

I. Meeting Packet



State of Florida
Public Service Commission
INTERNAL AFFAIRS AGENDA
Thursday, January 21, 2016
9:30 am
Room 105 - Gerald L. Gunter Building

1. Report on the Activities Pursuant to the Florida Energy Efficiency and Conservation Act - Due March 1 (Attachment 1)
2. Legislative Update
3. General Counsel's Report
4. Executive Director's Report
5. Other Matters

BB/ks

OUTSIDE PERSONS WISHING TO ADDRESS THE COMMISSION ON ANY OF THE AGENDAED ITEMS SHOULD CONTACT THE OFFICE OF THE EXECUTIVE DIRECTOR AT (850) 413-6463.

State of Florida



Public Service Commission

CAPITAL CIRCLE OFFICE CENTER • 2540 SHUMARD OAK BOULEVARD
TALLAHASSEE, FLORIDA 32399-0850

-M-E-M-O-R-A-N-D-U-M-

DATE: January 12, 2016

TO: Braulio Baez, Executive Director

FROM: Robert Margolis, Public Utility Analyst II, Division of Economics
Tripp Coston, Economic Supervisor, Division of Economics

RM 68
JAH

RE: Draft Report on Activities Pursuant to the Florida Energy Efficiency and Conservation Act (FEECA). Due March 1 to the Governor and Legislature.

Critical Information: Please place on the January 21, 2016 Internal Affairs packet. Commission approval is sought.

Section 366.82 (10), Florida Statutes, requires the Commission to submit an annual report to the Governor and Legislature on utility progress towards meeting goals established by the Commission pursuant to the Florida Energy Efficiency and Conservation Act (FEECA). The report is due by March 1 of each year.

Staff is seeking Commission approval of the attached draft report for the 2015 reporting period. Upon approval, the report will be submitted to the Governor, President of the Senate, Speaker of the House, and the Commissioner of Agriculture.

cc: Lisa Harvey, Deputy Executive Director, Technical
Apyl Lynn, Deputy Executive Director, Administrative



FLORIDA
PUBLIC
SERVICE
COMMISSION

FEECA

Annual Report on Activities Pursuant to the Florida Energy Efficiency & Conservation Act

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

FEBRUARY 2016

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Florida Public Service Commission

Annual Report on
**Activities
Pursuant
to the
Florida
Energy
Efficiency and
Conservation
Act**

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

February 2016

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List of Acronyms

C/I	Commercial and Industrial (Customers)
DEF	Duke Energy Florida, Inc.
DOE	U.S. Department of Energy
DR	Demand Response
DSM	Demand-Side Management
ECCR	Energy Conservation Cost Recovery Clause
EE	Energy Efficiency
EPA	U.S. Environmental Protection Agency
F.A.C.	Florida Administrative Code
FEECA	Florida Energy Efficiency and Conservation Act
FIPUG	Florida Industrial Power Users Group
FPL	Florida Power & Light Company
FPUC	Florida Public Utilities Company
FRCC	Florida Reliability Coordinating Council
F.S.	Florida Statutes
GW	Gigawatt
GWh	Gigawatt-Hour
Gulf	Gulf Power Company
HVAC	Heating, Ventilation and Air Conditioning
IOU	Investor-owned Utility
kWh	Kilowatt-Hour
LDC	Natural Gas Local Distribution Company
Load	Demand for Electricity
MW	Megawatt
MWh	Megawatt-Hour
OPC	Office of Public Counsel
OUC	Orlando Utilities Commission
O&M	Operations and Maintenance
Commission	Florida Public Service Commission
PV	Solar Photovoltaic
RIM	Ratepayer Impact Measure Test
SACE	Southern Alliance for Clean Energy
SEER	Seasonal Energy Efficiency Ratio
TECO	Tampa Electric Company
TRC	Total Resource Cost Test
WH	Solar Water Heating

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Executive Summary

Purpose

Reducing Florida's peak electric demand and energy consumption became a statutory objective in 1980, with the enactment of the Florida Energy Efficiency and Conservation Act (FEECA). Codified in Sections 366.80 through 366.85 and Section 403.519, Florida Statutes (F.S.), FEECA emphasizes 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.

Section 366.82(2), F.S., requires the Florida Public Service Commission (Commission) to set appropriate goals at least every five years for the seven electric utilities subject to FEECA. The Commission sets goals with respect to summer and winter electric peak demand and annual energy savings over a ten-year period, with a review every five years. Once goals are established, the utilities must submit for Commission approval, cost-effective demand-side management (DSM) plans containing the programs intended to meet these goals.

The seven electric utilities currently subject to FEECA are:

- Five Florida Investor-owned utilities (IOUs), ranked in order of sales
 - Florida Power & Light Company (FPL)
 - Duke Energy Florida, Inc. (DEF)
 - Tampa Electric Company (TECO)
 - Gulf Power Company (Gulf)
 - Florida Public Utilities Company (FPUC)

- Two municipal utilities, ranked in order of sales
 - JEA
 - Orlando Utilities Commission (OUC)

The Commission is required by Section 366.82(10), F.S., to provide an annual report to the Florida Legislature and the Governor summarizing the adopted goals and progress toward achieving these goals. Additionally, Section 377.703(2)(f), F.S., requires the Commission to file information on electricity and natural gas energy conservation programs with the Department of Agriculture and Consumer Services. Section 553.975, F.S., requires the Commission to submit a biennial report to the Governor, President of the Senate, and Speaker of the House regarding the effect of state energy standards on conservation. This report fulfills these Commission statutory obligations.

Report Layout

This report presents the Commission's efforts in overseeing the companies' initiatives established to achieve the conservation goals and Commission requirements. This report details these efforts through the following four sections:

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- Section 1 provides a history of FEECA, highlights savings produced by utility programs since 2000, and provides a description of existing tools for increasing conservation throughout the state.
- Section 2 discusses current goals and achievements of the FEECA utilities.
- Section 3 provides an overview of Florida's electricity market.
- Section 4 discusses methods the Commission has used to educate consumers about conservation and provides a list of related web sites.
- Appendix 1 provides a description of the conservation programs offered during 2015 by the FEECA utilities.

The FEECA report is due to the Governor on March 1, 2016. However, the FEECA utility filings to the Commission for 2014 were due on March 1, 2015. The 2015 FEECA utility filings are due on March 1, 2016. Therefore, the most current information regarding utility achievements available at the time this report pertains to 2014.

Conservation Achievements

Since 1980, the FEECA utilities' DSM programs in total have reduced winter peak demand by an estimated 6,595 megawatts (MW). The FEECA utilities' DSM programs decreased summer peak demand by an estimated 7,080 MW. The demand savings from these programs have resulted in the deferral or avoidance of power plant construction in the state. These programs also reduced total electric energy consumption by an estimated 10,244 gigawatt-hours (GWh).

The Energy Conservation Cost Recovery (ECCR) clause allowing recoverable expenditures on energy efficiency has been in existence since 1980. In 2015, Florida's IOUs recovered approximately \$363 million in conservation program expenditures, performed 266,381 residential and commercial audits, and offered approximately 105 conservation programs for residential and commercial customers. The history of FEECA and the ECCR clause are discussed in Section 1.

2014 Goal Achievement

TECO, Gulf, FPUC, and JEA met all of the Commission's total energy and demand savings goals in total. FPL, DEF, and OUC implemented programs that saved MWs of demand and GWhs of energy. However, these companies did not fully achieve the Commission's goals. Additional detail on each utility's performance is described in Section 2.

2014 Goal Setting Process

On November 25, 2014, the Commission approved demand and energy saving goals for the FEECA utilities for 2015 through 2024. The Commission voted to approve goals based on the Ratepayer Impact Measure (RIM) Test to ensure that all ratepayers benefit from these programs due to downward pressure on rates.

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The 2014 approved DSM goals for the FEECA utilities were lower than those approved by the Commission in 2009. The Commission identified fewer programs as cost-effective due to more stringent building codes and appliance efficiency standards, as well as lower avoided costs resulting from lower natural gas prices.

Moreover, the Commission voted to allow the IOUs' five-year solar pilot programs to end on December 31, 2015. The Commission based its decision on evidence in the record that the existing solar pilot programs were not cost-effective. The 2014 goal setting process is discussed further in Section 2.4.

Conclusion

The potential demand and energy savings from utility-sponsored conservation programs are affected by consumer education and behavior, building codes, and appliance efficiency standards. First, consumer actions to implement energy efficiency measures outside of utility programs reduce the amount of incremental energy savings available from utility programs. Additionally, utility conservation programs are designed to encourage actions that exceed the conservation resulting from building codes and minimum efficiency standards.

The level of savings from utility conservation programs is uncertain because it is based on voluntary participation from customers. However, all customers pay for the utility conservation programs. Therefore, customer education of, and participation in, utility DSM programs—along with individual efforts to save electricity—are key in reducing electric demand and energy usage.

Conservation and renewable energy are expected to play an important role in Florida's energy future. The Commission will continue its efforts to encourage cost-effective conservation and renewable energy programs to reduce the use of fossil fuels and defer the need for new generating capacity. These initiatives should ensure a balanced mix of resources that reliably and cost-effectively meet the needs of Florida's ratepayers.

Section 1. The Florida Energy Efficiency and Conservation Act

1.1 History of FEECA

The Florida Energy Efficiency and Conservation Act (FEECA) emphasizes three key areas: reducing the growth rates of weather-sensitive peak demand, reducing the growth rates of electricity consumption, and reducing the consumption of limited resources such as petroleum fuel. The Commission is required to establish conservation goals and the FEECA utilities are required to develop demand-side management (DSM) programs to meet these goals.

Originally, all electric utilities in Florida were subject to FEECA. In 1989, changes to the law limited the requirement to electric utilities with more than 500 gigawatt-hours (GWh) of annual retail sales. During that period, 12 Florida utilities met this threshold requirement and at that time their combined sales accounted for 94 percent of Florida’s retail electricity sales. An additional change to the law included language to encourage cogeneration projects.

In 1996, minimum retail sales thresholds for subject utilities were raised by the Legislature to 2,000 GWh. Retail sales for these utilities were measured as of July 1, 1993, and two municipal utilities met the threshold of the new law: JEA and OUC. In addition to these two utilities, all five Florida investor-owned utilities must comply with FEECA regardless of sales levels. No rural electric cooperatives are currently subject to FEECA.

The seven utilities subject to FEECA currently account for approximately 87 percent of all Florida energy sales. Table 1 reflects 2014 electricity sales and the percentage of total electricity sales by each FEECA utility, as well as non-FEECA utilities.

Table 1
Energy Sales by Florida's FEECA Utilities in 2014

Florida's FEECA Utilities	Energy Sales GWh	Percent of Total Energy Sales
Florida Power & Light Company	104,389	48%
Duke Energy Florida	37,240	17%
Tampa Electric Company	18,526	8%
JEA	12,224	6%
Gulf Power Company	11,391	5%
Orlando Utilities Commission	6,219	3%
Florida Public Utilities Company	648	0.3%
FEECA Utilities' Total	190,637	87%
Non-FEECA Utilities' Total	28,009	13%
Total Statewide Energy Sales	218,646	100%

Source: Commission "Statistics of Florida’s Electric Utilities" and FRCC’s 2015 Load and Resource Plan, S-2, “Total Sales GWh.”

1.2 Conservation Tools and DSM Savings

Although utility-sponsored DSM programs are an important means of achieving energy conservation, consumer choices and mandatory efficiency standards are keys to reducing demand and energy growth rates in Florida. Consumers respond to price signals by taking such actions as buying energy efficient homes, installing efficiency upgrades, using more cost-effective demand-side renewable systems, and making behavioral changes. The Commission’s actions to educate Florida’s consumers on conservation opportunities are discussed further in Section 4.

Home and business energy audits serve as the basis for many DSM and conservation programs. Pursuant to Section 366.82(11), F.S., all FEECA utilities are required to offer energy audits to residential customers. During 2014, Florida’s IOUs performed more than 249,000 residential energy audits. Though FEECA does not require commercial energy audits, Florida’s IOUs performed more than 16,000 commercial energy audits.

Starting with energy audits, the FEECA utilities evaluate conservation opportunities for their customers through 105 programs for residential, commercial, and industrial customers. Table 2 illustrates that since FEECA’s enactment, DSM programs are estimated to have reduced summer peak demand by an estimated 7,080 MW and reduced annual energy consumption by an estimated 10,244 GWh.

Table 2
Estimated Cumulative DSM Savings Since 1980

MW	Savings
Summer Peak Demand MW	7,080
Winter Peak Demand MW	6,595
Energy Reduction GWh	10,244

Source: FRCC Load and Resource Plan 2015.

DSM programs are designed to encourage conservation investment exceeding the minimum standards in building codes and appliance efficiency. However, the potential demand and energy savings from utility-sponsored conservation programs are also affected by consumer education and behavior. The current level of energy efficiency standards and building codes creates a baseline used in determining the cost-effectiveness of a potential DSM program. The higher the current efficiency standards and codes, the less opportunity there is for utility-sponsored programs to be cost-effective.

State and federal minimum efficiency standards for residential appliances and commercial equipment, along with building construction standards, complement utility-sponsored DSM programs. The Florida Building Code is updated and adopted with new editions every three years by the Florida Building Commission. In addition, the Florida Building Code is amended annually to incorporate interpretations, clarifications, and update standards. The 2014 Florida Building Code emphasizes thermal envelopes of buildings. Specifically, the energy efficiency section of the code

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focuses on insulation and ventilation measures for air conditioners, on/off switches for water heaters and pool heaters, and automatic temperature controls for hot water systems.

At the federal level, the U.S. Department of Energy (DOE) establishes minimum energy efficiency standards for more than 60 categories of appliances and equipment.¹ These products represent approximately 90 percent of home energy use, 60 percent of commercial building use, and 30 percent of industrial energy use. From August 2014 to August 2015, DOE proposed 76 rulemaking actions. Of the 76 rulemaking actions, DOE completed 14 final rules on new energy efficiency standards. DOE's rulemaking actions include final rules, as well as notices of proposed rulemaking, preliminary analyses, framework documents, notices of data availability, proposed determinations, and requests for information.

DOE's fourteen final rules from August 2014 through August 2015 included the following:

- Five appliance standards:
 - Commercial clothes washers
 - General service fluorescent lamps and incandescent reflector lamps
 - Automatic commercial ice makers
 - Packaged terminal air conditioners and packaged terminal heat pumps
 - Commercial heating, air-conditioning, and water-heating equipment
- Eight test procedures:
 - Commercial clothes washers
 - Residential clothes washers
 - Residential direct heating equipment and pool heaters
 - Fluorescent lamp ballasts
 - Refrigerated beverage vending machines
 - Dehumidifiers
 - Conventional cooking products
 - Packaged terminal air conditioners and packaged terminal heat pumps
- One alternative efficiency determination method regulation:
 - Commercial heating, ventilation, and air-conditioning (HVAC), water-heating, and refrigeration

Since August 2015, DOE has announced a final rule for commercial packaged terminal air conditioners and packaged terminal heat pumps that will become effective in 2018. DOE also broadcast a final rule for single package vertical air conditioners and vertical heat pumps that will be effective in 2019. Furthermore, DOE declared efficiency standards for commercial furnaces that will start in 2023.

¹ Pursuant to Section 553.975, F.S., the Commission must report the effectiveness of state energy conservation standards established by Sections 553.951 – 553.973, F.S. Florida's appliance efficiency standards are mandatory efficiency improvements but have not been updated since 1993, and therefore have likely been superseded by more recent federal efficiency standards.

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In November 2015, DOE announced a final rule for walk-in coolers and freezers. In December 2015, DOE determined that efficiency standards for high-intensity discharge lamps would not be economically justified. Also in December 2015, DOE amended the test procedure for ceiling fan light kits and amended the test procedure for commercial pre-rinse spray valves.

Beginning January 1, 2014, DOE began implementing new lighting standards, which resulted in the phasing out of various watts of incandescent bulbs. In May 2014, the U.S. Environmental Protection Agency (EPA) announced the first ENERGY STAR label for clothes dryers. ENERGY STAR is a government-backed labeling program that helps consumers save energy by identifying office equipment, home appliances, and electronics featuring superior energy efficiency. The EPA stated that if all residential clothes dryers in the U.S. meet the requirements, the utility cost savings could grow to more than \$1.5 billion per year. Other household items that were awarded ENERGY STAR labels in 2015 for the most efficient versions include boilers, ceiling fans, central air conditioners, clothes washers, computer monitors, dishwashers, ductless air conditioners and heat pumps, furnaces, refrigerators, ventilating fans, and residential windows.

Utility programs offer rebates and incentives for appliances that exceed federally established minimum efficiency standards. Increases in federal efficiency standards, independent conservation efforts by consumers, and general conservation practices make it more challenging for utilities to achieve additional demand and energy savings through DSM programs. Moreover, participation rates in utility programs are driven by the anticipated payback to the participating customer. While utility incentives will tend to increase the customers' "take rate" in programs, the average customer's participation is driven by utility costs. Thus, low or declining electric prices tend to reduce the market participation in DSM programs.

Table 3 describes the expected timeframes for changes in standards for those appliances where federal efficiency rulemaking is pending.

**Table 3
DOE Appliance Standards with Upcoming Statutory Deadlines**

Product Categories	Final Action Date
Heating Products Rulemakings	
Direct Heating Equipment and Pool Heaters	March 2016
Residential Furnaces and Boilers (Active Mode)	July 2016
Commercial Packaged Boilers	July 2016
Residential Boilers	March 2017
Light Commercial Water Heaters	May 2019
Space Cooling Rulemakings	
Room Air Conditioners	April 2017
Residential Central Air Conditioners	June 2017
Transformers, Motors, and Pumps Rulemakings	
Small Electric Motors	February 2016
Lighting Rulemakings	
General Service Lamps	January 2017
Fluorescent Lamp Ballasts	November 2017
Home Appliances Rulemakings	
Dishwashers	December 2016
Dehumidifiers	June 2017
Clothes Dryers	August 2017
Kitchen Ranges and Ovens	June 2017
External Power Supplies	June 2018
Commercial Appliances Rulemakings	
Commercial Pre-rinse Spray Valves	October 2020
Commercial Refrigeration Rulemakings	
Beverage Vending Machines	August 2015

Source: DOE's Energy Conservation Standards Activities Report to Congress August 2015.

In the 2013 State of the Union address, President Obama aimed to cut “in half the energy wasted by our homes and buildings over the next 20 years.”² In addition to the DOE Appliance Standards listed above, the Obama Administration hopes to improve energy efficiency through the Better Buildings Initiative.³ Since 2011, more than \$10 billion in federal funding has been invested for greater energy efficiency in buildings.

Since 2009, the cost-effectiveness of DSM measures has declined due to several factors outside of the FEECA utilities’ control. Customer load growth has declined, which defers the need for new generation resources. Second, the new federal appliance efficiency standards and state building codes are being incorporated into the marketplace. This decreases the amount of cost-

² <https://www.whitehouse.gov/the-press-office/2013/02/12/remarks-president-state-union-address>

³ <https://www.whitehouse.gov/blog/2015/05/27/4-years-building-energy-efficiency-across-america>

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effective DSM measures that the electric utilities can offer. Third, the price of natural gas has declined by approximately 50 percent during the past five years. While reducing customer bills, the price decrease also reduces the future benefit of additional DSM measures.

1.3 Conservation Cost Recovery

Administrative costs, equipment, and incentive payments are all costs of implementing a DSM program. IOUs are allowed by Statute to recoup prudent and reasonable expenses for DSM programs approved by the Commission through the Energy Conservation Cost Recovery (ECCR) clause. Before attempting to recover costs through the ECCR clause, a utility must prove its DSM programs are cost-effective and benefit the general body of ratepayers.

Each year, the Commission conducts financial audits of these expenses and a full evidentiary hearing to determine the conservation cost recovery factors that will be applied to customers' bills in the following year. Utilities must obtain Commission approval for program modifications made during the previous year prior to seeking cost recovery. In November 2015, the Commission set conservation cost recovery factors ranging from \$0.68 to \$3.25 per month for residential customers using 1,000 kWh.

As new energy efficiency technologies become available, Florida's IOUs encourage customer participation by offering incentives through DSM programs. Florida IOUs' annual expenditures on energy efficiency and demand-side management demonstrated general stability from 2005 to 2007, due to DSM programs becoming less cost-effective as a result of the reduced operating cost of newer generating units.

From 2008 through 2014, there was growth in utility expenditures due to adding and modifying DSM programs. Table 4 shows the annual DSM expenditures recovered by Florida's IOUs from 2005 through 2014 as well as the total over the period.

Table 4
DSM Expenditures Recovered Through the ECCR Clause

	FPL	DEF	TECO	Gulf	FPUC	Total
2005	\$144,192,697	\$59,143,255	\$15,583,726	\$9,363,182	\$473,610	\$228,756,470
2006	\$146,204,978	\$59,461,107	\$14,099,638	\$9,562,098	\$456,161	\$229,783,982
2007	\$160,749,639	\$67,109,815	\$13,652,585	\$9,107,192	\$515,022	\$251,134,253
2008	\$180,016,994	\$77,593,960	\$16,989,411	\$9,257,740	\$534,350	\$284,392,455
2009	\$186,051,381	\$80,954,071	\$32,243,315	\$10,576,197	\$540,433	\$310,365,397
2010	\$216,568,331	\$85,354,924	\$43,371,442	\$9,859,407	\$693,331	\$355,847,435
2011	\$228,293,640	\$91,738,039	\$43,349,092	\$15,003,596	\$954,297	\$379,338,664
2012	\$224,033,738	\$93,728,110	\$46,593,831	\$22,885,826	\$695,235	\$387,936,740
2013	\$244,443,534	\$115,035,455	\$47,502,652	\$27,431,962	\$806,698	\$435,220,301
2014	\$316,311,166	\$107,033,335	\$46,620,508	\$17,412,618	\$772,612	\$488,150,239
2005-2014						\$3,350,925,936

Source: Docket Nos. 060002-EG through 150002-EG, Schedules CT-2 and CT-3 from May 1 testimony.

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During the annual ECCR clause proceedings, the Commission determines the energy conservation cost recovery factor that each utility will assess to customer bills. This includes reconciliation for any actual conservation cost under- or over-recovery for the previous year. In November 2015, the Commission set the ECCR factors for the 2016 billing cycle.⁴ Table 5 illustrates the IOUs' conservation cost recovery factors for application to residential customer bills. These factors are 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 Energy Conservation Cost Recovery Factors in 2016

Utility	ECCR Factor (cents/kWh)	Monthly Bill Impact (based on 1,000 kWh)
FPL	0.186	\$1.86
DEF	0.325	\$3.25
TECO	0.191	\$1.91
Gulf	0.068	\$0.68
FPUC	0.135	\$1.35

Source: Order No. PSC-15-0542-FOF-EG, Docket No. 150002-EG.

1.4 Natural Gas Conservation Cost Recovery

Commission Rule 25-17.015, F.A.C., permits natural gas distribution companies to seek recovery for conservation programs. Natural gas local distribution companies (LDCs) offer conservation programs to their customers. However, the Commission does not currently set conservation goals for LDCs.

Natural gas conservation programs typically include the provision of incentives for the replacement of less efficient appliances. As a result, LDCs have historically spent the majority of conservation program costs promoting the use of natural gas to residential home builders and home owners. This is achieved by providing rebates that support the installation of energy efficient gas appliances.

In 2013, the natural gas LDCs received approval from the Commission to offer natural gas programs to their commercial customers.⁵ These programs allow the LDCs to incentivize commercial customers to use efficient end-use natural gas appliances in a similar manner as the residential customers.

⁴ Order No. PSC-15-0542-FOF-EG, Docket No. 150002-EG, In re: Energy Conservation Cost Recovery clause, issued November 23, 2015.

⁵ Order No. 14-0039-PAA-EG, Docket 130167-EG, In re: Petition for approval of natural gas energy conservation programs for commercial customers, by Associated Gas Distributors of Florida, issued January 14, 2014.

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In November 2015, the Commission set the natural gas conservation cost recovery factors for the 2016 billing cycle. Table 6 displays the LDC's conservation cost recovery factors and the impact on a residential customer's bill using 20 therms of natural gas per month.

Florida City Gas spent \$394,000 on its Commercial/Industrial Conversion programs and \$580,000 on its Commercial Appliance program in 2014. Florida Public Utilities Company spent \$689,000 on its Commercial Small Food Service Program.

Peoples Gas System spent approximately \$45,000 on commercial electric replacement and approximately \$92,000 on commercial new construction in 2014, as documented in the hearing exhibits in Docket 150004-GU.

Table 6
Residential Natural Gas Conservation Cost Recovery Factors in 2016

Utility	Cost Recovery Factor (cents/therm)	Monthly Bill Impact (based on 20 therms)
Peoples Gas System	6.4	\$1.28
Florida City Gas	15.2	\$3.03
Florida Public Utilities	14.8	\$2.96
Chesapeake Utilities	34.6	\$6.93
Indiantown Gas Company	13.8	\$2.77
St. Joe Natural Gas	34.5	\$6.90
Sebring Gas System	10.3	\$2.07

Source: Order No. PSC-15-0541-FOF-GU, Docket 150004-GU.

Section 2. Analytics for Setting Demand-Side Management Goals

2.1 Cost-Effectiveness

Utility-sponsored DSM programs can benefit the general body of electric ratepayers by offsetting the need for future power plant construction. These programs can reduce costs to ratepayers by postponing capital expenditures, improving reliability, and reducing current electrical generation costs—including fuel and variable operating and maintenance costs. However, the deferral of new power plants with advanced technology can forgo the benefits of more efficient power generation and the associated lower emission rates for certain regulated pollutants.

Section 366.82, F.S., requires utility conservation programs to be cost-effective, and this statute is codified in Rule 25-17.008, F.A.C. This rule requires that utilities provide cost and benefit information to the Commission when requesting to make changes or additions to a program. The Commission requires utilities to provide the following three cost-effective tests for its consideration: the Participants Test, the Ratepayer Impact Measure (RIM) test, and the Total Resource Cost (TRC) test. The tests are summarized below.

Participants Test

The Participants Test analyzes 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 Participants Test includes the costs customers pay for equipment and maintenance. Benefits considered in the test include the incentives paid to the customers and the reduction in customer bills. Failure to demonstrate cost-effectiveness under this test would infer that rational customers would not elect to participate in this program.

Ratepayer Impact Measure Test

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

Total Resource Cost Test

The TRC test measures the overall economic efficiency of a DSM program from a social perspective. This test measures the net costs of a DSM program based on its total costs, including both the participants' 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. Moreover, if appropriate, certain external costs and benefits such as environmental impacts may be taken into account. Because incentives and foregone revenues are not treated as "costs," electric rates for all customers will tend to be higher for programs that are implemented solely using the TRC test to judge cost-effectiveness.

Table 7 illustrates the costs and benefits considered in the three Commission-approved cost-effectiveness methodologies.

**Table 7
Summary of Cost-Effectiveness Methodologies**

	Participants	RIM	TRC
Benefits			
Bill Reduction	X		
Incentives Received	X		
Avoided Generation (Capital and O&M)		X	X
Avoided Transmission (Capital and O&M)		X	X
Fuel savings		X	X
Costs			
Program Costs		X	X
System Fuel Cost Increase		X	X
Incentives Paid		X	
Lost Revenues		X	
Participant's Costs (Capital and O&M)	X		X

The Commission requires IOUs to assess their programs on a regular basis. When programs prove no longer cost-effective, utilities must petition the Commission for modification or discontinuation of the program. For example, programs may need to be modified if a more stringent appliance efficiency standard or building code is adopted. In contrast, if new efficiency measures become available that are cost-effective, the utility may petition the Commission for approval of a new program.

In 2008, the Legislature amended the FEECA statute, placing upon the Commission additional responsibilities when adopting conservation goals. These responsibilities include the consideration of benefits and costs to program participants and ratepayers as a whole, as well as the need for energy efficiency incentives for customers and utilities. The Commission must also consider any costs imposed by state and federal regulations on greenhouse gas emissions.

The amended FEECA statute allows the Commission to provide appropriate financial rewards and penalties to the utilities over which it has rate-setting authority. Additionally, the 2008 legislation authorized the Commission to allow an IOU 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. To date, the Commission has not awarded financial awards or assessed penalties for IOUs subject to FEECA.

2.2 Commission-Established Goals

After considering the evidence in the 2014 goal-setting proceeding, the Commission voted to establish goals for the FEECA utilities based on the RIM cost-effectiveness analysis.⁶ The RIM test is a cost-effectiveness analysis that ensures that all ratepayers, both participants and non-participants, benefit from utility-sponsored conservation programs. Additionally, the RIM test minimizes cross subsidies between customers.

By setting goals based on the RIM test, the Commission also addressed concerns voiced at the hearing regarding subsidies between individuals who participate in DSM programs and individuals who do not participate. The 2014 goal setting process is discussed further in Section 2.4.

Table 8 shows the Commission-approved summer demand, winter demand, and annual energy reduction goals for the period 2015-2024 for the FEECA utilities established in Order No. PSC-14-0696-FOF-EU.

Table 8
Commission-Approved DSM Goals 2015-2024

Utility	Summer Demand Goals (MW)	Winter Demand Goals (MW)	Annual Energy Goals (GWh)
FPL	526.1	324.2	526.3
DEF	259.1	419.3	195.0
TECO	56.3	78.3	144.3
Gulf	68.1	36.7	84.2
FPUC	1.3	0.4	2.0
OUC	5.0	8.4	13.0
JEA	10.8	9.7	25.8
Total	926.7	877.0	990.6

Source: Order No. PSC-14-0696-FOF-EU

Commission Audit Review

In May 2013, the Commission’s Office of Auditing and Performance Analysis published a report titled *Review of Administrative Efficiency of Utility Demand-Side Management Programs*. This audit examined the administrative efficiency of the DSM programs for Florida’s four largest investor-owned electric utilities. The purpose of the audit was to review each utility’s administrative processes to efficiently develop, measure, analyze, and improve efficiency of its DSM programs. A copy of the report is available on the Commission’s website at

⁶ Order No. PSC-14-0696-FOF-EU, Docket Nos. 130199-EI through 130205-EI, In re: Commission review of numeric conservation goals, issued December 16, 2014.

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<http://www.psc.state.fl.us/Files/PDF/Publications/Reports/General/Electricgas/DSMReviewReport.pdf>.

2.3 Assessing Goal Achievement

Commission rules require separate goals be set for residential and commercial/industrial (C/I) customers, assigning context to measuring goal achievement within these two primary customer categories. Each utility's achievements in these categories are also combined and compared against total goals as the value of a system's demand and energy savings has no relation to the sector—business or residential—in which the savings occur.

The FEECA utilities file an annual report for the Commission summarizing demand and energy savings for each approved program compared to the approved DSM goals, pursuant to Rule 25-17.0021, F.A.C. The annual reports exist on the Commission's website at the following link: <http://www.floridapsc.com/ElectricNaturalGas/ARDemandSidePlans>.

Monitoring annual goal achievements enables the Commission to understand the effectiveness of each utility's programs. In addition to reviewing the annual reports, staff may request additional information from the FEECA utilities to better understand their demand and energy saving achievements. These data requests can seek explanations of factors preventing the FEECA utilities from achieving projected participation levels. For example, staff has requested more information specific to which programs in the residential and commercial/industrial sectors contributed to the utilities' ability to achieve estimated participation levels.

Each utility's DSM performance in 2014 is discussed below. The 2014 utility achievements have been compared to the 2014 goals established by the Commission in 2009.

FPL

The Commission allowed variances for both FPL and DEF for complying with the Commission goals established in 2009. FPL did not meet its annual goals on a system-wide basis. In Order No. PSC-09-0855-FOF-EG, issued December 30, 2009, in Docket No. 080407-EG, the Commission established annual numeric goals for FPL. The company's March 30, 2010 initial DSM filing to meet the goals was insufficient. As a result, the Commission directed FPL to file specific program modifications or additions needed for the company's DSM Plan to comply with the goals established in the Order.

FPL filed a modified plan on March 25, 2011, that would modify certain programs to comply with the goals set by the Commission. However, the modified plan, while complying with the Order, would have caused a significant increase in the rates paid by FPL customers. Consequently, the Commission directed FPL to continue with approved programs based on its 2004 DSM plan. This modification yielded significant increases in conservation and decreases in the growth of energy and peak demand, while protecting ratepayers from undue rate increases.

In 2014, FPL achieved 89 percent of its winter MW goals, 77 percent of its summer MW goals, and 56 percent of its annual GWh goals. FPL justifies not meeting the goals by stating it met what its DSM plan is designed to accomplish—meeting the goals established in 2004.

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DEF

Similarly, DEF did not meet its annual goals on a system-wide basis. In Order No. PSC-09-0855-FOF-EG, issued December 30, 2009, in Docket No 080408-EG, the Commission established annual numeric goals for DEF. The company's March 30, 2010 initial DSM filing to meet the established goals was insufficient. As a result, the Commission directed DEF to file specific program modifications or additions needed for the company's DSM Plan to reduce the consumer rate impact and meet the original goals set by the Commission.

DEF's modified plan also failed to meet the goals established by the Commission and would have caused a significant increase in DEF's customer rates. Consequently, the Commission directed DEF to continue with approved programs based on its 2004 DSM plan. This plan yielded significant increases in conservation and decreases in the growth of energy and peak demand, while mitigating rate impacts to customers.

In 2014, DEF achieved 66 percent of its winter MW goals, 54 percent of its summer MW goals, and 30 percent of its annual GWh goals. DEF notes while not achieving the residential goals, it exceeded its commercial and industrial goals. The company adds "although DEF performed over 33,000 Home Energy Audits, and installed over 63,000 measures through its Home Energy Improvement Program and Residential New Construction program . . . delivering cost-effective DSM programs to its [residential] customers . . . [is] challenging . . . due to changes in building codes and appliance standards."⁷

TECO

TECO was able to meet the Commission goals. In 2014, TECO achieved 194 percent of its winter MW goals, 158 percent of its summer MW goals, and 158 percent of its annual GWh goals.

Gulf

In 2014, Gulf achieved 196 percent of its winter MW goals, 153 percent of its summer MW goals, and 105 percent of its annual GWh goals. However, Gulf did not meet its residential GWh energy goal but did meet its total GWh goal.

FPUC

In 2014, FPUC achieved 250 percent of its winter MW goals, 225 percent of its summer MW goals, and 162 percent of its annual GWh goals. However, FPUC did not meet its C/I GWh energy goal but met its total GWh goal.

JEA

For 2014, JEA achieved 180 percent of its winter MW goals, 142 percent of its summer MW goals, and 110 percent of its annual GWh goals. However, JEA did not meet its C/I GWh energy goal but did meet its total GWh energy goal.

⁷ <http://www.floridapsc.com/utilities/electricgas/ARdemandside/2014/DEF.pdf>

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OUC

OUC did not meet the goals in total. In 2014, OUC achieved 67 percent of its winter and summer MW goals and 78 percent of its annual GWh goals. OUC states that it “has been increasingly emphasizing its DSM and conservation programs . . . not only do these programs help customers save money by saving energy, the programs help OUC reduce emissions of greenhouse gases.”⁸

Table 9 shows 2014 annual residential, C/I, and total savings for each utility. Numbers in **bold** show when a utility did not achieve its goals in a particular category.

Table 9
DSM Goals Compared to Annual (2014) Achievements

Utility	Winter (MW)		Summer (MW)		Annual (GWh)	
	Goals	Reduction	Goals	Reduction	Goals	Reduction
FPL						
Residential	60	51	104	99	200	163
Commercial/Industrial	14	16	79	43	194	59
Total	75	67	184	142	394	222
DEF						
Residential	96	41	88	25	289	43
Commercial/Industrial	12	30	26	36	40	57
Total	108	71	114	61	329	100
TECO						
Residential	12	17	11	13	23	44
Commercial/Industrial	2	10	5	13	20	22
Total	14	27	16	26	42	66
Gulf	-					
Residential	10	16	12	15	47	44
Commercial/Industrial	1	5	3	7	11	17
Total	11	21	14	22	58	61
FPUC						
Residential	0.1	0.4	0.2	0.7	0.5	1.4
Commercial/Industrial	0.1	0.1	0.2	0.2	0.8	0.7
Total	0.2	0.5	0.4	0.9	1.3	2.1
JEA						
Residential	1	2	1	2	5	10
Commercial/Industrial	0	1	1	1	10	7
Total	2	3	2	3	16	17
OUC						
Residential	0.2	0.4	0.5	0.6	1.8	1.8
Commercial/Industrial	0.7	0.2	0.7	0.2	1.8	1.0
Total	0.9	0.6	1.2	0.8	3.6	2.8

*Bold numbers indicate the utility did not meet its annual goals.

Source: FEECA utility demand-side management annual reports.

⁸ <http://www.psc.state.fl.us/utilities/electricgas/ARdemandside/2014/OUC.pdf>

2.4 Summary of Recent DSM and Goal Setting Activities

In mid 2013, the Commission set a schedule to establish goals for the FEECA utilities by December 2014. This ensured that the Commission met the statutory requirement specifying goals must be reviewed at least every five years.⁹ Both FPUC and OUC independently filed petitions to use proxy methodologies to establish their goals. These utilities stated that costs associated with updating the 2009 Technical Potential Study, performing the subsequent analyses required by the Order Establishing Procedure, and testifying in support of the analyses would represent a hardship to the companies and their ratepayers due to each company's small size. On August 4, 2013, the Commission voted to approve the proxy methodologies and excuse FPUC and OUC from participating in the goals hearing.¹⁰

On July 21 and July 22, 2014, the Commission heard evidence from the FEECA utilities and intervenors regarding the proposed DSM goals. Highlights from the proceeding included discussions regarding the FEECA utilities' numerical goals, payback/subsidization, consumer education, and solar initiatives. When setting the goals, the Commission considers the costs and benefits of conservation programs to customers who choose to participate in a program, as well as costs and benefits to customers who do not participate. The Commission considers both participants and non-participants as costs are recovered from the general body of ratepayers.

Based on evidence from the DSM goals setting proceeding, on November 25, 2014, the Commission voted to approve goals based on a RIM cost-effectiveness analysis. The Commission noted that FPL's approved goals would be based on the unconstrained RIM test. By approving goals based on the RIM test, the Commission ensured that rates would remain the same or lower than rates would otherwise have been, and that cross subsidies among ratepayer groups would be minimized. In addition, the Commission directed each utility to demonstrate in its DSM plan how it would make all customers, in particular low-income customers, aware of energy efficiency opportunities and utility programs.

The Commission also voted to allow the IOUs' five-year solar pilot programs to end on December 31, 2015. The Commission based its decision on evidence in the record that the existing solar pilot programs were not cost-effective and represented a subsidy between the general body of ratepayers and the limited participants in the programs. The Commission also ordered the IOUs to educate low-income customers on energy conservation opportunities.

The Commission issued the DSM Final Order, Order No. PSC-14-0696-FOF-EU, on December 16, 2014. The utilities subsequently filed DSM plans designed to meet the newly established goals. The Commission approved the utilities' DSM plans in August 2015.

Afterward, the IOUs submitted program standards providing detailed descriptions on the administrative approach for each DSM program. The Commission approved the program standards in October 2015. As of January 2016, the utilities are implementing the programs based on the latest DSM goals, plans and program standards approved by the Commission.

⁹ Docket Nos. 130199-EI through 130205-EI.

¹⁰ Order No. PSC-13-0645-PAA-EU, Docket Nos. 130204-EM and 130205-EI, issued December 4, 2013.

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Through monitoring of the utilities' conservation annual achievements, the Commission is able to better understand which utility programs are effective and which may need additional modification. Staff monitoring includes requesting information and supporting documentation from the utilities to validate the results of their DSM programs.

Solar Programs

In 2009, the Commission instructed the IOUs to spend 10 percent of each company's energy conservation cost recovery expenditures as an annual cap for solar water heating and solar photovoltaic (PV) pilot programs.¹¹ As part of its proposed DSM plan, each IOU proposed solar programs and the Commission approved these programs in 2010 and 2011. To comport with the FEECA revision encouraging demand-side renewables, the Commission approved solar pilot programs even though these programs were determined not to be cost-effective. The Commission's intent was to evaluate the results of the pilot programs in a subsequent goals proceeding. Table 10 represents the Commission-approved annual expenditure cap for the IOUs' solar pilot programs through 2015.

Table 10
Approved Annual Expenditures for Solar Pilot Programs

Utility	Commission-Approved Annual Solar Expenditures
FPL	\$15,536,870
DEF	\$6,467,592
TECO	\$1,531,018
GULF	\$900,338
FPUC	\$47,233
Total	\$24,483,051

Source: Order No. PSC-09-0855-FOF-GU.

During 2014, the FEECA IOU utilities provided rebates for 2,456 solar photovoltaic and water heating facilities for both the residential and commercial sectors. For many utilities, these programs reached capacity just hours after approval, demonstrating a high customer demand for solar photovoltaic rebates.

The FEECA IOUs also funded solar thermal (water heating) pilots for low-income customers as well as other residential and commercial customers. In addition, FPL, DEF, and Gulf offered solar pilot programs to fund photovoltaic panels for select schools until the end of 2015.

Table 11 reflects the quantity of photovoltaic and solar water heating installations funded by the five IOUs for the residential and commercial sectors.

¹¹Order No. PSC-09-855-FOF-EG, Docket Nos. 080407-EG through 080413-EG, In re: Conservation review of numeric conservation goals, issued December 30, 2009.

Table 11
Solar Pilot Program Installations in 2014

Installations	FPL	DEF	TECO	Gulf	FPUC	Total
Residential Solar Water Heating	1,384	337	58	43	-	1,822
Commercial Solar Water Heating	3	-	-	-	-	3
Residential PV	257	112	60	50	9	488
Commercial PV	114	27	2	-	-	143
Total Solar Water Heating and PV	1,758	476	120	93	9	2,456

Sources: FPL: Docket 150000-OT, Undocketed Filing, FPL, DEF, TECO, Gulf, and FPUC; Staff's first Data Request.

Table 12 reflects the five IOUs' photovoltaic and solar water heating installation expenditures.

Table 12
Solar Water Heating and Photovoltaic Expenditures in 2014

Installations	FPL	DEF	TECO	Gulf	FPUC	Total
Solar Water Heating Expenditures	\$2,598,694	\$322,245	\$97,190	\$100,352	\$45,015	\$3,163,496
PV Expenditures	\$10,442,994	\$4,800,473	\$1,357,661	\$490,000	\$652	\$17,091,780
Total Solar Water Heating and PV Expenditures	\$13,041,688	\$5,122,718	\$1,454,851	\$590,352	\$45,667	\$20,255,276

Sources: FPL: Docket 150000-OT, Undocketed Filing, FPL, DEF, TECO, Gulf and FPUC; Staff's first Data Request.

In the 2014 DSM goals docket, Order PSC-14-0696-FOF-EU, the Commission voted to terminate these programs by the end of 2015. Analysis of the pilot programs' results showed that the programs were not cost-effective, indicating that there were cross subsidies between participants and non-participants. In addition, the costs of solar photovoltaic systems had decreased significantly since the pilot programs were initiated.

ECCR Opt-Out

On September 5, 2014, in Docket 140002-EG, Wal-Mart and the Florida Industrial Power Users Group (FIPUG) requested that industrial customers be allowed to separate their ECCR charges into energy efficiency (EE) and demand response (DR) related costs. Wal-Mart and FIPUG further requested that industrial and large commercial customers be allowed to opt out of paying for the EE portion of their bill, stating that each could implement EE improvements into their businesses in the most cost-effective manner.

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The Commission addressed Wal-Mart's and FIPUG's request for an opt-out provision into a new docket, Docket 140226-EI. The other parties in the docket—FPL, Duke, TECO, Gulf, FPUC, the Southern Alliance for Clean Energy (SACE), and the Office of Public Counsel (OPC)—opposed the opt-out request. The opposing parties stated that the proposed opt-out provision was unnecessary, complex, costly to implement, and could result in subsidization by residential customers of large commercial and industrial customers.

On December 3, 2015, the Commission denied the opt-out provision as proposed by Wal-Mart and FIPUG. The Commission closed the record, but invited the petitioners—Wal-Mart and FIPUG—to submit additional information on a potential pilot opt-out program and the impacts on non-participating ratepayers.

Section 3. Overview of Florida’s Electricity Market

3.1 Energy Demand in Florida

Florida’s total electric consumption ranks among the highest in the country due to its sizeable population and climate-induced high demand for cooling. Florida’s load patterns include high air-conditioning loads in the summer and greater reliance on electricity, rather than natural gas, for heating in the winter. These patterns result in large swings in peak demand. Understanding these patterns and why they occur is imperative to appreciating the importance of conservation in Florida.

Table 13 shows residential customers comprise approximately 89 percent of Florida’s electricity customers, while purchasing approximately 53 percent of its electrical energy. Florida’s commercial customers comprise approximately 11 percent of the number of customers and purchase approximately 39 percent of its electrical energy. Industrial customers purchase the remaining 8 percent of electricity in Florida.

Table 13
Florida's Electric Customers by Class and Consumption in 2014

Customer Class	Number of Customers	% of Customers	Energy Sales (GWh)	% of Sales
Residential	8,518,308	88.7%	111,826	52.7%
Commercial	1,067,302	11.1%	83,326	39.2%
Industrial	21,705	0.2%	17,223	8.1%
Total	9,607,315	100.0%	212,375	100.0%

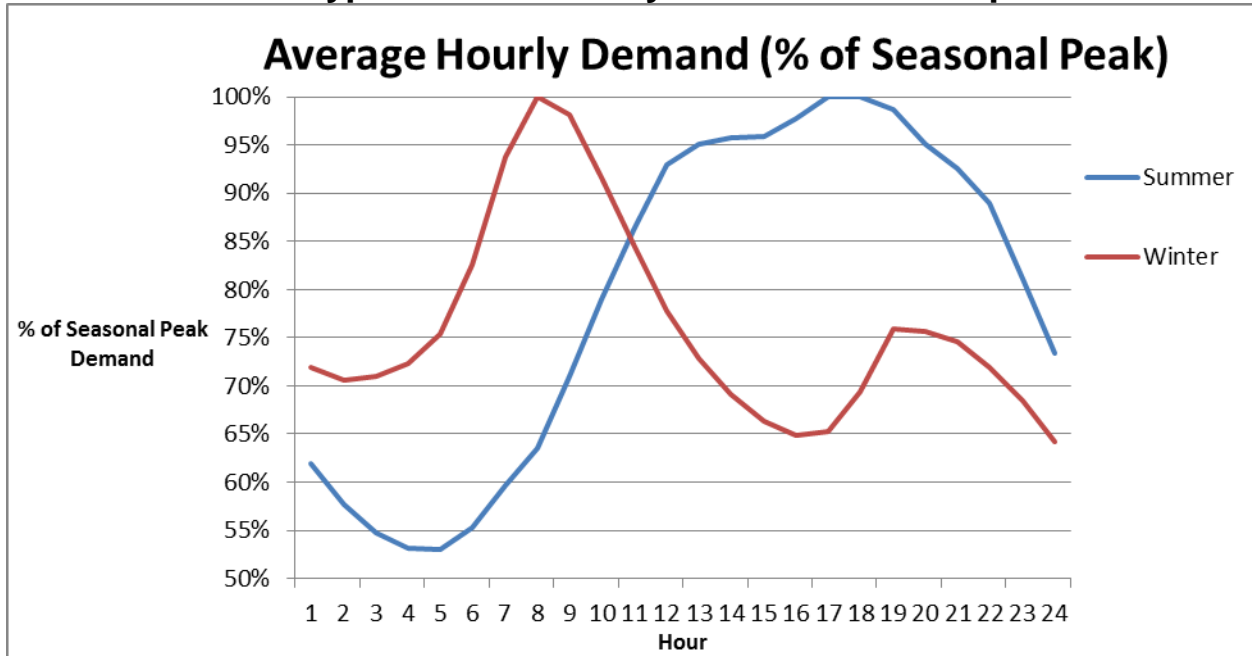
Source: Florida Reliability Coordinating Council Load and Resource Plan.

Florida’s high temperatures and humidity creates fluctuation in residential customers’ electrical usage throughout the day. In the summer, residential energy use peaks in early evening, while in the winter, residential energy usage peaks mid-morning and late evening.

Small and medium commercial loads are highest during the workday from 8am to 6pm. Large commercial and industrial loads demonstrate more consistency throughout the day. Other states with a larger industrial presence benefit from flatter large commercial and industrial loads, while Florida faces more rapidly shifting peak load. The Commission-approved utility demand response programs are designed to address the reduction or shifting of peak demand in order to reduce the need for new generation.

Figure 1 shows the daily load curves for a typical Florida summer and winter day. In the summer, air-conditioning demand starts to increase in the morning and peaks in the early evening; a pattern which aligns with the sun’s heating of buildings. In comparison, the winter load curve has two peaks—the largest in mid-morning, followed by a smaller peak in the late evening—both of which correspond to heating loads.

Figure 1
Typical Florida Daily Electric Load Shapes



Source: Ten Year Site Plan responses provided to the Commission by the IOUs in the 2015 first Data Request.

Florida is typically a summer-peaking state, which means summer peak demand generally controls the amount of required generation. As the 2015 FRCC Load and Resource Plan notes, Florida’s 2014 summer peak demand was 48,825 MW, while the winter peak demand was 45,789 MW.

3.2 Florida’s Electric Generating Resources

Florida’s electric utilities’ resource-planning process aims to guarantee enough installed capacity is available to meet projected customer demand and provide a contingency reserve in the event of planned outages, forced outages, or spikes in load. At the point in the planning process that the timing of capacity additions is known, the appropriate generating technology and fuel type is determined to provide the needed energy and maintain reliability.

Electric generating units typically are categorized as baseload, intermediate, or peaking. Aside from planned and forced outages, baseload units are scheduled to operate continuously. Intermediate units generate power to follow load for periods of time, but are not planned to operate nonstop. Peaking units supplement baseload and intermediate power, operating less frequently during high-demand periods. Utility-sponsored conservation programs help to reduce peak demand and energy consumption, offsetting the need for new generating capacity.

Florida’s mix of electric utilities is made up of five IOUs, 35 municipally-owned electric utilities and 18 rural electric cooperatives. In total, these utilities currently have 54,533 MW of summer electric generating capacity and 58,446 MW of winter generating capacity.

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Non-utility generators in the state provide an additional 4,355 MW of summer electric generating capacity and 4,652 MW of winter generating capacity. Supplementary capacity is purchased from out-of-state utilities over the Florida-Georgia transmission interconnections.

The most prominent fuel source for generation in Florida is natural gas. Table 14 below provides a breakdown of the fuel sources used to generate power in Florida.

Table 14
Generation Sources in Florida in 2014

Generation Source	Percent of Generation
Gas	58.8%
Coal	23.2%
Nuclear	11.6%
Other	2.1%
Interchange	1.9%
Non-Utility Generation, Primarily Gas	0.8%
Municipal Solid Waste	0.6%
Biomass	0.5%
Other Renewables (Landfill Gas, Solar, Hydro)	0.3%
Residual	0.1%
Distillate	0.1%

Source: 2014 Actual Data from the 2015 Florida Reliability Coordinating Council Load and Resource Plan

The relatively low price of natural gas, along with the EPA’s Clean Power Plan, are expected to result in Florida substituting additional gas generation or renewables for coal generation. Therefore, it is possible that Florida’s reliance on natural gas may increase beyond 59 percent. Approximately 1,638 MW of Florida’s generating capacity is comprised of renewables, according to the Commission’s Ten Year Site Plan Review. Municipal solid waste and biomass represent the majority of Florida’s renewable generation. Other major types of renewable generation in Florida include waste heat, hydroelectric, landfill gas, and solar.

Nuclear generation has steadily decreased since 2010 due to the decommissioning of DEF’s Crystal River Unit 3. However, uprates consisting of approximately 520 MW of capacity were completed on Florida’s four remaining nuclear units in 2013. In addition, Florida is scheduled to add new nuclear generation in 2027 and 2028, when FPL’s Turkey Point Units 6 and 7 are planned to come on-line. This will add an additional combined capacity of 2,200 MW.

Section 4. Educating Florida's Consumers on Conservation

4.1 Commission Consumer Education Outreach

While the Commission has statutory authority to require conservation efforts by regulated utilities, as part of the agency's outreach program, the Commission complements utility efforts with its own conservation related activities. To effectively reach as many consumers as possible, the Commission's consumer education program uses a variety of tools to share conservation information, including the Commission website, public events, brochures, press releases, *Consumer Connection E-newsletter*, and Twitter. Conservation information is also available through other governmental and utility websites. Section 4.2 lists related websites for state and federal agencies, investor-owned electric utilities, and local gas distribution companies to further assist consumers. Most of the data in this section covers January through September 2015, due to the report's publication date.

Triple E Award

For the second year, the Commission is recognizing small businesses for implementing Commission-approved, cost-effective conservation programs. Covering the state's five major geographic areas, each month the Commission gives its *Triple E Award*—for Energy Efficiency Efforts—to a local business that has accomplished superior energy efficiency by working with its local utility to help reduce its energy footprint. The Commission's *Triple E Award* recipients receive an award plaque, are highlighted through a press release issued statewide, and are featured under *Hot Topics* on the Commission's homepage, www.Floridapsc.com.

Electronic Outreach

An assortment of information is available on the Commission website to help consumers save energy. According to data from Google Analytics, website page views for January through October 2015 totaled 1,102,945. Of these, consumer assistance pages received 67,866 views. One of the more popular website destinations is the Commission's Conservation House. The interactive graphic provides informative “point and click” conservation tips, helping consumers discover ways to reduce their monthly utility bills. The Conservation House is located at: <http://www.psc.state.fl.us/ConsumerAssistance/EnergyConservationHouse?lang=E>.

The Commission also features several energy conservation brochures online and in print to help consumers save energy. Brochures may be viewed and printed directly from the website, <http://www.floridaPSC.com/publications/>, ordered free online, or requested by mail or phone. From January through September 2015, 44,318 brochures were mailed by request.

With its interactive design, the Commission's quarterly *Consumer Connection E-Newsletter* features current energy and water conservation topics, consumer tips, and general Commission information. In text and on video, consumer tips highlighted in 2015 include *Proper Tree Planting Near Utility Lines*, *Florida Telecommunications Relay*, and *Florida Friendly Landscaping*. The *Consumer Connection E-Newsletter* is tweeted and sent to consumers, who, at <http://www.floridapsc.com/ConsumerAssistance/ConnectionNewsletter> can subscribe to receive the free newsletter. Commission news releases, including those on conservation, are distributed

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electronically to legislators, local government officials, and Florida Cabinet members monthly in the *FPSC Update*. The *Update* is also featured and archived on the Commission's homepage.

National Consumer Protection Week

National Consumer Protection Week, highlighting consumer protection and education efforts, was important to the Commission's 2015 conservation education efforts. For the 17th Annual *National Consumer Protection Week* (March 1-7, 2015), Commission Chairman Art Graham teamed up with the Jacksonville Jaguars to remind consumers to "Suit Up and Stay Protected!" to tackle energy related fraud schemes and high energy usage.

Also during *National Consumer Protection Week*, the Commission made presentations in North Lauderdale, Hallandale Beach, Miramar, LaBelle, Punta Gorda, and Arcadia, showing consumers how to save money through energy and water conservation and how to avoid scams.

Older Americans Month

For the fourth year, the Commission participated in *Older Americans Month*, a national project celebrated each May to honor and recognize older Americans for their contributions to families, communities, and society. *Get into the Act* was this year's theme, and the Commission held ten education sessions on ways to conserve energy and water, and strategies to prevent becoming a victim of fraud at senior communities in the Fort Myers area. The Commission also distributed brochures and publications at the Jacksonville Expo, where over 5,500 seniors attended in May.

Energy Awareness Month

Each October, the U.S. Department of Energy (DOE) sponsors National Energy Awareness Month to promote smart energy choices and highlight economic and job growth, environmental protection, and increased energy independence.

Highlighting the 2014 Energy Awareness Month, Chairman Art Graham joined Beaches Energy Services representatives to perform a residential energy audit. A Neptune Beach homeowner learned how to implement easy home energy efficiency measures during the audit. By checking and making minor improvements to insulation, water heating, HVAC system, lighting, windows, and doors, the home's overall energy efficiency improved, making it more comfortable and more affordable.

Community Events

The Commission continuously seeks existing and new community events, venues, and opportunities where conservation materials can be distributed and discussed with citizens. This year, the Commission participated in consumer programs and distributed energy and water conservation materials through partnerships with governmental entities, consumer groups, and many other service organizations.

Examples of events where conservation information was shared during 2015 include:

- Senior Day at the Capitol
- Active Living Expo
- Earth Day at Cascades Park

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- Wiegel Senior Center
- Players Community Center
- Cherry Tree Apartments
- Barry Manor Apartments
- St. Johns River Apartments
- The Villas at Hampton Park
- The Villas at Carver Park
- Joseph Meyerhoff Senior Center
- Austin Hepburn Senior Center
- L.J. Nobles Senior Center
- Rebecca Neal Owens Center
- Miramar Senior Center
- Friendship Centers of DeSoto County
- Southside Senior Day at Jake Gaither Community Center
- Green Cove Springs Center
- Weigel Senior Center
- Players Community Center
- The Reverend Dr. Martin Luther King, Jr., Empowering Senior Day
- 6th Annual Southside Community Health & Fitness Fair at Maranatha Seventh Day Adventist Church
- Edgar Johnson Senior Center
- Sunshine Villas Apartments
- Renaissance Preserve Apartments
- Dr. Piper Memorial Center
- Lake Kennedy Senior Center
- Bonair Tower Apartments
- Sandpiper Run Apartments
- Hatton B. Rogers Apartments
- Goodwill Industries - Daytona, Orlando, Naples, Ft. Myers, Lehigh, and Port Charlotte
- Jacksonville Senior Expo

Hearings and Customer Meetings

As an ongoing outreach initiative, the Commission supplies conservation brochures to consumers at Commission hearings and customer meetings across the state. From January through September 2015, Commission staff distributed information and addressed consumer questions at 15 public hearings and meetings. Consumers who file a complaint with the Commission about high electric or natural gas bills also receive conservation information.

Library Outreach Program

Each year the Commission provides educational packets, including publications and Lifeline brochures and applications in English, Spanish, and Creole, to Florida public libraries across the state for consumer distribution. The Commission's Library Outreach Campaign reached 583 state public libraries and branches in 2015. This year, the Commission sent the materials via a

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CD that included a print-ready copy of brochures for easy reproduction. Following the Campaign, many libraries' requests for additional publications have been filled.

Media Outreach

News releases are distributed to the media on major Commission decisions, meetings, and public events. The Office of Consumer Assistance & Outreach also issues news releases urging conservation. For instance, in a March news release, the Commission highlighted the federal government's *Fix a Leak Week* and shared several water conservation strategies. In May, the Commission issued a release for Older Americans Month outlining the importance of learning to conserve resources and save money, and a release on *National Drinking Water Week* that included conservation techniques and water-saving tips.

Youth Education

The Commission emphasizes conservation education for Florida's young consumers. During 2015, the Commission continued to produce its student resource booklet--*Get Wise and Conserve Florida!*--to teach children about energy and water conservation. The booklet has been distributed to all public libraries through the Library Outreach Program and is available at all Commission outreach events. The student resource book continues to be a favorite during senior events.

On March 5, 2015, the Commission and the City of Tallahassee teamed up to encourage young people to conserve water in observance of the 1st Annual North Florida Water Festival. Leon High School drama students performed *Water Wiser*, a Commission conservation play, at the educational event in Cascades Park.

Water Wiser and another conservation play, *Turn It On, Turn It Off*, were developed by the Commission to be performed by teen drama groups or young school children for their classmates, thereby increasing the students' interest in learning about conservation. Both plays are included in the *Arts in Education Directory*, produced by the Tallahassee-Leon County Council on Culture and Arts that serves as a resource guide for teachers seeking information about educational programs available in the area.

4.2 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>

The Office of Energy – <http://www.freshfromflorida.com/Divisions-Offices/Energy>

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

Florida Weatherization Assistance - <http://floridajobs.org/community-planning-and-development/community-services/weatherization-assistance-program>

Florida's Local Weatherization Agencies List – <http://floridajobs.org/community-planning-and-development/community-services/weatherization-assistance-program/contact-your-local-weatherization-office-for-help>

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U.S. Agencies and National Organizations

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/>

National Energy Foundation – <https://nef1.org/>

Florida’s Electric Utilities Subject to FEECA

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

Duke Energy Florida, Inc. – <http://www.duke-energy.com/>

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

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

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

JEA – <http://www.jea.com/>

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

Florida’s Investor-Owned Natural Gas Utilities

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

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

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

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

Sebring Gas System <http://www.sebringgas.com/>

Appendix 1. Conservation Activities of FEECA Utilities for 2015

FEECA IOUs

A. Duke Energy Florida, Inc.

Residential Programs

Home Energy Check

This program is a requirement for participation in other residential programs and provides DEF customers with an analysis of energy consumption and recommendations on energy efficiency improvements. Seven types of energy audits are available: the free walk-through, the paid walk-through (\$15 charge), the energy rating (Energy Gauge), the mail-in audit, an Internet option, a phone-assisted audit, and a student audit.

Home Energy Improvement

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

Residential New Construction (Home Advantage)

The Home Advantage Program promotes energy efficient construction which exceeds the Florida Energy Code. Information, education, and consultation are provided to homebuilders, contractors, realtors, and home buyers on energy related issues and efficiency measures.

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, DEF 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.

Low-Income Weatherization Assistance Program

This program's goal is to integrate DEF's DSM program measures with the Department of Community Affairs and local weatherization providers to deliver energy efficiency measures to low-income families. Through this partnership, DEF assists local weatherization agencies by providing energy education materials and financial incentives to weatherize the homes of low-income families.

Energy Management (Residential and Commercial)

This load management program incorporates direct radio control of selected customer equipment to reduce system demand during peak capacity periods and/or emergency conditions by temporarily interrupting selected consumer appliances for special periods of time. Customers

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have a choice of options and receive a credit on their monthly electric bills depending on the options selected and their monthly kWh usage.

Commercial/Industrial Programs

Business Energy Check

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

Better Business

This efficiency program provides incentives to existing commercial and industrial customers for heating, AC, 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, AC, motors, water heating, window film, insulation, leak free ducts, cool roof, and lighting.

Florida Customer Incentive Program

This program encourages conservation efforts that are not supported by DEF's other programs. DEF evaluates major equipment replacement or other actions that substantially reduce DEF's peak demand requirements to determine their impact on DEF's system. If cost-effective, these actions may qualify for an incentive 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 DEF 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 DEF. In return for this cooperation, the customer receives a monthly rebate for the curtable portion of their load.

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Research and Development and Pilot Programs

Solar Water Heater for Low Income Residential Customers Pilot

This program was a customer renewable energy measure designed to assist low-income families with energy costs by incorporating a solar thermal water heating system in their residence while it is under construction. This pilot expired at the end of 2015.

Solar Water Heater with Energy Management

This pilot program encouraged residential customers to install a solar thermal water heating system. The pilot requires customers to complete a Home Energy Check before the solar thermal system is installed. This pilot expired at the end of 2015.

Residential Solar Photovoltaic Pilot

This pilot program encouraged residential customers to install new PV systems on their home. The program design included an annual reservation process for pre-approval. This pilot expired at the end of 2015.

Commercial Solar Photovoltaic Pilot

This pilot program encouraged commercial customers to install new PV systems on their facilities. The pilot design included an annual reservation process for pre-approval. This pilot expired at the end of 2015.

Photovoltaic for Schools Pilot

This pilot program was designed to promote energy education and provide participating public schools with new PV systems at no cost to the school. The pilot program was limited to an annual target of one system. 32 schools received solar since 2011. This pilot expired at the end of 2015.

Research and Demonstration Pilot

This program's purpose was to research technology and establish R&D initiatives to support the development of renewable energy pilot programs. This pilot expired at the end of 2015.

Technology Development

This program allows DEF to undertake certain development and demonstration projects which have promise to become cost-effective energy efficiency programs.

Qualifying Facility

This program supports the costs to administer and facilitate the purchase of as-available energy and firm energy and capacity from qualifying facilities including those that utilize renewable energy sources.

B. Florida Power & Light Company

Residential Programs

Residential Home Energy Survey Program (HES)

This program educates customers on energy efficiency and encourages implementation of recommended practices and measures, even if these are not included in FPL's DSM programs. The HES is also used to identify potential candidates for other FPL DSM programs.

Residential Building Envelope Program

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.

Residential Duct System Testing and Repair Program

This program identifies AC duct system leaks and has qualified contractors repair those leaks.

Residential Air Conditioning Program

This program provides financial incentives for residential customers to purchase a more efficient unit when replacing an existing AC system.

Residential New Construction Program (BuildSmart)

This 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 HVAC systems and install reduced air infiltration energy efficiency measures.

Residential Load Management Program (On Call Program)

This program offers voluntary load control to residential customers.

Commercial/Industrial Programs

Business Energy Evaluation Program

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

Business Efficient Lighting Program

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

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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 HVAC systems.

Business Custom Incentive Program

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

Business Building Envelope Program

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

Business Water Heating Program

This program encourages business customers to install qualifying Heat Recovery Units or Heat Pump Water Heater 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.

Business On Call Program

This program offers voluntary load control of central AC to General Service and General Service Demand customers.

Commercial/Industrial Load Control Program

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

Commercial/Industrial Demand Reduction Program

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

Cogeneration and Small Power Production

This program facilitates the installation of cogeneration and small power production facilities.

Research and Development and Pilot Programs

Conservation Research and Development Program

This program evaluates emerging conservation technologies to determine which are worthy of further evaluation as candidates for program development.

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Renewable Research and Demonstration Project

In this project, FPL conducted demonstrations and renewable technology research projects to increase awareness of solar and to quantify the effectiveness of emerging renewable technologies. This pilot expired at the end of 2015.

Residential Solar Water Heating Pilot

This pilot encouraged residential customers to install solar water heating systems. This pilot expired at the end of 2015.

Residential Solar Water Heating (Low Income New Construction) Pilot

This pilot was a partnership with non-profit organizations to provide solar water heating systems to selected low income housing developments. This pilot expired at the end of 2015.

Residential Photovoltaic (PV) Pilot

This pilot encouraged residential customers to install PV systems. The program design included an annual reservation process. This pilot expired at the end of 2015.

Business Solar Water Heating Pilot

This pilot encouraged business customers to install solar water heating systems. The pilot expired at the end of 2015.

Business Photovoltaic (PV) Pilot

This pilot encouraged business customers to install PV systems. The program design included an annual reservation process. This pilot expired at the end of 2015.

Business Photovoltaic (PV) for Schools Pilot

In this pilot, FPL installed PV systems and provided supporting educational training and materials for selected schools in most public school districts in FPL's territory to demonstrate and educate students on PV. This pilot expired at the end of 2015.

C. Florida Public Utilities Company

Residential Programs

Residential Energy Survey Program

This program is provided at no cost to the customer and provides participating customers with information they need to determine which energy saving measures are best suited to their individual needs and requirements. The objective of this type of survey is to provide FPUC's residential customers with energy conservation advice that encourages the implementation of efficiency measures resulting in energy savings for the customer.

Residential Heating & Cooling Efficiency Upgrade Program

This program is directed at reducing the rate of growth in peak demand and energy throughout the company's electricity service territories. The program does this by increasing the saturation of high-efficiency heat pumps and central air-conditioning systems.

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Solar Water Heating Program

This program is directed at reducing the consumption of electric energy and fossil fuels in FPUC's service territories. The company provides a rebate of \$200 for eligible solar water heating installations. All FPUC customers are eligible to participate in this program, but each customer can only receive one incentive payment of \$200, regardless of the amount of installations. Though the Commission did not specifically mention FPUC, in its 2014 DSM goals order, the Commission ordered that the existing solar pilot programs should end due to not being cost-effective. It therefore appears that 2015 will be the last year of the FPUC solar water heating program.

Solar Photovoltaic Program

The primary purpose of this program is to encourage the installation of solar photovoltaic systems and reduce the consumption of fossil fuels used to generate electricity. FPUC provides an incentive of \$2.00 per watt of dc solar PV installed, up to a maximum of \$5,000. Excess generation from the solar PV installation is purchased by FPUC. Though the Commission did not specifically mention FPUC, in its 2014 DSM goals order, the Commission ordered that the existing solar pilot programs should end due to not being cost-effective. It therefore appears that 2015 will be the last year of the FPUC solar photovoltaic program.

Commercial Programs

Commercial Energy Survey Program

This program provides participating customers with a free energy audit that provides customized information to meet the individual needs of small and large customers. The survey process consists of an on-site review of the customer's facility operation, equipment, and energy usage pattern by a FPUC Energy Conservation Representative. The Energy Conservation Representative identifies areas of potential reduction in kW demand and kWh consumption.

Commercial Heating & Cooling Efficiency Upgrade Program

This program is directed at reducing the rate of growth in peak demand as well as reducing energy consumption throughout FPUC's commercial sector. The program will do this by increasing the saturation of high-efficiency heat pumps and central AC systems.

Commercial Indoor Efficient Lighting Rebate Program

This program is directed at reducing peak demand and energy consumption by decreasing the load presented by commercial lighting equipment. To serve this purpose, this program requires that commercial customers achieve at least 1,000 watts of lighting reduction by either replacing ballasts and lamps, qualifying for a \$.010 per watt reduced incentive, or by replacing lamps only for an incentive of \$0.025 per watt reduced (maximum \$100 rebate)

Commercial Window Film Installation Program

This program is directed at reducing peak demand and energy by decreasing the load on commercial AC equipment. To serve this purpose, FPUC will provide rebates of \$0.50 per square foot of covered area (at a maximum of \$100 per customer) for solar window film installations with a shading coefficient of 0.45 or less.

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Commercial Chiller Upgrade Program

This program is directed at reducing the rate of growth in peak demand and energy through FPUC's commercial sector. To serve this purpose, this program requires that commercial customers replace existing chillers with a more efficient system. By doing so, they will qualify for an incentive of up to \$100 per kW of additional savings above the minimum efficiency levels.

Educational and Research Programs

Educational/Low Income Program

FPUC presently has energy education programs that identify low-cost and no-cost energy conservation measures. To better assist low-income customers in managing their energy purchases, the presentations and formats of these energy education programs are tailored to the audience.

Conservation Demonstration and Development Program

The primary purpose of this program is to pursue research, development, and demonstration projects that are designed to promote energy efficiency and conservation. This program will supplement and complement the other demand-side management programs offered by FPUC. The program is meant to be an umbrella program for identification of new technologies.

Affordable Housing Builders and Providers Program

In this program, FPUC will identify the affordable housing builders within the service area and will encourage them to attend educational seminars and workshops related to energy efficient construction, retrofit programs, and financing programs. FPUC will work with the Florida Energy Extension Service and other seminar sponsors to offer to facilitate a minimum of two seminars and/or workshops per year.

D. Gulf Power Company

Residential Programs

Residential Energy Audit and Education

This program is the primary educational program to help customers improve the energy efficiency of their new or existing home through energy conservation advice and information that encourages the implementation of efficiency measures and behaviors resulting in utility bill savings.

Community Energy Saver Program

This program assists low-income families with managing their energy costs. Through this program, qualifying customers receive the direct installation of conservation measures at no cost to them. The program also educates families on energy conservation techniques.

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Landlord/Renter Custom Incentive Program

This program is designed to increase energy efficiency in the residential rental property sector. This program promotes the installation of various energy efficiency measures available through other programs, such as HVAC, insulation, windows, water heating, lighting, and appliances.

HVAC Efficiency Improvement Program

This program is designed to increase energy efficiency and improve HVAC cooling system performance for new and existing homes. These efficiencies are realized through:

- HVAC maintenance
- HVAC early retirement (for inefficient systems)
- Duct repair and other means

Heat Pump Water Heater Program

This program provides incentives directly to the customer for the installation of high-efficiency Heat Pump Water Heating equipment for domestic hot water production.

Ceiling Insulation Program

This program provides incentives to encourage customers to install high efficiency insulation or increase insulation in existing residential single-family and multi-family homes. The objective of this program is to reduce heat loss and heat gain from both conductive and convective means by increased insulation.

High Performance Window Program

This program provides incentives to install high-efficiency windows or window film in existing or new residential applications. The objective of the program is to reduce solar heat gain into a home which, in turn, leads to reduced HVAC loads and operating costs.

Reflective Roof Program

This program provides incentives to install ENERGY STAR qualified cool/reflective roofing products when constructing a new home or replacing the roof on an existing residence. The objective of this program is to significantly decrease the amount of heat that is transferred through roof assemblies and into vented attic spaces.

Variable Speed/Flow Pool Pump Program

This program provides an incentive to encourage the installation of high-efficiency variable speed or variable flow pool pumping and control equipment in both new and existing residential applications. The objective of this program is to reduce the energy, demand, and cost associated with swimming pool operation.

Energy Select / Energy Select Lite

The program is designed to provide customers with a means of controlling their energy purchases by conveniently programming their heating and cooling systems and major appliances, such as electric water heaters and pool pumps, to automatically respond to prices that vary during the day and by season. The Energy Select Lite subset of the program was originally intended to provide a separate means to expand price responsive load management program participation to

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include residential customers who did not meet certain participation standards for the Energy Select Program.

Self-Install Energy Efficiency Program

This program promotes the purchase and installation of ENERGY STAR rated appliances for residential customers. The program focuses on increasing customer awareness of the benefits of energy efficient technologies and products through customer education and retail partnerships.

Refrigerator Recycling Program

This program is intended to eliminate inefficient or secondary refrigerators in an environmentally safe manner and produce cost-effective long-term energy and peak demand savings in the residential sector. The objective of the program is to increase customer awareness of the economic and environmental costs associated with running inefficient, older appliances in a household, and to provide eligible customers with free refrigerator and freezer pick-up services in addition to a small financial incentive.

Commercial Programs

Commercial/Industrial Audit

This program is designed to provide professional advice to existing commercial and industrial customers on how to reduce, and make efficient use of, energy. This program covers from the smallest commercial customer, requiring only a walk-through survey, to the use of computer programs which will simulate several design options for very large energy intensive customers.

Commercial HVAC Retrocommissioning Program

This program offers basic retrocommissioning at a reduced cost for qualifying installations of existing commercial and industrial customers. It is designed to diagnose the performance of the HVAC cooling unit(s) operating in commercial buildings with the support of an independent computerized quality control process.

Commercial Building Efficiency Program

This program is designed as an umbrella efficiency program for existing commercial and industrial customers to encourage the installation of eligible high-efficiency equipment as a means of reducing energy and demand. The goal of the program is to increase awareness and customer demand for high-efficiency, energy saving equipment.

HVAC Occupancy Sensor

This program is intended to help manage energy consumption and reduce energy waste in hotel rooms by providing hotel owners in Gulf's service area the opportunity to automatically control temperature settings in hotel rooms when the rooms are unoccupied.

High Efficiency Motor Program

This program is designed to encourage commercial and industrial customers to install premium-efficiency motors in new or existing facilities. The objective is to reduce demand and energy associated with electric motors by encouraging the replacement of worn out, inefficient motors with high efficiency motors.

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Food Service Efficiency Program

This program encourages the installation of ENERGY STAR qualified or equivalent energy efficient commercial and industrial food service equipment. The objective of the program is to reduce energy consumption and demand as well as operating costs for the customer.

Commercial/Industrial Custom Incentive

This program is designed to establish the capability and process to offer advanced energy services and energy efficient end-user equipment to C/I customers. These energy services include comprehensive audits, design, and construction of energy conservation projects.

Energy Select Electric Vehicle Pilot Program

The Energy Select Electric Vehicle Pilot Program provides residential customers with an incentive to encourage electric vehicle transportation and off-peak charging through the Energy Select Program. The objective of this pilot program is to measure customer acceptance of electric vehicles (EVs) and plug-in hybrid electric vehicles (PHEVs) as well as customer response to charging these electric vehicles using Gulf's existing Energy Select program.

Research and Development Programs

Renewable Energy

The Renewable Energy Program promotes the deployment of demand-side renewable technologies through a portfolio of four programs—solar for schools, solar PV, solar thermal, and solar thermal water heater for low income. This program expired in 2015.

Conservation Demonstration and Development

A package of conservation programs was approved by the Commission in Order No. 23561 for Gulf to explore and to pursue research, development, and demonstration projects designed to promote energy efficiency and conservation. This program serves as an umbrella program for the identification, development, demonstration, and evaluation of new or emerging end-use technologies.

E. 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.

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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 HVAC equipment at existing residences.

Residential Building Envelope Improvement

This program reduces demand and saves energy by decreasing the load on residential HVAC equipment. Eligible customers can receive incentives to add ceiling insulation exterior walls, window replacements and window film.

Prime Time Program

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

Renewable Energy Initiative

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

Renewable Energy Systems Initiative (Pilot)

This is a five year renewable energy pilot program that uses rebates and incentives to encourage the installation of solar photovoltaic and solar hot water heating technologies. This pilot program expired in 2015.

Price Responsive Load Management

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

Residential Low-Income Weatherization

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

Educational Energy Awareness – Pilot

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

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Energy Plus Homes

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

Commercial Programs

Cogeneration

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

Commercial Cooling

The purpose of this program is to encourage the installation of high efficiency direct expansion commercial AC equipment.

Commercial Lighting

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

Commercial Load Management

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

Standby Generator

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

Conservation Value

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

Industrial Load Management

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

Commercial Duct Repair

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

Commercial Building Envelope Improvement

This program saves demand and energy by decreasing the load on HVAC equipment. Eligible customers can receive incentives to add ceiling insulation, exterior wall insulation, and window film.

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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

DSM Research and Development

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

Non-IOU FEECA Utilities

A. JEA

Residential Programs

Residential Energy Audit Program

This program uses auditors to examine homes, educate customers and make recommendations on low-cost or no-cost energy saving practices and measures.

Residential Energy Efficient Products

This program promotes the use of energy efficient lighting and other energy efficient products in homes by offering a financial incentive. JEA includes messaging concerning the proper disposal of bulbs containing mercury.

Green Built Homes of Florida

This program encourages the application of energy efficient construction and products in new homes by offering a financial incentive to builders and developers.

Residential Solar Water Heating

This program offers a financial incentive to customers to encourage the use of solar water heating technology.

Residential Solar Net Metering

This program promotes the use of solar photovoltaic systems by purchasing excess power from residential customers implementing these systems.

Neighborhood Efficiency Program

This program offers education concerning the efficient use of energy and water as well as the direct installation of an array of energy and water efficient measures at no cost to income qualified customers.

Commercial Programs

Commercial Energy Audit Program

This program uses auditors to examine businesses, educate customers, and make recommendations on low-cost or no-cost energy saving practices and measures.

Commercial Energy Efficient Products

This program promotes the use of energy efficient lighting and other energy efficient products in businesses by offering a financial incentive. JEA includes messaging concerning the proper disposal of bulbs containing mercury.

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District Chilled Water Program

This program utilizes district chilled water to reduce energy costs, other operating costs, and capital costs.

Commercial Solar Net Metering

This program promotes the use of solar photovoltaic systems by purchasing excess power from commercial customers implementing these systems.

B. Orlando Utilities Commission (OUC)

Residential Programs

Residential Energy Survey Program

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

Residential Duct Repair Rebate Program

The purpose of this program is to encourage customers to repair leaking ducts on existing systems. Customers will receive up to a \$160 rebate for duct repairs on their homes.

Residential Ceiling Insulation Rebate Program

This program is offered to residential customers to encourage them to upgrade their attic insulation. Customers receive \$0.05 per square foot for upgrading their attic insulation up to R-30. If OUC inspects the property and verifies that existing insulation is R-11 or less, the rebate rises to \$0.14 per square foot.

Residential Window Film/Solar Screen Rebate Program

This program is designed to encourage customers to install solar shading on their windows. Customers will receive a rebate of \$1 per square foot for installation of solar shading film with a solar heat gain coefficient of 0.44 or shading coefficient of 0.5 or less on east, west, and south facing windows.

Residential High Performance Windows Rebate Program

This program is designed to help minimize heating, cooling, and lighting costs. The high performance windows rebate program encourages customers to install windows that will improve energy efficiency in their homes. Customers will receive a \$2.00 rebate per square foot for the purchase of ENERGY STAR rated energy efficient windows.

Residential Block Wall Insulation Rebate Program

This program is designed to encourage customers to insulate the walls of their homes. Customers will receive a rebate of \$0.66 per square foot of wall insulation added, with the requirement that the initial insulation R-value must be increased by a minimum of R-10.

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Residential Cool/Reflective Roof Rebate Program

This program is designed to encourage customers to install new roofing to help insulate their homes. Customers will receive a rebate of \$0.14 per square foot for ENERGY STAR cool/reflective roofing that has an initial solar reflectance greater than or equal to \$0.70.

Residential Heat Pump Rebate Program

This program provides rebates to qualifying customers in existing homes who install heat pumps having a SEER of 14.0 or higher. Customers will obtain a rebate in the form of a credit on their bill ranging from \$20 to \$1,275, depending on the SEER rating and capacity (tons) of the new heat pump.

Residential Efficiency Delivered Program

This program, previously called the Home Energy Fix-Up Program, is available to residential customers and provides up to \$2,000 of energy and water efficiency upgrades based on the needs of the customer's home. A Conservation Specialist from OUC performs a survey at the home and determines which home improvements have the potential of saving the customer the most money.

Residential New Home Rebate Program

This program offers rebates for the builder or home buyer, such as \$0.04/sqft for Cool/Reflective Roof, \$0.16/sqft for Block Wall Insulation, and \$0.04/sqft for Ceiling Insulation Upgrade to R-38.

Residential Compact Fluorescent Lighting Program

OUC will give away at least one compact fluorescent lamp to customers who participate in OUC's in-home energy audit program. This practice may be eliminated as incandescent lamps are curtailed from the marketplace due to legislation over the next few years.

Residential AC Proper Sizing with R-30 Attic Insulation Program

OUC offers this program to assist customers in properly sizing their air conditioning (AC) units. The program combines proper sizing of AC systems along with installation of R-30 insulation with the intent of reducing the size required by a half ton or more.

Commercial Programs

Commercial Energy Audit Program

The purpose of this program is to focus on increasing energy efficiency and energy conservation in commercial buildings. OUC includes a free survey consisting of a physical walk-through inspection of the commercial facility performed by experienced energy experts.

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.

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Commercial Heat Pump Rebate Program

This program provides rebates to qualifying customers in existing buildings who install heat pumps having a SEER of 14.0 or higher. Customers will obtain a rebate in the form of a credit on their bill ranging from \$20 to \$1,275, depending on the SEER rating and capacity (tons) of the heat pump.

Commercial Duct Repair Rebate Program

In this program, OUC rebates 100 percent of the cost, up to \$160, when qualifying customers seal existing central AC systems of 5.5 tons or less with mastic and fabric tape or Underwriters Laboratory approved duct tape.

Commercial Window Film/Solar Screen Rebate Program

This program is designed to help reflect the heat during hot summer days and retain heat on cool winter days. OUC will rebate customers \$1/sqft for window tinting and solar screening with a solar heat gain coefficient (SHGC) of 0.44 or shading coefficient of 0.5 or less.

Commercial Ceiling Insulation Rebate Program

This program was designed to increase a building's resistance to heat loss and gain. Participating customers receive \$0.05/sqft for upgrading their attic insulation up to R-30. If OUC inspects the property and verifies that the existing insulation is R-11 or less, OUC will pay a rebate of \$0.14/sqft.

Commercial Cool/Reflective Roof Rebate Program

This program is designed to reflect the sun's rays and lower roof surface temperature while increasing the lifespan of the roof. OUC will rebate customers \$0.14/sqft of ENERGY STAR cool/reflective roofing that has an initial solar reflectance greater than or equal to 0.70.

Additional Conservation Measures

Residential Energy Conservation Rate Structure

Residential customers using more than 1,000 kWh per month pay a higher rate for additional energy usage. The purpose of this rate structure is to make OUC customers more energy conscientious and to encourage conservation of energy resources.

Commercial OUConsumption Online

OUConsumption enables businesses to check their energy usage and demand from a computer and manage their energy load. Customers are able to analyze the metered interval load data for multiple locations, compare usage among facilities, and measure the effectiveness of various energy efficiency efforts.

Commercial OUConvenient Lighting

OUConvenient Lighting offers complete outdoor lighting services for commercial applications, including industrial parks, sports complexes, and residential developments. Lighting packages are customized for each participant, allowing the customer to choose light fixtures and poles.

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OUCooling

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

Small Business Efficiency Pilot Program

This program shows small business owners how to reduce energy and water consumption and improve overall business operations. The pilot focuses on providing essential services to entrepreneurial and small businesses.

Residential Floor Insulation Upgrade Rebate Program

This program provides a rebate to incent customers to insulate wood floors over unconditioned spaces. This incentive is mostly geared towards older homes that were not built to today's more energy efficient standards. The \$0.07/sqft incentive is for a minimum of R-11 floor insulation.

Energy Star Washing Machine Rebate Program

OUC added a \$50 incentive for the purchase of Energy Star washing machines to bring customers' attention to the benefit of these new machines.

Solar Water Heating Rebate Program

OUC offers a one time upfront rebate of \$1,000 to residential customers to purchase a Solar Water Heater. Commercial customers receive a monthly credit on their OUC bill of \$0.03/kWh and a one time \$250 credit towards the installation of the BTU meter on the OUC bill.

Heat Pump Water Heaters Rebate Program

OUC added an incentive of \$650 for the purchase of a Heat Pump Water Heater. The technology has become more affordable, and this program may change in the future.

Commercial Custom Incentive Program

OUC developed a program to accommodate the various other efficiency improvements possible in a commercial application that were not covered by an existing standard conservation program. With the Custom Incentive Program, OUC can accommodate practically any measure that can reduce electric demand above code requirements that a commercial customer wants to implement.

Community Solar Farm

In 2013, OUC built the first Community Solar Farm in Central Florida. This innovative project allowed customers to "buy a piece of the sun" and receive the benefits of solar without having to install it on their roof. The program sold out in six days.

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Commercial Energy Star Windows Rebate Program

This rebate is designed to minimize customers' heating, cooling, and lighting costs. OUC will rebate customers at \$2/sqft for ENERGY STAR Window, \$1/sqft for Solar Screen, and \$1/sqft for Window Film.

Commercial Block Wall Insulation Rebate Program

This program is designed to encourage customers to insulate the walls of their businesses. Customers will receive a rebate of \$0.66/sqft of insulation added, with the requirement that the initial insulation R-value must be increased by a minimum of R-10.

Commercial AC Proper Sizing with R-30 Attic Insulation Rebate Program

This program helps customers with properly sizing their AC units for their businesses. The program combines the proper sizing of AC systems along with installation of R-30 insulation with the intent of reducing the size required by a half ton or more.

Commercial Energy Star Washing Machine Rebate Program

This program is designed to encourage customers to purchase an Energy Star rated clothes washer. Upon receiving certified documentation, OUC will provide the customer with a \$50 rebate per machine.

Commercial Energy Star Pump Water Heater Rebate Program

This program is designed to encourage customers to purchase an Energy Star rated pump water heater. OUC will provide the customer with 100 percent of cost, up to \$650, when given certified documentation.

II. Outside Persons Who Wish to Address the Commission at Internal Affairs

Note: The records reflect that no outside persons addressed the Commission at this Internal Affairs meeting.

III. Supplemental Materials for Internal Affairs

A: Material pertaining to Item 2 of this agenda.

B: Material pertaining to Item 5 of this agenda.

**A: The following material pertains to
Item 2 of this agenda.**

**B: The following material pertains to
Item 5 of this agenda.**

IV. Transcript

Note: Transcript Pending