical energy sales.

Table 2. Energy Sales by Florida's Electric Utilities in 2007

Florida Electric Utilities	Energy Sales GWh	% of Total State Energy Sales
Utilities Subject to FEECA		
FPL	105,415	46.6
Progress Energy	39,282	17.4
TECO	19,533	8.6
Gulf	11,521	5.1
FPUC	771	0.3
JEA	12,751	5.6
OUC	6,079	2.7
FEECA Total	195,352	86.3
Non-FEECA Utilities Total	31,006	13.7
State Total	226,358	100.0

The 2008 legislative session resulted in several additional changes to the FEECA statute. The Commission was directed to consider benefits and costs to program participants and ratepayers as a whole in developing the FEECA goals. The Commission was also charged with evaluating the technical potential of all demand-side and supply-side energy conservation measures, including demand-side renewable energy systems. Section 366.82(1)(b) defines demand-side renewable energy as “a system located on a customer’s premises generating thermal or electric energy using Florida renewable energy resources and primarily intended to offset all or a part of the customer’s electricity requirements provided such system does not exceed 2 megawatts.” The amended statute also allows the Commission to financially reward or penalize utilities over which it has rate-setting authority for exceeding or failing to meet the goals. Per the revised statute, investor-owned utilities may potentially receive an additional return on equity of up to 50 basis points for exceeding 20 percent of their annual load growth through energy efficiency and conservation measures.

In order to meet the statutory requirements of FEECA to review utility demand-side management goals every five years, the Commission must set new goals by January 2010. In preparation for the new goal-setting process, the Commission has begun conducting a series of

workshops regarding energy efficiency initiatives. The first workshop, held on November 29, 2007, explored how the Commission could encourage additional energy efficiency and conservation. A second workshop held on April 25, 2008, examined how the costs and benefits of utility-sponsored energy efficiency and demand-side programs should be evaluated. A third workshop, held on June 4, 2008, included the utilities, stakeholders, and representatives of Itron/KEMA. Discussions regarding the new requirements of Section 366.82 F.S., established by the 2008 Legislature focused on appropriate methodologies for collecting the information for a Technical Potential Study that Itron/KEMA would conduct on behalf of the utilities. On June 26, 2008, the Commission opened dockets 080407-EG through 080413-EG to review numeric conservation goals for the utilities subject to FEECA.

On November 3, 2008, the Commission held a fourth workshop on the development of demand-side and supply-side conservation and efficiency goals, including demand-side renewable energy systems. The FEECA utilities presented information on the status of the Technical Potential Study being conducted by Itron/KEMA. The Southern Alliance for Clean Energy (SACE) also made a presentation commenting on certain aspects of the Technical Potential Study. Commissioners, Commission staff, utilities, and stakeholders discussed activities related to the progress of the study.

The results of the Technical Potential Study were presented at a Commission workshop held on December 15, 2008. Discussions took place regarding the filing expectations of each utility relative to their current DSM goals, new FEECA requirements and the effect of the Technical Potential Study on the development of new demand-side management programs and measures.

Utilities are scheduled to file their proposed demand and energy goals on June 15, 2009. In 2008, the Legislature also authorized the Commission to spend up to \$250,000 from the regulatory trust fund to obtain technical consulting services. The Commission has retained a consulting firm, GDS Associates, to assist with assessing potential conservation measures and the review of the goals to be filed by the FEECA utilities.

The Commission will hold a hearing in August 2009 to take evidence on the utilities' proposed goals, followed by staff's recommendation for approval or denial of those goals. The effective date for the revised goals is January 1, 2010.

2.2 Commission Rules Implementing FEECA

Initially adopted by the Commission in 1980, Rules 25-17.001 through 25-17.015, Florida Administrative Code (F.A.C.), require all electric utilities to implement cost-effective DSM programs. The Commission revised its rules in 1993 to require utilities to establish numeric DSM goals for summer and winter demand (MW) and annual energy sales (GWh). These rules continue to apply to the seven Florida utilities subject to FEECA. The 2008 amendments to the FEECA can be implemented under the existing Rules 25-17.001 through 25-17.015, F.A.C. These responsibilities will be discussed in further detail in the section “Commission Actions to Encourage Additional Conservation and Energy Efficiency.”

DSM goals were last established for FEECA utilities in August 2004.³ At least every five years, the Commission reviews each utility’s DSM goals and establishes numeric demand and energy savings goals that extend ten years into the future. Therefore new goals must be established by January 2010. Each affected utility then must, within ninety days of the Commission’s order, respond with a DSM plan. The plan must explain the utility’s strategy to offer customers DSM programs that meet the required demand and energy savings. Utilities are required to report their progress annually for monitoring and evaluation by the Commission.

2.3 Conservation Cost-Effectiveness Requirement

DSM programs benefit the general body of electric utility ratepayers by (1) deferring the need for future power plant construction, (2) reducing current production cost, and (3) improving reliability. Historically, investor-owned utility DSM programs approved by the Commission for cost-recovery have been shown to have a cost to benefit ratio which benefited all utility ratepayers.

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

³ See Dockets 040029-EG through 040035-EG.

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

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

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

The Commission's traditional policy has been to set goals for utilities based on measures that pass both the Participant and the RIM tests. In addition, the Commission "encourages utilities to evaluate implementation of TRC measures when it is found that the savings are large and the rate impacts are small."⁴ TRC measures that have a large savings but small impact on rates are reviewed and approved by the Commission on a case-by-case basis. The amendments to Section 366.82, F.S. provide the Commission with more flexibility when evaluating the cost-effectiveness of utility DSM goals. Therefore, the Commission may revise its policy during the evidentiary proceeding currently scheduled for August 2009.

⁴ Order No. PSC-94-1313-FOF-EG, issued October 25, 1994, in Docket No. 930548-EG, In Re: Adoption of numeric conservation goals in consideration of National Energy Policy Act Standards (Section 111) by Florida Power and Light Company; Docket No. 930549-EG, In Re: Adoption of numeric conservation goals in consideration of National Energy Policy Act Standards (Section 111) by Florida Power Corporation; Docket No. 930550-EG, In Re: Adoption of numeric conservation goals in consideration of National Energy Policy Act Standards (Section 111) by Gulf Power Company; Docket No. 930551-EG, In Re: Adoption of numeric conservation goals in consideration of National Energy Policy Act Standards (Section 111) by Tampa Electric Company.

The Commission also 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 their DSM programs.

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

2.4 Conservation Achievements

As a whole, Florida’s utilities have been successful in meeting the overall objectives of FEECA. Residential energy audits provide the first step for utilities and customers to assess conservation opportunities. To date, Florida’s investor-owned utilities have performed over 300,000 residential energy audits. Florida’s investor-owned utilities offer over 71 conservation programs for residential and commercial customers.

Since FEECA’s enactment, utility-sponsored DSM programs have reduced statewide summer peak demand by an estimated 5,805 MW and winter peak demand by 6,245 MW, and have reduced annual energy consumption by an estimated 7,250 GWh in 2008. The demand savings from these programs has deferred the need for over 30 typical 150 MW combustion turbine units, or enough capacity to serve approximately 1.6 million households. By 2017, DSM programs are forecasted to further reduce aggregate peak demand and energy consumption, as summarized in Table 3. This reduction will benefit Florida’s ratepayers by deferring the need for additional generating capacity in a cost-effective manner.

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

	2008	By 2017
Summer Peak Demand	5,805 MW	7,669 MW
Winter Peak Demand	6,245 MW	7,803 MW
Energy Consumption (Annual)	7,250 GWh	9,766 GWh

Table 4 shows the reported DSM demand and energy achievements of the five investor-owned utilities and two municipalities in 2007, compared to their DSM goals set by the Commission in 2004.

Table 4. Comparison of Cumulative DSM Achievements with Approved Goals in 2007

	Winter MW Goals	Reported Winter MW Reduction	Summer MW Goals	Reported Summer MW Reduction	Annual GWh Goals	Reported Annual GWh Reduction
FPL						
Residential	89.20	104.30	140.60	171.00	246.90	247.50
Commercial/Industrial	33.30	129.20	71.30	213.20	59.10	346.10
Progress Energy						
Residential	108.00	153.00	30.00	58.00	50.00	85.00
Commercial/Industrial	10.00	38.00	11.00	44.00	9.00	30.00
TECO						
Residential	12.00	12.70	8.50	9.80	22.50	24.60
Commercial/Industrial	7.80	9.40	10.50	13.40	19.50	25.80
Gulf Power						
Residential	21.70	8.45	17.70	6.81	9.20	5.75
Commercial/Industrial	10.70	11.75	22.30	22.98	6.50	20.30
FPUC						
Residential	0.12	0.29	0.08	0.12	0.17	0.32
Commercial/Industrial	0.09	0.06	0.15	0.08	0.40	0.25
JEA						
Residential	0.00	1.10	0.00	1.70	0.00	3.20
Commercial/Industrial	0.00	1.50	0.00	2.60	0.00	27.90
OUC						
Residential	0.00	0.15	0.00	0.37	0.00	1.66
Commercial/Industrial	0.00	0.51	0.00	0.51	0.00	2.33

Table 4 above shows that FPL, Progress Energy, TECO, JEA and OUC met or surpassed all of the Commission-approved cumulative demand and energy goals in 2007. Although the Commission set goals for JEA and OUC at zero, both utilities have accomplished additional DSM achievements.

Gulf and FPUC both fell short of their 2007 goals for at least one customer class. Though Gulf met or exceeded its goals for commercial/industrial customers, it did not reach its residential demand goals due to events beyond its control. Gulf states that the eligible customer base for its GoodCents Select program has been reduced by advancements in heating and cooling equipment efficiency and communications technology. Shortages of equipment caused by the manufacturer also delayed new installations causing Gulf to temporarily suspend promotion of the program until April 2009. The dramatic downturn of new home construction in Gulf's service territory has also reduced participation in the GoodCents/Energy Star program. While

FPUC significantly surpassed all of its 2007 residential DSM goals, the company did not meet its commercial/industrial goals. FPUC cited its inability to network with commercial builders and developers and inadequate conservation personnel as causes for its failure to achieve the commercial energy audit program's DSM goals. Though it appears that Gulf and FPUC's failure to meet their 2007 goals may be due to events beyond their control, the Commission could choose to assess a penalty in accordance with the revisions to Section 366.82(8), F.S., should they not meet their Commission approved goals going forward.

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

2.5 Conservation Cost Recovery

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

Since 1981, Florida's investor-owned electric utilities have recovered over \$4.5 billion of conservation program expenditures through the ECCR clause, with nearly \$2.4 billion of that amount in the last ten years. Table 5 depicts the annual DSM expenditures which have been recovered from customers by Florida's investor-owned utilities through the ECCR clause over the last ten years. The table also shows that annual expenditures of the investor-owned utilities have remained fairly stagnant from the 2003 - 2007 periods. This stagnation is due primarily to DSM programs reaching saturation in participation levels and a decline in cost-effectiveness of DSM programs due to the lower cost of new generating units. However, expenditures in 2008 are projected to exceed \$285 million, probably due to the implementation of several new programs approved by the Commission in 2006 and 2007.

**Table 5. DSM Expenditures Recovered Through the ECCR Clause
(\$ Dollars)**

	FPL	Progress Energy	TECO	Gulf	FPUC	Total
1998	164,483,007	77,936,016	19,421,194	2,356,560	284,326	264,481,103
1999	158,376,162	68,431,962	18,129,268	2,963,888	300,415	248,201,695
2000	158,312,902	66,052,277	16,656,250	3,872,004	323,102	245,216,535
2001	157,660,093	64,831,597	17,600,060	4,984,286	358,054	245,434,090
2002	162,062,655	63,150,036	16,970,240	5,436,083	418,498	248,037,512
2003	150,026,657	62,156,585	17,518,874	7,313,033	381,563	237,396,712
2004	145,679,192	60,072,362	16,357,137	7,619,637	382,504	230,110,832
2005	144,192,696	59,143,076	15,583,727	8,826,754	473,610	228,219,863
2006	146,205,249	59,543,107	14,099,638	9,562,098	456,162	229,866,254
2007	146,204,978	67,109,815	13,652,585	9,107,952	515,022	236,589,592
Total						\$2,413,554,188

Each November, the Commission determines an energy conservation cost recovery factor to be applied to the energy portion of each customer's bill during the following calendar year. These factors are set based on each utility's estimated conservation costs for the next calendar year, along with a true-up for any actual conservation cost under- or over-recovery for the previous year. The Commission most recently set conservation cost recovery factors for each rate class on November 26, 2007. These factors will take effect with the first billing cycle of 2009. Table 6, on the following page, displays the current conservation cost recovery factors which are applied to residential customer bills. These factors were applied to a bill based on 1,200 kilowatt-hour (kWh) energy usage to estimate the impact on a typical residential customer's monthly bill.

Table 6. Residential Conservation Cost Recovery Factors in 2009

	Residential Conservation Cost Recovery Factor (cents per kWh)	Typical Residential Monthly Bill Impact (based on 1,200 kWh)
FPL	\$0.203	\$2.44
PEF	\$0.223	\$2.68
TECO	\$0.106	\$1.27
GULF	\$0.085	\$1.02
FPUC	\$0.078	\$0.94

2.6 Commission Actions to Encourage Additional Conservation and Energy Efficiency

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

These new statutory requirements may result in changes to existing Commission policy with regard to how utility-sponsored conservation and energy efficiency programs are evaluated. For example, the weight the Commission has traditionally placed on the RIM and Participant tests in measuring the cost-effectiveness of utility-sponsored conservation programs may be revised.

In order to meet the statutory requirements of FEECA to review utility DSM goals at least every five years, the Commission must establish new goals by January 2010. To prepare for the goal-setting process, the Commission held a series of workshops regarding energy efficiency initiatives.

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

On April 25, 2008, the Commission held a workshop to discuss how the costs and benefits of utility-sponsored energy efficiency and demand-side programs should be evaluated. After presentations from representatives of the industry and environmental associations, a roundtable discussion addressed the following topics: (1) What is each cost-effectiveness test designed to achieve? (2) Are the tests capturing all the benefits and costs of energy-efficiency and demand-side management? (3) How do the tests used affect the level of conservation goals? (4) Should the tests be modified to address other concerns? and (5) Should non-economic benefits and costs be included?

On June 4, 2008, the Commission held a workshop which included the utilities, stakeholders, and representatives of Itron/KEMA. Discussions were held regarding the new information included in Section 366.82 F.S., as amended by the Legislature in 2008. Discussion topics focused on Itron/KEMA's Technical Potential Study and its information-collection methodologies. A Technical Potential Study is the first step in establishing goals because it estimates the total potential savings that could be obtained if unconstrained by economics. This study will establish baseline consumption data, identify potential conservation and energy efficiency measures, develop corresponding demand and energy savings for each measure, and ultimately estimate the total technical potential savings if the eligible market adopts all measures immediately. Using the Technical Potential Study, utilities may refine these estimates to account for customer acceptance, rebate levels, and various cost-effectiveness evaluations to arrive at an achievable level of savings to be expected. The achievable level should be close to the utilities' proposed goals. Because the goals must be approved by the Commission, Docket Nos. 080407-EG through 080413-EG were opened on June 26, 2008, for reviewing the numeric conservation goals of the FEECA utilities.

On November 3, 2008, the Commission held a workshop to discuss the development of demand-side and supply-side conservation and efficiency goals, including demand-side renewable energy systems. Commissioners, Commission staff, utilities, and stakeholders discussed the Technical Potential Study being conducted by Itron/KEMA on behalf of the FEECA utilities and other relevant statutory requirements. As a result of the workshop, the

Commission learned that the utilities were not planning to discuss the potential of solar photovoltaics or supply-side efficiency improvements as part of the Technical Potential Study.

The results of the Technical Potential Study were presented at a Commission workshop held on December 15, 2008. Discussions took place regarding the filing expectations of each utility relative to their current DSM goals, new FEECA requirements and the effect of the Technical Potential Study on the development of new demand-side management programs and measures.

In 2008, the Legislature also authorized the Commission to spend up to \$250,000 from the regulatory trust fund to obtain technical consulting services. The Commission has retained a consulting firm, GDS Associates, to assist with assessing potential conservation measures and the review of the goals to be filed by the FEECA utilities. The utilities are scheduled to file their proposed demand and energy goals by June 15, 2009. The Commission will hold a formal administrative hearing on August 24-28, 2009, to take evidence on the utilities' proposed goals, followed by staff's recommendation for approval or denial of those goals. The effective date for the goals is January 1, 2010.

The amendments to Section 366.82, F.S. provide the Commission with more flexibility when evaluating the cost-effectiveness of utility DSM goals. Therefore, the Commission may alter its policy during the evidentiary proceeding currently scheduled for August 2009.

2.7 Renewable Generation Activities

Coupled with increased national attention on energy resources and climate change, the Commission has taken several steps to encourage further development of renewable energy resources in Florida. Below are explanations of the Commission's activities related to increased use of renewable resources in the state.

Standard Offer Contracts

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

existing renewable energy facilities while promoting further development of renewable energy resources.

In December 2006, the Commission adopted Rules 25-17.200 through 25-17.310, F.A.C., which became final in March 2007. These rules require each investor-owned utility to continuously offer a separate contract for each type of fossil fuel technology that is included in its Ten-Year Site Plan. On August 18, 2008, new standard offer contracts were approved by the Commission. FPL’s standard offer contract was protested by Wheelabrater, and a hearing is scheduled for January 22 - 23, 2009. PEF’s standard offer contract was protested by White Springs Agricultural Chemicals, Inc., and a hearing is scheduled to take place in the Spring of 2009.

Net Metering and Interconnection Rules

On April 7, 2008, amendments were approved to Rule 25-6.065, F.A.C., regarding the interconnection and net metering of customer-owned renewable generation. The purpose of the rule is to assist with the promotion and development of customer-owned demand-side renewable generation up to two MW by enhancing the interconnection of such generation and minimizing the customer’s cost when interconnecting to a utility’s system. Moreover, the rule allows customers to offset electric consumption through net metering, which would further mitigate costs associated with customer-owned renewable generation. Table 7 illustrates the amount of residential solar photovoltaic connections made by Florida’s four largest investor-owned utilities.

Table 7. PV Interconnection Summary

Utility	Connections	MW
Florida Power & Light	105	0.354
Progress Energy Florida	297	0.672
Tampa Electric Company	8	0.023
Gulf Power	6	0.027
Total	416	1.075

Large Renewable Facilities

In 2008, the Commission approved three negotiated contracts that will result in 175 MW of firm capacity and associated energy produced by renewable facilities. The proposed facilities will use municipal solid waste, gasified biomass, and cultivated biomass as primary fuels. In addition to power purchased from non-utility generators, FPL is in the process of developing the St. Lucie Wind Project, which may consist of up to 6 wind turbine generators capable of generating approximately 13.8 MW. FPL's goal is to start construction on the St. Lucie Wind Project in 2008 with completion in 2009. FPL is also planning to add 3 new solar facilities which will produce 110 MW of solar generation. FPL's largest project, Martin Solar, will be a 75 MW solar thermal steam generating facility at the existing Martin Power Plant Site in Martin County, Florida. Martin Solar is designed to serve as a "fuel substitution" resource, i.e., the facility is not designed to provide firm capacity. Once constructed, Martin Solar will be the largest solar thermal facility in the world and the largest solar plant of any kind outside of California. Additionally, FPL is proposing the construction of two solar photovoltaic projects. The DeSoto Solar and the Space Coast Solar projects will generate 25 MW and 10 MW of non-firm capacity, respectively.

Renewable Portfolio Standard (RPS) for Florida

Currently, renewable energy in Florida is supplied mostly by municipal solid waste, biomass, and waste-heat resources. In 2008, Section 366.92, F.S., was amended to direct the Commission to establish a renewable portfolio standard (RPS) requirement for the IOUs, and to submit a draft RPS rule to the Legislature by February 1, 2009 for ratification.

As part of the rule development process, the Commission is to evaluate the current and forecasted installed capacity in kilowatts through 2020, and current and forecasted levelized cost in cents per kilowatt-hour (kWh) through 2020, for each renewable energy resource. In August 2008, the Commission, in cooperation with the Governor's Energy Office and the Lawrence Berkeley National Laboratory, engaged Navigant Consulting, Inc. to perform an assessment of renewable energy resources in Florida. The results of the assessment were provided to the Commission on December 29, 2008 and satisfy the statutory requirement that the Commission evaluate the projected availability and cost of renewable resources through 2020.

In addition to establishing the RPS percentages and timing, Section 366.92, F.S., requires that the Commission's RPS rule include the following:

- Methods of managing the cost of compliance with the RPS, whether through direct supply or procurement of renewable power or through the purchase of renewable energy credits (RECs);
- Appropriate compliance measures and conditions under which non-compliance can be excused when the supply of renewable energy is not adequate or the cost of securing renewable energy is cost prohibitive;
- Appropriate period of time for which RECs may be used for purposes of compliance with the RPS;
- Monitoring procedures for compliance with and enforcement of the RPS;
- A means of ensuring that energy credited toward compliance with the RPS may not be used for any other purpose;
- Procedures to track and account for RECs, including ownership derived from customer-owned renewable energy facilities as a result of an action by a customer of an electric power supplier independent of a program sponsored by the supplier; and
- Provisions for the repeal or amendment of the rule in the event new federal law supplants or conflicts with the rule.

The Commission is authorized to provide for annual cost recovery of costs for compliance with the RPS and adjustments to an IOU's return on equity (ROE) to encourage use of renewable energy. The Commission also may give added weight to energy provided by wind and solar photovoltaic (PV) over other forms of renewable energy in developing its RPS rule.

The statute also requires annual reporting to the Commission by each IOU of its compliance with the RPS in the previous year and how it plans to comply in the upcoming year. The municipal electric utilities and rural electric cooperatives are also required to develop, on their own, standards for the promotion, encouragement, and expansion of the use of renewable energy resources and energy conservation and efficiency measures and to file an annual report with the Commission.

The inclusion of demand-side renewable energy systems as part of the FEECA goal setting process has further intertwined the FEECA statute with Section 366.92, F.S. A balance

must be found that will allow establishment of both RPS (supply-side) and energy-efficiency and conservation (demand-side) goals that are realistic as well as attainable. The goals must complement each other to ensure that use of renewable energy sources will continue to grow in the state while consumers are encouraged to use less energy by practicing conservation and using energy efficient appliances.

Section 3. Conservation Activities of Natural Gas Utilities

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

Under the Commission's Energy Conservation Cost Recovery (ECCR) clause, investor-owned utilities petition the Commission for approval to implement natural gas conservation programs. Each of Florida's LDCs offers conservation programs and is authorized to participate in the ECCR. Cost-effective programs that are approved often give rebates to customers to help defray the cost of appliances, which, over time, save the customer money. Investments in energy efficiency typically reduce future bills, which translates into savings for the average residential natural gas customer. Table 8, below, summarizes the conservation expenditures of Florida's natural gas utilities in 2007.

Table 8. Natural Gas Conservation Cost Recovery in 2007

Utility	Number of Customers	Expenditures
Chesapeake Utilities	14,365	\$966,017
City Gas Company	103,845	\$2,167,483
Florida Public Utilities	51,584	\$2,123,687
Peoples Gas System	334,333	\$8,934,625
St. Joe Natural Gas	3,099	\$9,175
Indiantown Gas Company	680	\$15,806
Sebring (Transportation Only)	529	\$12,276
Total:	508,435	\$14,229,069

LDCs are spending the majority of their conservation program dollars to promote the use of natural gas to residential home builders by providing rebates that support the installation of energy efficient appliances. Over the past year, several of Florida's natural gas LDCs have modified their residential programs to provide higher rebates for natural gas storage water heaters, dryers, stoves, and heating appliances and have also added a rebate for higher efficiency tankless water heaters. In addition, natural gas LDCs advertise describing measures customers

can follow to reduce their natural gas usage. For example, GetGasFl.com has become an effective tool for LDCs to educate customers on the types of energy efficiency programs they offer. The Web site promotes the use of natural gas to offset electric consumption. Included in the Web site are conservation tips, information on each participating LDC's conservation programs, and the incentive amounts available for customers choosing to purchase natural gas appliances.

Section 4. Educating Florida's Consumers on Conservation

The Florida Public Service Commission continually seeks new methods to educate Floridians on energy efficiency and water conservation. The Commission's Office of Public Information complements existing conservation activities of the FEECA utilities and serves as a consumer resource for information on energy and water conservation.

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

Through partnerships with governmental entities, consumer groups, and many other organizations, the PSC participates in consumer programs and distributes conservation-related materials. During the tenth annual National Consumer Protection Week, March 2-8, 2008, the PSC highlighted ways to save money through energy and water conservation programs. More than 800 seniors at 23 centers statewide participated.

The Commission's Web site, www.floridapsc.com, is continually updated to offer consumers current information about energy conservation and the conservation efforts of Florida's electric and gas utilities. Weekly consumer tips on energy and water conservation measures are available in the Consumer E-Newsletter and on the Web site. Consumer Tips and E-Newsletter topics include:

- Green Power and Green Pricing
- Compact Fluorescent Light Bulbs
- Save Money with a Programmable Thermostat
- Low-Income Home Energy Assistance
- Be Your Own Energy Manager
- Practice Peak Shifting
- Weatherization Works In Florida
- Your Water Heater: How Hot is Hot Enough?
- Net Metering
- Earth Day 2008
- Vampire Electronics
- Summertime Savings

- Staying Cool with Ceiling Fans
- Home Energy Audits Lead to Savings

The Web site includes brochures to inform Florida's consumers on energy efficiency measures and an interactive, online Energy Conservation House that gives informative "point and click" conservation tips for the home, helping consumers discover ways to reduce their monthly utility bills.

To help students better understand the need to conserve resources, the Commission provides an educational program on energy and water conservation for students in kindergarten through middle school. As a part of Energy Awareness and Earth Day 2008 activities, the Commission partnered with a school in Central Florida to produce an original energy conservation play, *Turn It On, Turn It Off*, showing what happens to a family's energy use when the Energy Hog comes for an unexpected visit. Students at the St. Petersburg Southside Fundamental Middle School in conjunction with the St. Petersburg American Stage Theatre Company performed the play at Plumb Elementary School in Clearwater. Local government officials and Progress Energy representatives also attended. The PSC's conservation play has also been performed in Leon, Polk, and Seminole Counties and has received positive feedback from participating schools.

The Commission also participates in the annual Jiminy Cricket's Environmental Challenge, a partnership between the Walt Disney World Company and various organizations. Open to all fifth grade classes in Florida, the program's mission is to teach students about the environment. The Commission's energy and water conservation brochure, *Conserve Your World* (English and Spanish versions) is used in the program, and the Commission is listed as a resource in the Environmental Challenge's *Get Back to Nature* brochure, which is distributed to fifth grade teachers statewide.

To supplement the conservation outreach program for schools, the Office of Public Information is compiling a Student Resource Booklet for elementary and middle school students highlighting the importance of energy and water conservation.

The Commission also continues its partnership with the National Energy Foundation (NEF), <http://www.nef1.org>, a nonprofit 501(c)3 educational organization dedicated to the development, dissemination, and implementation of supplementary educational materials, programs, and courses. The NEF received a grant to present a series of workshops throughout Florida to prepare teachers to include conservation in their courses. In cooperation with NEF,

the Commission provides educators with printed materials focusing on Florida-specific energy and water conservation solutions in the home.

Throughout the year, the Commission participates in special awareness events to promote energy and water conservation. Some of this year's activities included (1) an on-site home energy usage analysis to encourage residents to do the same by contacting their utilities to do the same; (2) a do-it-yourself home energy audit news release to promote October's Energy Awareness Month; (3) the release of a new PSC brochure, *Drop by Drop*, to celebrate National Drinking Water Week and show consumers how they can save money by conserving water; and (4) the Chairman's monthly column that regularly features topics on energy efficiency and conservation.

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

Appendix 2 to this report supplies a list of related Web sites belonging to investor-owned utilities, local distribution companies, and state and federal entities to assist consumers in researching additional conservation opportunities.

Appendix 1: Conservation Activities of FEECA Utilities

A. Florida Power & Light Company

Residential Programs

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

Duct System Testing and Repair Program. A program designed to identify air conditioning duct system leaks and have qualified contractors repair those leaks.

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

Residential Load Management Program (On Call Program). A program designed to offer voluntary load control to residential customers.

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

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

Commercial/Industrial Programs

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

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

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

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

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

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

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

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

Cogeneration and Small Power Production. A program to facilitate the installation of cogeneration and small power production facilities.

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

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

Research & Development and Pilot Program

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

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

B. Progress Energy Florida

Residential Programs

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

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

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

Energy Management (Residential & Commercial). This load management program incorporates direct radio control of selected customer equipment to reduce system demand during peak capacity periods and/or emergency conditions by temporarily interrupting selected consumer

appliances for special periods of time. Customers have a choice of options and receive a credit on their monthly electric bills depending on the options selected and their monthly kWh usage.

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

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

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

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

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

Commercial/Industrial Programs

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

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

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

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

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

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

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

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

C. Gulf Power Company

Residential Programs

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

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

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

Commercial Programs

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

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

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

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

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

Research and Development Program

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

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

D. Tampa Electric Company

Residential Programs

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

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

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

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

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

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

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

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

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

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

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

Commercial Programs

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

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

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

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

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

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

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

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

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

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

Research and Development

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

E. Florida Public Utilities Company

Residential Programs

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

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

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

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

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

Commercial Programs

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

Good Cents Commercial Technical Assistance Audit. This program is an interactive program that assists commercial customers in identifying advanced energy conservation opportunities. Customers receive an on-site review of the facility operation, equipment, and energy usage pattern by a Florida Public Utilities Company Conservation Specialist. All areas of potential reduction in kW demand and kWh consumption end-use technology opportunities are identified. In addition, a technical evaluation is performed to determine the economic payback or life cycle cost for various improvements to the facility.

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

Educational and Research Programs

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

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

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

conservation. This comprehensive program is meant for the identification, development, demonstration, and evaluation of promising new end-use technologies.

F. Orlando Utilities Commission

Residential Programs

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

Residential Energy Efficiency Rebate Program. The purpose of this program is to reward customers who have invested in energy-efficient heat pumps, weather stripping, insulation, duct repairs, or other energy-savings measures for their single family homes. Orlando Utilities gives specific tips to customers on conserving electricity and water and offers details on those programs.

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

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

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

Residential Gold Ring Home Program. This program is closely aligned with Energy Star Ratings. Orlando Utilities partnered with local home builders to construct new homes according to Energy Star standards. Some features include high efficiency heat pumps, heat recovery water heaters, R-30 attic insulation, interior air ducts, double pane windows, and window shading. Contractors are required to qualify its homes to Energy Star standards by having the homes rated by a certified rater. In return for each Energy Star home certification, the builder receives a rebate of \$200 for single-family homes and \$100 for townhomes. In addition, OUC will help support the builder's efforts through further advertising and other promotional strategies.

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

Commercial Programs

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

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

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

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

agreements have allowed this program to expand into neighboring communities like Clermont, Oviedo, and Brevard County.

Commercial Power Quality Analysis Program. This program gives Orlando Utilities the ability to ensure the highest possible power quality to commercial customers. The program's goals include making the maximum effort to solve power quality problems through monitoring and interpretive analysis, identifying solutions that will lead to corrective action, and providing ongoing follow-up services to monitor results.

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

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

G. JEA

Residential Programs

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

Residential Net Metering. This program is offered to encourage the use of customer-sited solar photovoltaic electric generating systems. JEA requires that the system be installed according to JEA engineering standards, and then JEA will install a meter which turns backward when a

customer's system is producing more energy than the customer is using. The amount of electricity billed is reduced by the amount of electricity exported to the JEA system.

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

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

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

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

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

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

Appendix 2: Related Web Sites

State Agencies and Organizations

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

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

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

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

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/>

