



FLORIDA  
PUBLIC  
SERVICE  
COMMISSION

# FEECA

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

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

DECEMBER 2017



# Florida Public Service Commission

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

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December 2017



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## List of Acronyms

<b>C/I</b>	Commercial and Industrial (Customers)
<b>Commission or FPSC</b>	Florida Public Service Commission
<b>DEF</b>	Duke Energy Florida, LLC
<b>DOE</b>	U.S. Department of Energy
<b>DSM</b>	Demand-Side Management
<b>ECCR</b>	Energy Conservation Cost Recovery Clause
<b>F.A.C.</b>	Florida Administrative Code
<b>FEECA</b>	Florida Energy Efficiency and Conservation Act
<b>FPL</b>	Florida Power & Light Company
<b>FPUC</b>	Florida Public Utilities Company
<b>FRCC</b>	Florida Reliability Coordinating Council
<b>F.S.</b>	Florida Statutes
<b>GWh</b>	Gigawatt-Hour
<b>Gulf</b>	Gulf Power Company
<b>HVAC</b>	Heating, Ventilation and Air Conditioning
<b>IOU</b>	Investor-owned Utility
<b>kWh</b>	Kilowatt-Hour
<b>LDC</b>	Natural Gas Local Distribution Company
<b>Load</b>	Demand for Electricity
<b>MW</b>	Megawatt
<b>MWh</b>	Megawatt-Hour
<b>OUC</b>	Orlando Utilities Commission
<b>O&amp;M</b>	Operations and Maintenance
<b>RIM</b>	Rate Impact Measure Test
<b>TECO</b>	Tampa Electric Company
<b>TRC</b>	Total Resource Cost Test



# Executive Summary

## ***Purpose***

Reducing the growth of 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). The Florida Energy Efficiency and Conservation Act emphasizes four key areas: reducing the growth rates of weather-sensitive peak demand and electricity usage, increasing the efficiency of the production and use of electricity and natural gas, encouraging demand-side renewable energy systems, and conserving expensive resources, particularly petroleum fuels. Section 366.82(2), F.S., requires the Florida Public Service Commission (FPSC or Commission) to establish goals over a ten year period for the FEECA utilities, and a re-evaluation review every five years. The utilities are required to develop and submit to the Commission for approval, cost-effective demand-side management (DSM) plans to achieve these goals.

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 the progress made toward achieving these goals. Similarly, 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. Pursuant to Section 366.82(10), F.S., this report on conservation results achieved by the FEECA utilities is due to the Florida Legislature and Governor by March 1, 2018. This report reviews the 2016 annual goal results for each of the seven FEECA electric utilities and fulfills these statutory obligations.

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, LLC (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 regulates the electric rates and energy conservation cost recovery of the five IOUs. In contrast, the Commission does not regulate the rates or conservation program costs of the two municipal utilities for which it sets DSM goals.

## ***Report Layout***

This report presents the FEECA utilities' progress towards achieving the Commission-established goals and the Commission's efforts in overseeing these conservation initiatives. This report details these efforts through the following five sections and appendices:

Section 1 provides a brief history of FEECA, and a description of existing tools for increasing conservation throughout the State of Florida.

Section 2 discusses the most recent Commission-established goals set for the FEECA utilities.

Section 3 reviews the utilities' goal achievements and progress towards Low-Income and Research and Development programs.

Section 4 provides an overview of the associated program costs recovered through the Energy Conservation Cost Recovery Clause for 2016.

Section 5 discusses methods the Commission has used to educate consumers about conservation during the prior period, including a list of related web sites.

Appendices 1 and 2 provide a list of the currently-offered conservation programs and a description of each program's purpose.

### ***Goal Setting Process for the Current Period***

On November 25, 2014, the Commission approved winter and summer peak demand and annual energy savings goals for the seven FEECA electric utilities beginning in 2015 through 2024. The approved goals were based on the Rate Impact Measure (RIM) cost-effectiveness test. This test was used to ensure that all ratepayers benefit from energy efficiency programs due to downward pressure on electric rates. The Commission identified fewer cost-effective energy efficiency programs as a result of more stringent building codes and appliance efficiency standards. The higher the current efficiency standards and codes, the less opportunity there is for utility-sponsored programs to be cost-effective. Additionally, reduced utility avoided costs resulting from relatively low natural gas prices have contributed to fewer programs being cost-effective. For these reasons, the 2014 approved DSM goals for the FEECA utilities were lower than the Commission-approved goals in 2009. The 2014 goal setting process is discussed further in Section 2.

The November 2014 hearing also resulted in the Commission mandating, in its 2014 Goals Order, that a focus be placed on energy efficiency for low-income consumers. The Commission ordered "When the FEECA utilities file their DSM implementation plans, each plan should address how the utilities will assist and educate their low-income customers, specifically with respect to the measures with a two-year or less payback."<sup>1</sup> Further discussion of the utilities' low-income programs can be found in Section 3.

Following the Commission's establishment of the goals in late 2014, the FEECA utilities filed DSM plans designed to meet the Commission's goals. In mid 2015, the Commission approved each DSM plan. Subsequently, in late 2015, the utilities filed program standards which provide details on how each program will be administered. At the end of 2015, the Commission approved

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<sup>1</sup> 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.

the program standards, and the utilities implemented the new programs in late 2015 and early 2016. This report covers the first full year of the conservation programs in the utilities' 2015 DSM plans.

### **2016 Achievements and Related Program Costs**

Since FEECA's inception, it is estimated that DSM programs offered by FEECA utilities have reduced summer peak demand by 7,813 megawatts (MW) and winter peak demand by 7,224 MW. In 2016, all of the FEECA utilities met the Commission's Annual goal of total reduction, with four utilities meeting the Commission's energy and demand savings goals for the residential and commercial/industrial (C/I) customer classes. Florida's FEECA electric utilities also performed over 190 thousand residential and commercial energy audits/evaluations and offered 110 residential and commercial programs focused on energy conservation.<sup>2</sup> Additional detail on each utility's performance is described in Section 3.

The Commission has authority by statute to allow investor-owned utilities to recover prudently incurred costs related to conservation.<sup>3</sup> The Commission has implemented this authority through the Energy Conservation Cost Recovery (ECCR) clause. The ECCR clause has been in existence since 1980. For 2016, Florida's investor-owned electric utilities recovered approximately \$317 million in conservation program expenditures.

### **Conclusion**

The potential demand and energy savings from utility-sponsored DSM programs are affected by consumer education and behavior, building codes, and appliance efficiency standards. Consumer actions to implement energy efficiency measures outside of utility programs, as well as codes and efficiency standards, create a baseline for a new program's cost-effectiveness and reduce the potential incremental electric demand and energy savings available from DSM programs.

Utilities design DSM programs to encourage conservation that exceeds levels set by current building codes and minimum efficiency standards. The level of savings from these types of programs is uncertain because it requires voluntary participation and in some cases changes in customer behavior. Because all customers pay for the utility conservation programs as a portion of their monthly utility bills, the Commission focuses on ensuring that all customers benefit from utility-sponsored DSM programs. Overall, reducing Florida's electric demand and energy usage relies on customer education, and participation in, utility DSM programs, along with each individual's efforts to save electricity.

Conservation and renewable energy will continue to play an important role in Florida's energy future. The Commission is continuing its efforts to encourage cost-effective conservation that defers the need for new generating capacity and reduces the use of fuel. These initiatives support a balanced mix of resources that reliably and cost-effectively meet the needs of Florida's ratepayers.

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<sup>2</sup> 2016 FEECA utility demand-side management annual reports.

<sup>3</sup> Section 366.82(11), F.S.



# Section 1. Florida Energy Efficiency and Conservation Act

## 1.1 FEECA History and Implementation

The Florida Energy Efficiency and Conservation Act (FEECA), emphasizes four key areas: reducing the growth rates of weather-sensitive peak demand and electricity usage, increasing the efficiency of electricity and natural gas production and use, encouraging demand-side renewable energy systems, and conserving expensive resources, particularly petroleum fuels. Pursuant to FEECA, the Commission is required to establish conservation goals and the FEECA utilities must develop demand-side management (DSM) programs to meet these goals.

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

In 1996, the Florida Legislature raised the minimum retail sales threshold for subject utilities to 2,000 GWh. Retail sales for FEECA 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 electric utilities must comply with FEECA regardless of sales levels. No rural electric cooperatives are currently subject to FEECA.

Table 1 lists the seven FEECA utilities, reflects the 2016 retail electricity sales, and the percentage of total electricity sales by each utility. The table also includes the total energy sales for all non-FEECA utilities. Currently, the seven electric utilities that are subject to FEECA account for approximately 83.9 percent of all Florida energy sales.

**Table 1**  
**Energy Sales by Florida's FEECA Utilities in 2016**

<b>Florida's FEECA Utilities</b>	<b>Energy Sales GWh</b>	<b>Percent of Total Energy Sales</b>
Florida Power & Light Company	109,663	46.4%
Duke Energy Florida, LLC	38,774	16.4%
Tampa Electric Company	19,235	8.1%
JEA	12,215	5.2%
Gulf Power Company	11,082	4.7%
Orlando Utilities Commission	6,599	2.8%
Florida Public Utilities Company	646	0.3%
<b>FEECA Utilities' Total</b>	<b>198,214</b>	<b>83.9%</b>
Non-FEECA Utilities' Total	37,938	16.1%
<b>Total Statewide Energy Sales</b>	<b>236,152</b>	<b>100.0%</b>

Source: Commission's "Statistics of the Florida Electric Utility Industry" (Table 26) published in October 2017.

Section 366.82(2), F.S., requires the Commission to set demand-side management (DSM) 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 re-evaluation review every five years. Once goals are established, the seven FEECA utilities must submit, for Commission approval, DSM plans containing cost-effective programs intended to meet the goals.

In 2008, the Florida Legislature amended the FEECA statute, placing upon the Commission additional responsibilities when adopting conservation goals. These responsibilities included the consideration of the 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 FEECA statute also allows the Commission to provide appropriate financial rewards and penalties to the utilities over which it has rate-setting authority. Additionally, the Commission has the authority 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 rewards or assessed penalties for IOUs through FEECA.

## ***1.2 FEECA's Influence on the Florida Energy Market***

FEECA's mission is important to Florida's overall energy market. Florida's total electric consumption ranks among the highest in the country due to its sizeable population and climate-induced demand for cooling. When compared to the rest of the country, Florida's energy market is unique. The distinction is largely due to the state's climate, high proportion of residential customers, and the reliance on electricity for heating and cooling.

Florida is typically a summer-peaking state. On a typical summer day, the statewide demand for electricity can increase from roughly 15,000 MW to nearly 30,000 MW over the span of hours.<sup>4</sup> Additionally, 88 percent of Florida's electricity customers are residential, consuming approximately 52 percent of the electrical energy produced. In contrast, nationally residential customers account for only 36 percent of total electric sales, while commercial customers represent 35 percent of electric consumption and industrial customers represent 26 percent.<sup>5</sup> The remaining 3 percent of national electric consumption is direct use. Table 2 shows the makeup of Florida's Electric Customers by Class and Consumption.

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<sup>4</sup> Ten-Year Site Plan responses provided to the Commission by the IOUs in the 2015 first Data Request.

<sup>5</sup> <http://www.eia.gov/electricity/data.cfm#sales> Retail sales of electricity to ultimate consumers, annual, by sector by provider.

**Table 2**  
**Florida's Electric Customers by Class and Consumption in 2016**

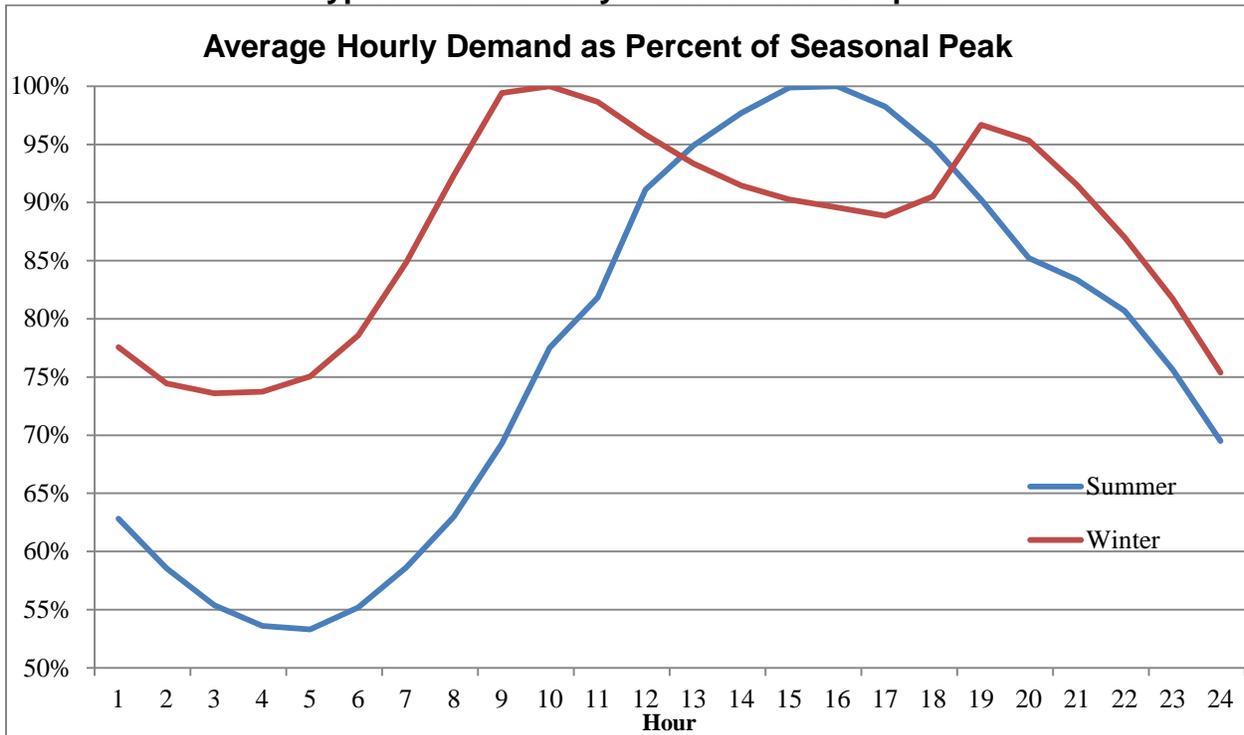
Customer Class	Number of Customers	Percent of Customers	Energy Sales (GWh)	Percent of Sales
Residential	9,197,125	87.6%	123,449	52.3%
Commercial	1,134,458	10.8%	85,147	36.1%
Industrial	28,513	0.3%	20,848	8.8%
Other*	134,696	1.3%	6,708	2.8%
<b>Total</b>	<b>10,494,792</b>	<b>100.0%</b>	<b>236,152</b>	<b>100.0%</b>

\*Street and highway lighting, sales to public authorities, and interdepartmental sales.

Source: Commission's "Statistics of the Florida Electric Utility Industry" (Table 26) published in October 2017.

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—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

Residential load patterns are rapidly shifting and have high peaks to trough variation. In contrast, commercial or industrial loads demonstrate more consistency throughout the 24 hour day and experience fewer spikes in demand.

Utilities dispatch additional generating capacity throughout the day to follow the customer load patterns. Peaking generating units, which are dispatched during high peak demand periods of the day, are less fuel efficient than baseload or intermediate generating units. Utility demand-side management programs play a role in reducing energy usage and shifting peak demand; and therefore reduce the need to dispatch relatively fuel inefficient generating units.<sup>6</sup> Over time, the need for additional generating capacity has grown in Florida, in large part due to population growth. In addition to providing fuel savings at existing generating units, utility-sponsored demand-side management programs and conservation efforts by individual consumers can avoid or defer the need for new electric generating capacity. In order to meet FEECA requirements, the Commission and utilities must ensure that the demand-side management programs created to reap the benefits of reduced fuel usage and deferred generating capacity are cost-effective, i.e. less costly than generation. The Commission’s methodologies to determine the cost-effectiveness of demand-side management programs are explained in detail in Section 2.1.

FEECA has been successful in reducing the growth rates of weather sensitive peak electric demand and conserving expensive fuel resources. Since its inception, FEECA utility-sponsored DSM programs have cumulatively saved 7,813 MW of summer peak demand and 7,224 MW of winter peak demand, referenced in Table 3. This reduction in peak demand has helped offset the use of peaking units that rely on expensive fuel sources and deferred new generating capacity. In 2016, FEECA DSM programs saved over 674 gigawatt-hours (GWh), enough electricity to power approximately 49,000 homes for a year.<sup>7</sup> In addition, some FEECA utilities have also implemented programs, such as community solar, which allows customers to voluntarily participate in the development of solar generation and other renewable options.

**Table 3**  
**Estimated Cumulative DSM Savings Since 1980**

<b>Savings</b>	
Summer Peak Demand	7,813 MW
Winter Peak Demand	7,224 MW
Annual Energy Reduction	10,694 GWh

Source: Florida Reliability Coordinating Council Load and Resource Plan 2017, S-3, S-4, S-5.

Currently, the FEECA utilities provide in total, 110 programs for residential, commercial, and industrial customers. Programs focus on either reducing energy use at a given moment, which shifts/reduces demand, or toward reducing overall energy consumption over a period of time. Utility-sponsored DSM programs are an important means of achieving demand and energy savings and these programs are designed to encourage customer conservation efforts.

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<sup>6</sup> 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 during high-demand, or peak, periods.

<sup>7</sup> Average Florida annual household kWh use is 13,692 kWh. Data from forms EIA-861-schedules 4A-D, EIA-861S and EIA-861U. <https://www.eia.gov/tools/faqs/faq.php?id=97&t=3>

Additionally, home and business energy audits, required by Section 366.82(11), F.S., serve as an avenue to identify and evaluate conservation opportunities for customers and identify opportunities to implement many DSM and conservation programs. During 2016, Florida's FEECA utilities performed more than 181,800 residential audits. Though FEECA does not require commercial energy audits, Florida's FEECA utilities also performed more than 14,300 commercial energy audits in 2016.

### **1.3 Recovery of Conservation Expenditures**

Administrative costs, equipment, and incentive payments are all costs of implementing a DSM program. The IOUs are allowed by Florida Statute to recoup prudent and reasonable expenses for DSM programs approved by the Commission through the Energy Conservation Cost Recovery (ECCR) clause, established by Commission Rule 25.17.015, F.A.C. Before attempting to recover costs through the ECCR clause, a utility must prove its DSM programs are cost-effective. Utilities must have Commission approval for any program modifications prior to seeking cost recovery.

Commission Rule 25-17.015, F.A.C., also permits natural gas distribution companies to seek recovery for costs related to Commission-approved conservation programs. Even though natural gas local distribution companies (LDCs) offer conservation programs to their residential and commercial customers, the Commission does not currently set conservation goals for LDCs. Natural gas conservation programs have historically focused on providing rebates to residential customers that support the replacement of less efficient appliances with new, energy efficient gas appliances. However, many LDCs have recently expanded their rebate programs to commercial customers.<sup>8</sup>

Each year, the Commission conducts financial audits of these expenses for both the electric IOUs and LDCs. A full evidentiary hearing is held annually to determine the following year's conservation cost recovery factor to be applied to customer bills. The 2018 conservation cost recovery factors are discussed further in Section 4.

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<sup>8</sup> Order No. PSC-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.



## Section 2. DSM Goal Setting

### 2.1 DSM Programs Cost-Effectiveness and Energy Savings

Section 366.81, F.S., requires utility conservation programs to be cost-effective. This statutory requirement is codified in Rule 25-17.008, F.A.C. The rule identifies the cost-effectiveness methodologies to be used and requires that utilities provide cost and benefit information to the Commission when requesting to add or make changes or additions to an existing program. The Commission requires that utilities measure cost-effectiveness from three perspectives, the program participant, the utility's ratepayers, and society's overall cost for energy services. The Participants Test, the Rate Impact Measure (RIM) test, and the Total Resource Cost (TRC) test capture these viewpoints. FEECA utilities are required to provide cost benefit analysis using the three tests when seeking to add or make changes to an existing program. Table 4 summarizes the costs and benefits considered in the three Commission-approved cost-effectiveness methodologies.

**Table 4**  
**Summary of Cost-Effectiveness Methodologies**

	Participants	RIM	TRC
<b>Benefits</b>			
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
<b>Costs</b>			
Program Costs		X	X
Incentives Paid		X	
Lost Revenues		X	
Participant's Costs (Capital and O&M)	X		X

#### 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 up-front costs customers pay for equipment and costs to maintain this equipment. Benefits considered in the test include the incentives paid by utilities 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.

### **Rate Impact Measure Test (RIM)**

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. DSM programs can reduce utility revenues due to reduced kWh sales and reduced demand. The decreased utility revenues typically are 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 rates would be without the DSM program.

### **Total Resource Cost Test (TRC)**

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 utility 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 tend to be higher for programs implemented solely using the TRC test to judge cost-effectiveness.

### **Ensuring Cost-Effectiveness**

Ensuring utility-sponsored DSM programs remain cost-effective benefits the general body of electric ratepayers. These programs can reduce costs to ratepayers by postponing capital expenditures such as future power plant construction, and reducing current electrical generation costs, including fuel and variable operating and maintenance costs. DSM programs can also benefit customers by improving reliability.

When IOUs determine that their programs are no longer cost-effective, the utilities must petition the Commission for modification or discontinuation of the program. In many instances, programs may need to be modified due to the adoption of a more stringent appliance efficiency standard or building code. In contrast, if new efficiency measures become available that are cost-effective, the utility may petition the Commission for approval of a new program.

## **2.2 Summary of the 2014 DSM Goal Setting**

The Commission set a schedule in 2013 to establish goals for FEECA utilities by December 2014. This action fulfilled the statutory requirement that DSM goals must be reviewed at least every five years. Subsequently, both FPUC and OUC independently filed petitions to use proxy methodologies to establish their goals and be excused from participating in the goals hearing. These utilities stated that costs associated with updating the 2009 Technical Potential Study, performing the subsequent analysis required by the Order Establishing Procedure, and testifying in support of the analysis would represent a hardship to the companies and their ratepayers due to each company's small size. On August 4, 2013, the Commission approved FPUC and OUC's request and excused them from participating in the goals hearing.<sup>9</sup>

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<sup>9</sup> Order No.PSC-13-0645-PAA-EU, Docket Nos. 130204-EM and 130205-EI, issued December 4, 2013.

On July 21 and July 22, 2014, the Commission heard evidence from the remaining FEECA utilities, FPL, DEF, TECO, Gulf, JEA, and intervenors regarding the proposed DSM goals. Throughout the proceeding there were discussions regarding the FEECA utilities' numerical goals, payback/subsidization, consumer education, and solar initiatives. During the goal setting process, the Commission also considered the costs and benefits of conservation programs. Costs are recovered from the general body of ratepayers, and affect both participant and non-participant customers.

The Commission reviewed the results of all three required cost-effectiveness tests during the hearing. 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. By using the RIM test to establish goals, the Commission addressed concerns regarding subsidies between individuals who participate in DSM programs and those who do not, and ensured rates would remain the same or lower and that cross subsidies would be minimized.

In addition to setting goals, 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 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.

### **Established 2015-2024 Goals**

The Commission issued the DSM Final Order, Order No. PSC-14-0696-FOF-EU, on December 16, 2014. The utilities subsequently filed DSM plans in March 2015 in accordance with Section 366.82(7), F.S., to meet the newly set goals. The Commission reviewed and approved the utilities' DSM plans in August 2015. Around the same time, the FEECA utilities submitted for approval their program standards providing detailed descriptions on the administrative approaches for each DSM program. Beginning in late 2015, the FEECA utilities started to phase out old programs and began implementing the modifications needed to reflect the approved DSM plans. This report covers the first full year of the utilities' new DSM plans.

Table 5 shows each utility's Commission-approved summer demand, winter demand, and annual energy reduction goals for 2015-2024, established in Order No. PSC-14-0696-FOF-EU.<sup>10</sup> A list of all programs and descriptions provided by FEECA utilities can be found in Appendices 1 and 2 of this report.

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<sup>10</sup> 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.

**Table 5**  
**Commission-Approved DSM Goals 2015-2024**

<b>Electric Utility</b>	<b>Summer Demand Goals (MW)</b>	<b>Winter Demand Goals (MW)</b>	<b>Annual Energy Goals (GWh)</b>
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
<b>Total</b>	<b>926.7</b>	<b>877.0</b>	<b>990.6</b>

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

### **2.3 Effect of Efficiency Standards on FEECA Utility DSM Programs**

Federal efficiency standards and state building codes establish a baseline in assessing the cost-effectiveness of a potential DSM program. Currently, Florida utility DSM programs offer rebates and incentives for appliances that exceed federally established minimum efficiency standards. However, increases in federal efficiency standards, independent conservation efforts by consumers, and general conservation practices make it more challenging for utilities to achieve demand and energy savings through DSM programs. Moreover, participation rates in the utility programs are driven by the anticipated payback to the participating customer. While utility incentives tend to increase customers' "take rate" in conservation programs, electric rates are also a contributing factor in customers' decisions to invest in a more efficient appliance. Thus, low or declining electric prices tend to reduce customer energy efficiency investments. This makes it crucial that the FEECA utilities frequently evaluate conservation programs to ensure that they remain cost-effective.

Since 2009, the cost-effectiveness of DSM measures has declined due to several factors outside of FEECA utilities' control. First, new federal efficiency standards and state building codes have become more stringent over time. These higher standards and codes decrease the number of cost-effective DSM measures that can be offered by the electric utilities. Second, natural gas is the primary fuel source for electricity generation in Florida. The average price of natural gas fell from \$8.86/MMBtu in 2008 to \$3.73/MMBtu in 2013, the most recent full year before the Commission established the 2015-2024 DSM goals.<sup>11</sup> In turn, lower natural gas prices reduced utility avoided costs.<sup>12</sup> Lower fuel prices can impact customer participation in utility-sponsored DSM programs due to reduced monthly electric bills. As a result, customers could have less of an incentive to implement energy efficiency measures.

<sup>11</sup> EIA Henry Hub Natural Gas Spot Price Annual Average <https://www.eia.gov/dnav/ng/hist/rngwhhdD.htm>

<sup>12</sup> Current gas prices have remained low at \$2.52/MMBtu in 2016.

## **State Building Code**

At the state level, the Florida Building Code is amended annually to incorporate interpretations and clarifications as well as to update efficiency standards. The Florida Building Commission updates the Florida Building Code with relevant new standards every three years. In 2017, the Florida Building Code was updated. Commission staff is evaluating these changes in relation to conservation initiatives.

## **Federal Government Standards**

At the federal government, the U.S. Department of Energy's (DOE) Building Technologies Office establishes minimum energy efficiency standards for more than 60 categories of appliances and other equipment.<sup>13</sup> According DOE, "Products covered by standards represent about 90 percent of home energy use, 60 percent of commercial building use, and 30 percent of industrial energy use."<sup>14</sup> The DOE traditionally provides to Congress a semi-annual update on modification to energy efficiency standards. Staff has confirmed that no updates to Congress have occurred since the prior report. Staff will continue to monitor future developments in this area.

Further details can be found on the DOE Office of Energy Efficiency and Renewable Energy's buildings reports website at <http://energy.gov/eere/buildings/reports-and-publications>.

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<sup>13</sup> 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.

<sup>14</sup> <http://energy.gov/eere/buildings/appliance-and-equipment-standards-program>.



## **Section 3. FEECA Utility Goal Achievements**

### **3.1 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; the value of a system's demand and energy savings has no relation to the sector—C/I or residential—in which the savings occur.

Each FEECA utility must file an annual report pursuant to Rule 25-17.0021, F.A.C., which summarizes demand savings, energy savings, and customer participation rates for each approved program. The report also includes the residential, C/I, and total energy efficiency achievements compared to the approved DSM goals. Each of the utility's 2016 DSM annual reports and prior year reports can be found on the Commission's website: <http://www.floridapsc.com/>.

Monitoring annual goal achievements enables the Commission to evaluate the effectiveness of each utility's programs. In addition to reviewing the utilities annual DSM reports, staff may request additional information from the FEECA utilities on their demand and energy saving achievements. Staff's data requests can, for example, seek explanations of factors preventing the utilities from achieving projected participation levels. Each utility's DSM performance in 2016 is discussed below. The 2016 utility achievements have been compared to the 2015 goals established by the Commission in November 2014. Table 6 provides a breakdown of each utility's goal achievements for the period.

#### **FPL**

FPL met its 2016 total goals and all individual customer class goals.

#### **DEF**

Overall, DEF met all of its 2016 total goals and all but one of its individual customer class goals. DEF was below its Residential Winter MW goal; achieving 98 percent of the goal. DEF stated the shortfall was due to redirected resources from the Residential Demand Response program toward storm restoration activities, lower than projected eligibility in the Neighborhood Energy Saver program, and from Low-Income Weatherization Assistance Program partners receiving lower funding from the Department of Energy. DEF plans to make necessary adjustments to ensure reaching their DSM Goals.

#### **TECO**

TECO met its 2016 total goals and all individual customer class goals.

#### **Gulf**

Overall, Gulf met its 2016 total goals; however, it did not meet any of its C/I individual customer class goals. Gulf achieved 20 percent of its C/I Winter MW goal, 68 percent of its C/I Summer MW goal, and 49 percent of its C/I Annual GWh reduction goal. When asked about the company's low C/I performance, Gulf stated that "low incentive levels are the primary driver." In order to prevent impairing program cost-effectiveness, Gulf is considering other methods to increase customer participation and awareness of their DSM programs.

**Table 6  
DSM Goals Compared to Annual (2016) Achievements**

Utility	Winter (MW)		Summer (MW)		Annual (GWh)	
	Goals	Achieved Reduction	Goals	Achieved Reduction	Goals	Achieved Reduction
<b>FPL</b>						
Residential	15.8	18.0	25.6	26.1	22.2	22.5
Commercial/Industrial	14.3	14.9	24.0	26.1	23.4	40.1
Total	30.1	32.9	49.6	52.2	45.6	62.6
<b>DEF</b>						
Residential	53.0	<b>52.0</b>	24.0	30.0	24.0	47.0
Commercial/Industrial	5.0	72.0	12.0	85.0	14.0	28.0
Total	59.0	124.0	36.0	115.0	37.0	75.0
<b>TECO</b>						
Residential	4.1	7.7	1.6	5.1	3.5	13.2
Commercial/Industrial	1.3	2.9	2.5	4.4	6.0	17.8
Total	5.4	10.6	4.1	9.5	9.5	31.0
<b>Gulf</b>						
Residential	1.80	4.75	3.20	5.12	3.20	6.75
Commercial/Industrial	0.10	<b>0.02</b>	0.40	<b>0.27</b>	1.20	<b>0.59</b>
Total	1.90	4.77	3.60	5.39	4.40	7.34
<b>FPUC</b>						
Residential	0.02	0.26	0.05	0.46	0.03	0.89
Commercial/Industrial	0.01	0.04	0.03	0.07	0.08	0.14
Total	0.02	0.30	0.07	0.53	0.11	1.04
<b>JEA</b>						
Residential	1.92	4.82	1.88	6.80	5.00	15.40
Commercial/Industrial	0.01	0.06	0.28	<b>0.18</b>	0.16	0.58
Total	1.93	4.87	2.16	6.97	5.16	16.00
<b>OUC</b>						
Residential	0.08	0.41	0.08	0.48	0.30	1.16
Commercial/Industrial	0.57	1.30	0.28	2.53	0.50	12.26
Total	0.65	1.71	0.36	3.01	0.80	13.42

Note: Bold numbers indicate the utility did not meet its annual goals within that category.

Source: FEECA utility demand-side management annual reports.

**FPUC**

FPUC met its 2016 total goals and all individual customer class goals.

## **JEA**

Overall, JEA met its 2016 total goals and residential customer class goals. However, for the C/I customer class, JEA achieved 63 percent of its Summer MW goal. JEA attributed this to a lower than anticipated participation in the commercial solar net metering program.

## **OUC**

OUC met its 2016 total goals and all individual customer class goals.

### **3.2 Low-Income Programs**

The 2014 Commission DSM Goals Order states “When the FEECA utilities file their DSM implementation plans, each plan should address how the utilities will assist and educate their low-income customers, specifically with respect to the measures with a two-year or less payback.”<sup>15</sup> In accordance with this order, each FEECA utility has implemented programs within its DSM plan that address low-income conservation efforts. Low income customer participation in energy conservation programs furthers the intent of FEECA by encouraging potential demand and energy reduction in the State of Florida. Customers that participate in these programs benefit through increased knowledge of conservation opportunities, and through rebates on energy saving equipment, resulting in potential bill saving.

These programs mainly focus on efforts to provide weatherization opportunities and the installation of energy efficient appliances to residential homes. In many cases, the utilities have established partnerships with government and non-profit agencies. They work together to help identify low-income neighborhoods and distribute information and educate customers on conservation opportunities through energy audits, bill inserts, presentations, and other measures.

All of the FEECA utilities submitted programs in 2015 in their DSM plans highlighting how they reach and encourage qualifying customers. Each FEECA utility’s conservation efforts with respect to low-income customers during 2016 is discussed below. Customers interested in any low-income programs should contact their electricity provider.

## **FPL**

FPL uses energy efficiency education targeted at low-income customers. FPL states that its energy audit, the Residential Energy Survey, is available to all customers and is a no-cost way for customers to identify energy-saving opportunities. Participation in FPL’s Low-Income Program increased nearly 400 percent in 2016, partially due to an Energy Retrofit channel recently launched in selected neighborhoods. This program assists in the installation of measures that address main areas of energy use (i.e. weather stripping, duct testing, outdoor unit coil cleaning, and pipe wrap).

## **DEF**

DEF offers information to its customers about energy conservation programs through bill inserts and through the company’s website. The company also participates in community outreach

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<sup>15</sup> 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.

efforts to reach low-income customers. DEF offers the Neighborhood Energy Saver Program which provides information about potential energy efficiency improvements and resources for energy efficiency rebates. These incentives are offered through the Residential Incentive Programs, EnergyWise, and the Low-Income Weatherization Assistance Program. In 2016, DEF saw participation in insulation and HVAC tune-up measures increase. According to DEF, this was due to an improvement in targeting low-income neighborhoods and customers that would benefit from these measures.

### **TECO**

TECO utilizes a multi-pronged approach of communication and education to reach out to low-income customers. TECO performs door-to-door advertising and has Service Team members participate in local community events and fairs. TECO also works with Senior Outreach and Elder Affairs Centers to promote, educate, and advise on energy efficiency.

In addition, TECO offers programs that target low-income customers. The Neighborhood Weatherization program for low income offers a package of conservation measures to reduce energy use at no cost to the customer, and has served nearly 30,000 customers. The company anticipates that this program, along with the Energy Education Awareness and Agency Outreach program, are expected to continue to grow over time. Both programs have benefited from increased visibility and information sharing opportunities resulting from recent company actions to increase availability throughout the Hillsborough County Neighborhood Service Centers.

### **Gulf**

Gulf states the increased educational effort has focused on low-cost and no-cost efficiency practices that may not be directly tied to particular DSM programs or measures. The company works with local assistance agencies to present energy conservation information through an “energy literacy” curriculum to low-income customers. Gulf stated that while its efforts have been valuable to the community, it is difficult to quantify the impact of these education efforts on low-income program participation.

Gulf provides energy conservation installations at no cost to low-income families through its Community Energy Saver Program. In addition, Gulf offers home energy audits through which company representatives provide advice on opportunities to lower electricity consumption. Gulf also presents energy efficiency advice as appropriate when customers call or visit as well as through its website.

### **FPUC**

FPUC continues to partner with the Florida Department of Economic Opportunity’s approved Low Income Weatherization Program operators located in their service territory. These operators offer energy surveys and weatherization contractor training, provide energy efficient literature and host events that are specially geared towards low-income households. FPUC’s partnership ensures low-income customers are aware and have access to their conservation programs.

### **JEA**

In addition to JEA’s presence in the community, the utility has maintained its focus on low-income customers through their Neighborhood Energy Efficiency Program. The program

provides the installation of conservation products and provides energy education packets that give energy savings ideas and information about other JEA programs as well as community conservation programs.

## **OUC**

OUC offers education and direct installation of energy efficient measures at no cost to income qualified customers through its residential efficiency program. Because almost half of OUC's service territory represents multi-family housing, OUC is continuing to focus on a partnership with the Orlando Housing Authority to promote OUC's multi-family efficiency program. In order to improve participation in low-income initiatives, OUC has recently started using the Home Utility Report program to reach low-income customers, a free service that educates customers on energy, water, and financial savings through direct mail and email.

### ***3.3 Investor-Owned Utility Research & Development Programs***

In addition to specific DSM programs that provide measurable energy savings, the five IOUs conduct conservation research and development initiatives to evaluate emerging DSM opportunities. In these programs, Florida's IOUs often partner with universities or established industry research organizations. With the constant arrival of new electricity consuming products and new technologies, research and development from Florida's IOUs creates a unique opportunity to identify emergent opportunities to conserve electricity. The recent initiatives undertaken by the IOUs are discussed below.

## **FPL**

FPL's Research and Development program for tracking and evaluating emerging DSM technologies is the utility's Conservation Research and Development (CRD) program. The program features many ongoing projects conducted in both laboratory and field settings.

In 2016, Phase II of the FPL co-funded, multi-year U.S. Department of Energy (DOE) Building America Program was completed. The study found that there are several retrofit technologies that might be economically justifiable as part of a deep retrofit package. One is the Variable Speed Pool Pump; the study concluded that it averaged 69 percent in energy savings (2,846 kWh annually), and had an annual rate of return of 38 percent. The study also states that Variable Speed Pool Pumps should be considered a desirable area for conservation programs due to the saturation of swimming pools in the area and lack of customer knowledge on potentially large energy savings.

## **DEF**

DEF continued to conduct field studies and research on projects throughout 2016. Four of DEF's projects focus on CTA-2045 technology, a port that enables appliances to connect and receive and execute commands, and its potential for energy conservation programs. These projects apply to various CTA-2045 enabled appliances that are currently being field tested. Other projects include partnering with the University of South Florida to investigate available technologies for a Building IQ System for commercial buildings and benefits of energy storage technologies for renewable energy sources.

## **TECO**

TECO's Research and Development Program explores potential areas to benefit from energy conservation. In 2016, TECO continued to study thermal energy storage, including residential heat pump water heaters and hybrid water heaters in its Residential Price Responsive Load Management (Energy Planner) Program. The company also started evaluating battery storage for commercial/industrial facilities and the ability of these technologies to shift peak usage.

The R&D Program also began evaluating the benefits and measurable savings of a commercial low-income weatherization program, similar to the residential Neighborhood Weatherization Program. This new program would specifically target smaller to mid-size commercial customers that lack the financial flexibility to take advantage of commercial rebate programs already offered by TECO. Examples of potential energy savings measures identified by the company include: LED lighting, programmable/learning thermostats, insulated water lines, and ductwork sealing. Further research and review on the Commercial Low-Income Weatherization Program is ongoing.

TECO states it has also continued to focus on efforts surrounding Electric Vehicles (EVs). Research is being conducted in collaboration with the University of South Florida Center for Urban Transportation Research with hopes to have research completed in early 2018. Objectives of the study are to evaluate EVs, understand the potential impacts EVs may have on energy conservation, and to evaluate any potential DSM opportunities. DSM Programs that could result from this research fall into categories of Demand Response, Load Management, or leveraging/controlling the charging of EVs through a time-of-use or dynamic pricing program.

## **Gulf**

In 2016, Gulf completed three projects in its Conservation Demonstration and Development Program. Two of the projects, the 10 Ave North Hair Salon Heat Pump Water Heater Project and the Azalea Trace Heat Pump Water Heater Project, focused on water heaters and their ability to meet consumer needs while attaining energy cost savings. Both concluded positive results that a high-efficiency, high power water heater can reduce overall energy cost savings to customers. The third project, the University of West Florida Best House Project, discovered various findings related to solar and battery technology efficiencies, attic insulation techniques, and window technology.

## **FPUC**

While no projects were completed in 2016, FPUC recently began working on a Distributed Battery Technology Pilot Program. The company states the program will test the viability of using battery storage to improve customers' electric system reliability and resiliency. The pilot will also test whether the technology can be used to lower FPUC's power supply cost and to facilitate integrating renewables into FPUC's power purchase portfolio.

## Section 4. 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.

### 4.1 Electric IOU Cost Recovery

During 2008 through 2014 electric utility expenditures to fund conservation programs grew due to additions and modifications of these programs. However, costs recovered from customers through the ECCR have recently stayed flat or started to decline for most IOUs, due to DSM program modifications designed to meet the Commission's revised goals. Table 7 shows the annual DSM expenditures recovered by Florida's IOUs from 2006-2016.

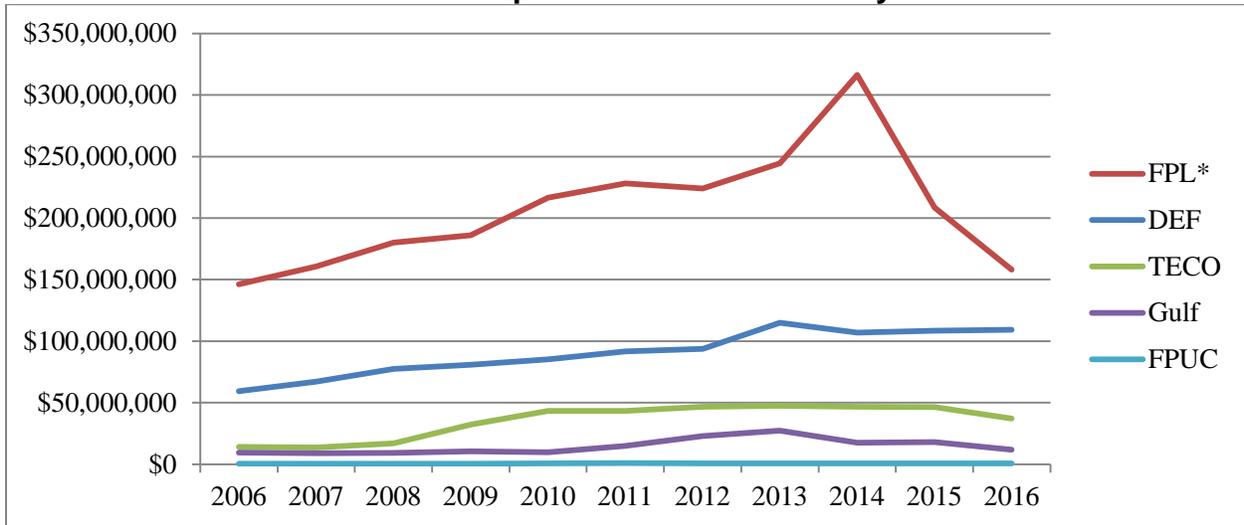
**Table 7**  
**DSM Expenditures Recovered by IOUs**

	FPL	DEF	TECO	Gulf	FPUC	Total
2006	\$146,204,978	\$59,461,107	\$14,099,638	\$9,562,098	\$456,161	\$229,783,982
2007	\$160,749,639	\$67,109,875	\$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
2015	\$208,643,788	\$108,455,141	\$46,516,401	\$17,961,885	\$718,616	\$382,295,831
2016	\$158,174,787	\$109,155,438	\$37,242,148	\$11,915,459	\$687,590	\$317,175,422
<b>Total</b>						<b>\$3,821,640,719</b>

Source: Docket Nos. 070002-EG through 170002-EG, Schedules CT-2 from the IOUs' May testimony.

Figure 2 trends the annual DSM expenditures for the five IOUs from 2006 to 2016.

**Figure 2  
Annual DSM Expenditures Recovered by IOUs**



Source: Docket Nos. 070002-EG through 170002-EG, Schedules CT-2 from the IOUs' May testimony.

\*FPL's 2014 recovery included a one-time \$56.3 million capacity payment to Solid Waste Authority of Palm Beach County.

During the annual ECCR clause proceedings, the Commission approves the energy conservation cost recovery factors, by customer class, which each utility will assess to the energy and demand portions of customer bills. These factors are set using the IOUs' estimated conservation costs for the next year and reconciliation for any actual conservation cost under- or over-recovery.

In October 2017, the Commission set the ECCR factors for the 2018 billing cycle. Table 8 illustrates the five IOUs' conservation cost recovery factors for residential customers' monthly bills. For illustration purposes, these factors are applied to a typical monthly residential bill based on a 1,000 kilowatt-hour (kWh) per month energy usage.

**Table 8  
Residential Energy Conservation Cost Recovery Factors in 2018**

Utility*	ECCR Factor (cents per kWh)	Monthly Bill Impact (Based on 1,000 kWh)
FPL	0.153	\$1.53
DEF	0.328	\$3.28
TECO	0.246	\$2.46
Gulf	0.140	\$1.40
FPUC	0.102	\$1.02

\*While JEA and OUC fall under the FEECA Statute, the Commission does not regulate electric rates for municipal utilities.

Source: Order No. PSC-2017-0434-FOF-EG, Docket No. 170002-EG.

## 4.2 Natural Gas Cost Recovery

Commission Rule 25-17.015, F.A.C., also allows for recovery of costs attributed to natural gas conservation programs. Like the electric IOUs, the Commission also audits expenditures requested for recovery on a yearly basis and adjusts the cost recovery factors appropriately. Table 9 shows the amount each LDC recovered in natural gas conservation program expenditures from 2006-2016.

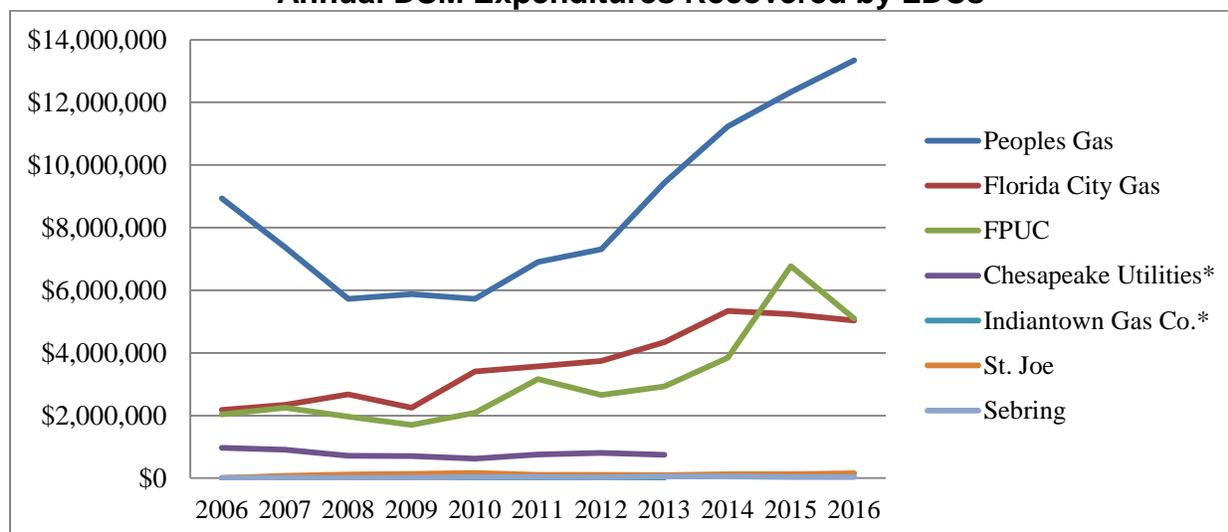
**Table 9**  
**DSM Expenditures Recovered by LDCs**

Year	Peoples Gas System	Florida City Gas	Florida Public Utilities	Chesapeake Utilities	Indiantown Gas Company	St. Joe Natural Gas	Sebring Gas System	Total
2006	\$8,934,625	\$2,176,960	\$2,032,704	\$967,263	\$0	\$9,175	\$0	\$14,120,727
2007	\$7,367,135	\$2,345,976	\$2,249,573	\$906,159	\$15,563	\$73,171	\$12,344	\$12,969,921
2008	\$5,730,116	\$2,678,650	\$1,962,670	\$714,243	\$11,970	\$116,975	\$6,816	\$11,221,440
2009	\$5,880,890	\$2,254,121	\$1,702,041	\$710,850	\$21,682	\$137,675	\$11,926	\$10,719,185
2010	\$5,721,003	\$3,404,142	\$2,084,724	\$627,734	\$8,733	\$170,374	\$37,283	\$12,053,993
2011	\$6,906,668	\$3,573,513	\$3,163,050	\$755,779	\$11,357	\$106,300	\$34,640	\$14,551,307
2012	\$7,314,940	\$3,743,811	\$2,655,654	\$806,747	\$5,238	\$102,425	\$25,090	\$14,653,905
2013	\$9,432,551	\$4,342,603	\$2,935,140	\$742,412	\$10,222	\$96,575	\$53,967	\$17,613,470
2014	\$11,229,211	\$5,343,191	\$3,844,386			\$128,000	\$58,382	\$20,603,170
2015	\$12,335,245	\$5,240,383	\$6,768,175	*	*	\$123,400	\$33,563	\$24,500,766
2016	\$13,345,716	\$5,037,863	\$5,098,245			\$156,250	\$36,801	\$23,674,875
<b>Total</b>								<b>\$153,007,884</b>

Source: Docket Nos. 070004-GU through 170004-GU, Schedules CT-2 from LDCs' May testimony.

\* Spending combined with Florida Public Utilities Company

**Figure 3**  
**Annual DSM Expenditures Recovered by LDCs**



\*Spending combined with Florida Public Utilities Company

Figure 3 trends the annual conservation expenditures for all LDCs from 2006 to 2016. In 2013, the Commission approved in order No. PSC-14-0039-PAA-EG the LDC's Commercial Conservation programs resulting in additional overall conservation expenditures.

In October 2017, the Commission set the natural gas LDC conservation cost recovery factors for the 2018 billing cycle. Table 10 provides the LDCs' conservation cost recovery factors for 2018 and the impact on a typical residential customer's bill using 20 therms of natural gas per month.

**Table 10**  
**Residential Natural Gas Conservation Cost Recovery Factors for 2018**

Utility	Cost Recovery Factor (Cents per Therm)	Monthly Bill Impact (Based on 20 Therms)
Peoples Gas System	9.921	\$1.98
Florida City Gas	12.996	\$2.60
Florida Public Utilities	7.936	\$1.59
Chesapeake Utilities	19.641	\$3.93
Indiantown Gas Company	7.721	\$1.54
St. Joe Natural Gas	44.277	\$8.86
Sebring Gas System	18.21	\$3.64

Source: Order No. PSC-2017-0435-FOF-GU, Docket No. 170004-GU.

## Section 5. Educating Florida’s Consumers on Conservation

### 5.1 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 platforms to share conservation information, including the Commission website, public events, brochures, press releases, E-Newsletters, and Twitter. Conservation information is also available through other governmental and utility websites. Section 5.2 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 October 2016 through September 2017.

#### Triple E Award

Each month, the Commission recognizes a small business for implementing Commission-approved, cost-effective conservation programs. Covering the state’s five major geographic areas, the Commission presents 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. Triple E Award recipients receive an award plaque; are highlighted in a press release that’s issued statewide, tweeted @floridapsc, and archived on the website; and are featured under Hot Topics on the homepage, [www.FloridaPSC.com](http://www.FloridaPSC.com).

#### Website Outreach Resources

An assortment of information is available on the Commission website to help consumers save energy. According to Google Analytics, website page views for October 1, 2016 through September 4, 2017 totaled 976,872. One of the more popular website destinations is [Find Your Utility](#). Chairman Julie Brown was instrumental in designing this website feature to provide consumers with contact information for Florida’s utilities. Customers who are in a crisis situation and unable to pay their electric bills can tap into utilities’ large network of social-service organizations and weatherization programs designed to lower utility bills and increase in-home comfort. To complement the website feature, the Commission’s [A Guide to Utility Assistance in Florida](#) booklet is also available on the website. The publication provides a list of Florida’s electric companies with their contact information for consumers’ convenience.

The Commission also offers several energy conservation brochures to help consumers save energy. Brochures may be viewed and printed directly from the website, [FloridaPSC.com/publications](http://FloridaPSC.com/publications), ordered online, or requested by mail or phone. From October 2016 through September 2017, 63,190 brochures were mailed by request.

#### Newsletters

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. Consumer tips highlighted through video and text during the reporting period include *Xeriscaping*, *Saving Energy in the Laundry Room*, *Momentary Outages*, and *Tips to Save Energy During the Holidays*. The *Consumer Connection E-Newsletter* is available under

Consumer Corner on the Commission's homepage and distributed to consumers via Twitter and by subscribing to the free newsletter [online](#).<sup>16</sup>

Chairman Julie Brown's monthly *Commission Update* often features conservation topics and is distributed electronically to legislators, local government officials, and Florida Cabinet members. The *Update* is tweeted and also featured under Hot Topics and archived on the Commission's homepage.

### **National Consumer Protection Week**

*National Consumer Protection Week (NCPW)*, highlighting consumer protection and education efforts, was important to the Commission's 2017 conservation education efforts. Chairman Brown recognized the 19<sup>th</sup> Annual NCPW (March 5-11, 2017) with the importance of education and awareness about utility services and avoiding scams. With social media reshaping how news is received, the FPSC launched a Twitter campaign, #PSCCelebratesConsumersNCPW. Each day, the campaign featured a consumer tip from a FPSC Commissioner that highlighted the FPSC's educational activities. Also during the week, the Commission made seven presentations to consumers in Winter Springs, Winter Park, Orlando, Hollywood, Miramar, and Hallandale Beach, showing them how to save money through energy and water conservation and how to avoid scams.

### **Older Americans Month**

Each May, the Commission participates in *Older Americans Month*, a national project to honor and recognize older Americans for their contributions to families, communities, and society. *Age Out Loud* was this year's theme, and the Commission hosted and attended five educational sessions on ways to conserve energy and water, and on strategies to prevent becoming a victim of fraud at senior communities in Duval, Hillsborough, Leon, and Marion Counties. The Commission also distributed brochures and publications at the Jacksonville Expo, where a record-breaking 7,900 seniors attended.

### **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. The Commission highlights Energy Awareness Month annually through energy conservation awareness events.

### **Community Events**

FPSC Commissioners are active in communities around the state and regularly present energy conservation information to students at area schools, to seniors and low-income residents at local community centers, and to county and city businesses at meetings or other events.

Through ongoing partnerships with governmental entities, consumer groups, and many other service organizations, the Commission regularly distributes energy and water conservation materials. The Commission also actively seeks new community events, venues, and opportunities where conservation materials can be distributed and discussed with consumers. Events where conservation information was shared during October 2016 through September 2017 include:

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<sup>16</sup> <http://www.floridapsc.com/ConsumerAssistance/ConnectionNewsletter>

- Senior Day at the Capitol
- Active Living Expo
- Jacksonville Senior Expo
- Wealth of Information Fair—Lake City
- Suwannee River Economic Council—Lake City
- Bayshore Dining Center—Tampa
- Kings Arm—Tampa
- Fraud Prevention Seminar—Pensacola
- L. Claudia Allen Senior Center
- William Beardall Senior Center
- Taylor Senior Citizens Center
- Senior Citizens Council of Madison County
- 34<sup>th</sup> Annual Children’s Day—Florida Museum of History
- Jefferson County Senior Citizens Center
- Lunch and Learn—Wildwood Presbyterian Church—Bradfordville Senior Center
- Winter Springs Senior Center
- Winter Park Senior Center
- Renaissance Senior Center
- Fred Lippman Multi-Purpose Center
- Miramar Senior Center
- Sunset Lake Senior Center
- Austin Hepburn Senior Center
- Lunch and Learn—Chaires Senior Center
- Lunch and Learn—Lake Jackson Senior Center
- Goodwill Industries of Central Florida
- Osceola Senior Center
- Lunch and Learn—Woodville Senior Center (2)
- Mary L. Singleton Senior Center
- Town N’ Country Senior Center
- Oaks at Riverview Senior Center
- Marion County Senior Center
- Lafayette Senior Center
- 2017 Elder Abuse and Fraud Prevention Summit—Tallahassee Community College
- 2017 World Elder Abuse Awareness Day—Quincy
- Barbara Washington Senior Center
- Calhoun County Senior Center
- Calhoun County Public Library
- Jackson County Senior Center—Graceville, FL
- Jackson County Senior Citizens Center—Marianna, FL
- Ft. White Senior Recreation Center
- Florida Department of Agricultural and Consumer Services’ Consumer Protection Fair—The Villages
- Community Back to School Family Health Fair—Orlando

## **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 October 2016 through September 2017, Commission staff distributed information and addressed consumer questions at 19 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 Campaign**

Each August, the Commission provides educational packets, including conservation materials, to Florida public libraries across the state for consumer distribution. The Commission's Library Outreach Campaign reached 555 state public libraries and branches in 2017. To reduce mailing and production costs, the Commission sent the materials via a CD that included a print-ready copy of brochures for easy reproduction. Following the Campaign, many libraries' requests for additional publications are filled.

## **Media Outreach**

News releases are distributed via email and Twitter 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 March, the Commission highlighted the federal government's *Fix a Leak Week* and offered easy repairs to save valuable water and money, and in April, water conservation month was recognized. In May, the Commission issued a release for Older Americans Month on how seniors can learn to save money on their utility bills and how to avoid utility-related scams.

## **Youth Education**

The Commission emphasizes conservation education for Florida's young consumers. During 2016 and 2017, the Commission continued to produce its student resource booklet—*Get Wise and Conserve Florida!*—to teach children about energy and water conservation. The booklet is distributed to all public libraries through the Library Outreach Program and is available at all Commission outreach events. The student resource book also continues to be a favorite during senior events.

## **5.2 Related Websites**

### **State Agencies and Organizations**

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

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

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>

## **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, LLC – <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. FEECA Utilities' Conservation Programs

### IOUs

<b>Florida Power &amp; Light Company</b> <a href="https://www.fpl.com/save/programs-and-resources.html">https://www.fpl.com/save/programs-and-resources.html</a>	
<b>Residential Programs</b>	Residential Home Energy Survey Residential Ceiling Insulation Residential Air-Conditioning Residential New Construction (BuildSmart) Residential Low-Income Residential Load Management (On Call)
<b>Commercial/Industrial Programs</b>	Business Energy Evaluation Business Lighting Business Heating, Ventilating, and Air Conditioning (HVAC) Business Custom Incentive Business On Call Commercial/Industrial Load Control (CILC) Commercial/Industrial Demand Reduction (CDR)
<b>Other</b>	Conservation Research and Development (CRD) Cogeneration & Small Power Production

<b>Duke Energy Florida, LLC</b> <a href="https://www.duke-energy.com/home/savings">https://www.duke-energy.com/home/savings</a>	
<b>Residential Programs</b>	Home Energy Check Residential Incentive Low-Income Weatherization Assistance Program Neighborhood Energy Saver Residential Energy Management
<b>Commercial/Industrial Programs</b>	Business Energy Check Commercial Energy Management Better Business Florida Custom Incentive Standby Generation Interruptible Service Curtailable Service
<b>Other</b>	Technology Development Qualifying Facility

<b>Tampa Electric Company</b> <a href="http://www.tampaelectric.com/residential/saveenergy/">http://www.tampaelectric.com/residential/saveenergy/</a> <a href="http://www.tampaelectric.com/business/saveenergy/">http://www.tampaelectric.com/business/saveenergy/</a>	
<b>Residential Programs</b>	Residential Energy Audits Residential Ceiling Insulation Residential Duct Repair Residential Electronically Commutated Motors (ECM) Energy Education, Awareness, and Agency Outreach ENERGY STAR for New Homes Residential Heating and Cooling Neighborhood Weatherization (Low-Income) Residential Price Responsive Load Management (Energy Planner) Residential Wall Insulation Residential Window Replacement
<b>Commercial/Industrial Programs</b>	Commercial/Industrial Energy Audits Commercial Ceiling Insulation Commercial Chiller Cogeneration Conservation Value Commercial Cool Roof Commercial Cooling Demand Response Commercial Duct Repair Commercial Electronically Commutated Motors (ECM) Industrial Load Management (GSLM 2&3) Lighting Conditioned Space Lighting Non-Conditioned Space Lighting Occupancy Sensors Commercial Load Management Refrigeration Anti-Condensate Control Standby Generator Thermal Energy Storage Commercial Wall Insulation Commercial Water Heating
<b>Other</b>	Technology Development Renewable Energy

<b>Gulf Power Company</b> <a href="https://www.gulfpower.com/residential/savings-and-energy">https://www.gulfpower.com/residential/savings-and-energy</a> <a href="https://www.gulfpower.com/business/savings-and-energy">https://www.gulfpower.com/business/savings-and-energy</a>	
<b>Residential Programs</b>	Residential Energy Audit and Education Community Energy Saver (Low-Income) Residential Custom Incentive HVAC Efficiency Improvement Residential Building Efficiency Energy Select Residential Service Time of Use Pilot
<b>Commercial/Industrial Programs</b>	Commercial/Industrial Audit Commercial HVAC Retrocommissioning Commercial Building Efficiency Commercial/Industrial Custom Incentive
<b>Other</b>	Conservation Demonstration and Development

<b>Florida Public Utilities Company</b> <a href="http://www.fpuc.com/electric/residential/rebates/">http://www.fpuc.com/electric/residential/rebates/</a> <a href="http://www.fpuc.com/electric/commercial/commercial-rebates/">http://www.fpuc.com/electric/commercial/commercial-rebates/</a>	
<b>Residential Programs</b>	Residential Energy Survey Residential Heating and Cooling Efficiency Upgrade
<b>Commercial/Industrial Programs</b>	Commercial Energy Consultation Commercial Heating and Cooling Efficiency Upgrade Commercial Reflective Roof Commercial Chiller Upgrade
<b>Other</b>	Low-Income Energy Outreach Conservation Demonstration and Development

## Non-IOUs

<b>JEA</b>	
<a href="https://www.jea.com/ways_to_save/home/">https://www.jea.com/ways_to_save/home/</a> <a href="https://www.jea.com/ways_to_save/business/">https://www.jea.com/ways_to_save/business/</a>	
<b>Residential Programs</b>	Residential Energy Audit Residential Solar Water Heating Residential Solar Net Metering Neighborhood Efficiency (Low-Income) Residential Efficiency Upgrade Energy Efficient Products Residential New Build
<b>Commercial/Industrial Programs</b>	Commercial Energy Audit Commercial Solar Net Metering Commercial Prescriptive Small Business Direct Install Custom Commercial

<b>OUC</b>	
<a href="http://www.ouc.com/residential/save-energy-water-money">http://www.ouc.com/residential/save-energy-water-money</a> <a href="http://www.ouc.com/business/business-rebates-programs">http://www.ouc.com/business/business-rebates-programs</a>	
<b>Residential Programs</b>	Residential Home Energy Survey Residential Duct Repair/Replacement Rebate Residential Ceiling Insulation Upgrade Rebate Residential Window Film/Solar Screen Rebate Residential High Performance Windows Rebate Residential Efficient Electric Heat Pump Rebate Residential New Home Rebate Residential Efficiency Delivered (Low-Income)
<b>Commercial/Industrial Programs</b>	Commercial Energy Audits Commercial Efficient Electric Heat Pump Rebate Commercial Duct Repair Rebate Commercial Window Film/Solar Screen Rebate Commercial Ceiling Insulation Rebate Commercial Cool/Reflective Roof Rebate

## **Appendix 2. FEECA Utilities' Conservation Program Descriptions**

### **FEECA IOUs**

#### **A. Florida Power & Light Company**

##### **Residential Programs**

###### **Residential Home Energy Survey**

The Residential Home Energy Survey Program encourages implementation of recommended energy efficiency measures, even if they are not included in FPL's DSM programs. The Residential Home Energy Survey Program also identifies FPL DSM programs that could be appropriate considering the residential customers' home layouts and electricity usage patterns.

###### **Residential Ceiling Insulation**

The Residential Ceiling Insulation Program encourages customers to improve their homes' thermal efficiency.

###### **Residential Air-Conditioning**

The Residential Air-Conditioning Program encourages customers to install high-efficiency central air-conditioning systems.

###### **Residential New Construction (BuildSmart)**

The Residential New Construction Program encourages builders and developers to design and construct new homes that achieve BuildSmart certification and move towards ENERGY STAR qualifications.

###### **Residential Low-Income**

The Residential Low-Income Program assists low-income customers through state Weatherization Assistance Provider ("WAP") agencies and FPL conducted energy retrofits.

###### **Residential Load Management (On Call)**

The Residential Load Management Program allows FPL to turn off certain customer-selected appliances using FPL-installed equipment during periods of extreme demand, capacity shortages, or system emergencies.

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

###### **Business Energy Evaluation**

The Business Energy Evaluation 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 Business Energy Evaluation is also used to identify potential opportunities to implement for other FPL DSM programs.

### **Business Lighting**

The Business Lighting Program encourages customers to install high-efficiency lighting systems.

### **Business Heating, Ventilating, and Air Conditioning (HVAC)**

The Business HVAC program encourages customers to install high-efficiency HVAC systems.

### **Business Custom Incentive**

The Business Custom Incentive Program encourages customers to install unique high-efficiency technologies not covered by other FPL DSM programs.

### **Business On Call**

The Business On Call Program allows FPL to turn off customers' direct expansion central air-conditioning units using FPL-installed equipment during periods of extreme demand, capacity shortages, or system emergencies.

### **Commercial/Industrial Load Control (CILC)**

The Commercial/Industrial Load Control Program allows FPL to control customer loads of 200 kW or greater during periods of extreme demand, capacity shortages, or system emergencies. The CILC Program was closed to new participants as of 2000.

### **Commercial/Industrial Demand Reduction (CDR)**

The Commercial/Industrial Demand Reduction Program allows FPL to control customer loads of 200 kW or greater during periods of extreme demand, capacity shortages, or system emergencies. FPL installs a load management device at the customer's facility and provides monthly credits to customers. Unlike the CILC program, the CDR program is still open to new customers.

### **Cogeneration & Small Power Production**

The Cogeneration and Small Power Production Program facilitates the interconnection and administration of contracts for cogenerators and small power producers.

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

### **Conservation Research and Development (CRD)**

Under Conservation Research and Development, FPL conducts research projects to identify, evaluate, and quantify the impact of new energy efficient technologies. FPL uses the findings to potentially add new energy efficient technologies to DSM programs.

## **B. Duke Energy Florida, LLC**

### **Residential Programs**

#### **Home Energy Check**

The Home Energy Check is a residential energy audit program that provides residential customers with an analysis of their energy consumption and educational information on how to reduce energy usage and save money.

#### **Residential Incentive**

The Residential Incentive Program provides incentives to residential customers for energy efficiency improvements in both existing and new homes.

#### **Low-Income Weatherization Assistance Program**

The Low-Income Weatherization Assistance Program works with the Florida Department of Economic Opportunity and local weatherization providers to deliver energy education, efficiency measures, and incentives to weatherize the homes of low-income families.

#### **Neighborhood Energy Saver**

The Neighborhood Energy Saver Program installs energy conservation measures, identified through an energy assessment, in the homes of customers in selected neighborhoods where at least 50 percent of households have incomes equal to or less than 200 percent of the poverty level established by the U.S. government.

#### **Residential Energy Management**

The Residential Energy Management Program uses direct control of customer equipment to reduce system demand during winter and summer peak capacity periods by temporarily interrupting select customer appliances.

### **Commercial/Industrial Programs**

#### **Business Energy Check**

The Business Energy Check Program provides no-cost energy audits at non-residential facilities either over the phone or at the customer's facility.

#### **Commercial Energy Management**

The Commercial Energy Management Program uses direct control of customer equipment to reduce system demand during winter and summer peak capacity periods. The Commercial Energy Management Program was closed to new participants in 2000, but is still open for existing participants.

#### **Better Business**

Better Business is an umbrella efficiency program that provides incentives to existing C/I and government customers for HVAC, roof insulation, duct leakage and repair, demand-control ventilation, and cool roof coating.

### **Florida Custom Incentive**

The Florida Custom Incentive Program provides incentives for individual custom projects, such as new construction measures or thermal energy storage systems, that are cost effective but not addressed by DEF's other programs.

### **Standby Generation**

The Standby Generation Program is a demand control program that reduces DEF's system demand based on control of customer equipment. This program is available to C/I customers who have on-site generation capability and are willing to reduce demand on DEF's system when requests for system reliability purposes.

### **Interruptible Service**

Interruptible Service is a direct load control DSM program in which customers allow DEF to interrupt their electrical service during times of capacity shortages based on peak or emergency conditions. In return, customers receive a monthly bill credit.

### **Curtable Service**

Curtable Service is an indirect load control DSM program in which customers contract to curtail all or a portion of their electricity demand during times of capacity shortages. In contrast to the Interruptible Service Program, the customer, instead of DEF, controls whether or not the customer's appliances are turned off during times of stress on the grid. In return, customers receive a monthly bill credit.

### **Qualifying Facility**

The Qualifying Facility Program supports the interconnection and purchase of as-available energy as well as firm energy and capacity from qualifying facilities including those that use renewable energy and distributed energy resources.

## **Research and Development**

### **Technology Development**

The Technology Development Program allows DEF to investigate technologies that hold promise for cost-effective demand reduction and energy efficiency. DEF will investigate variable capacity heat pump air conditioners, building automated energy efficiency and demand response, energy management circuit breakers, and more.

## **C. Florida Public Utilities Company**

### **Residential Programs**

#### **Residential Energy Survey**

In the Residential Energy Survey Program, FPUC provides the customer with specific whole-house energy efficiency recommendations. FPUC also provides customers with lists of blower-door test contractors who can check for duct leakage. Finally, FPUC provides the customer with a conservation kit.

### **Residential Heating and Cooling Efficiency Upgrade**

The Residential Heating and Cooling Upgrade Program incentivize customers operating inefficient heat pumps and air conditioners to replace them with more efficient units. The program incentivizes also customers to install a new heat pump. Finally, the program incentivizes customers who are replacing older heat pumps or air conditioners with more efficient heat pump or air conditioners.

### **Low-Income Energy Outreach**

The Low-Income Energy Outreach Program partners with Department of Economic Opportunity approved Low-Income Weatherization Program operators to offer Residential Energy Surveys, distributing energy conservation materials, and more.

## **Commercial Programs**

### **Commercial Energy Consultation**

In the Commercial Energy Consultation Program, FPUC energy conservation representatives conduct commercial site visits to assess the potential for applicable DSM programs, educate customers about FPUC's commercial DSM programs, and more.

### **Commercial Heating and Cooling Efficiency Upgrade**

The Commercial Heating and Cooling Upgrade Program provides rebates to small commercial customers (customers with a maximum of 5 ton units) if the customers install a high-efficiency central air conditioner or heat pump with a minimum 15 SEER.

### **Commercial Reflective Roof**

The Commercial Reflective Roof Program provides rebates to non-residential customers who convert or install a new cool roof on an existing or new building. The rebates cover up to 25 percent of the added upfront cost of building a cool roof compared to an alternative roof.

### **Commercial Chiller Upgrade**

The Commercial Chiller Upgrade Program offers customers an incentive of up to \$175kW of savings above minimum efficiency levels.

## **Research Programs**

### **Conservation Demonstration and Development**

The Conservation Demonstration and Development Program researches energy efficiency and conservation projects to identify, develop, demonstrate, and evaluate promising end-use energy efficient technologies across a wide variety of applications.

## **D. Gulf Power Company**

### **Residential Programs**

#### **Residential Energy Audit and Education**

The Residential Energy Audit and Education Program is the primary educational program to help customers improve the energy efficiency of their new or existing home. The program provide energy conservation advice and information that encourages the implementation of efficiency measures and behaviors that result in electricity bill savings.

#### **Community Energy Saver (Low-Income)**

The Community Energy Saver Program installs energy conservation measures in the homes of low-income families at no cost to the customers. The program also educates families on behavioral changes designed to save money by decreasing energy use.

#### **Residential Custom Incentive**

The Residential Custom Incentive Program aims to increase energy efficiency in the residential rental property sector. The program promotes the installation of efficiency measures available through other programs, such as HVAC maintenance and quality installation, high performance windows, and reflective roofing. As suitable, the program has other incentives to surmount the split-incentive barrier in a landlord/renter situation.

#### **HVAC Efficiency Improvement**

The HVAC Efficiency Improvement Program aims to increase energy efficiency and improve HVAC cooling system performance for new and existing homes. Gulf increases efficiency through HVAC maintenance, duct repair, and HVAC quality installation.

#### **Residential Building Efficiency**

The Residential Building Efficiency Program is an umbrella efficiency program for existing and new residential customers to install eligible equipment such as high performance windows, reflective roof, and ENERGY STAR window air conditioners. The goals are to increase customer demand for energy efficient technologies and to create long-term energy savings and peak demand reduction.

#### **Energy Select**

The Energy *Select* Program gives customers a way to manage their energy consumption by programming their heating and cooling systems and major appliances, such as electric water heaters and pool pumps, to respond automatically to prices that vary during the day and by season in relation to Gulf's cost of producing or purchasing energy.

#### **Residential Service Time of Use Pilot**

The Residential Service Time of Use Pilot Program provides residential customers the opportunity to use customer-owned equipment to respond automatically and take advantage of a variable pricing structure with a critical peak component. The pilot will be offered to 400 residential customers. The goal is to measure customers' response, with customer owned equipment, to a variable electricity price.

## **Commercial Programs**

### **Commercial/Industrial Audit**

The Commercial/Industrial Audit Program provides advice to Gulf's existing C/I customers on how to reduce energy consumption. The program ranges from an Energy Analysis Audit and walk-through surveys to a Technical Assistance Audit and computer programs that simulate options for very large, energy-intensive customers.

### **Commercial HVAC Retrocommissioning**

The Commercial HVAC Retrocommissioning program offers retrocommissioning at a reduced cost for qualifying installations by C/I customers. Retrocommissioning is a process of identifying suboptimal performance in a facility's systems and replacing the outdated equipment.

### **Commercial Building Efficiency**

The Commercial Building Efficiency Program is an umbrella efficiency program for C/I customers to encourage the installation of high-efficiency equipment in order to reduce energy and demand. The high-efficiency equipment is focused on commercial geothermal heat pumps, ceiling/roof insulation, and reflective roofs.

### **Commercial/Industrial Custom Incentive**

The Commercial/Industrial Custom Incentive Program offers energy efficient end-user equipment to C/I customers. The C/I Custom Incentive Program also offers energy services such as comprehensive audits, design, and construction of energy conservation projects. Covered projects include demand reduction or energy improvement retrofits that are beyond the scope of other DSM programs.

## **Research and Development Programs**

### **Conservation Demonstration and Development**

The Conservation Demonstration and Development Program is an umbrella program for the identification, development, and evaluation of end-use energy efficient technologies.

## **E. Tampa Electric Company**

### **Residential Programs**

#### **Residential Energy Audits**

The Residential Energy Audits Program includes a walk-through free energy check, a customer assisted energy audit, a computer assisted paid energy audit, and a building energy ratings system (BERS).

#### **Residential Ceiling Insulation**

The Residential Ceiling Insulation Program offers rebates to existing residential customers to install additional ceiling insulation in existing homes.

#### **Residential Duct Repair**

The Residential Duct Repair Program encourages residential customers to repair leaky duct work of central air conditioning systems in existing homes.

#### **Residential Electronically Commutated Motors (ECM)**

The Residential Electronically Commuted Motors Program encourages residential customers to replace their existing HVAC air handler motors with more efficient ECMs.

#### **Energy Education, Awareness, and Agency Outreach**

The Energy Education, Awareness, and Agency Outreach Program engages and educates groups of customers and students on energy efficiency in an organized setting. Also, participants receive an energy savings kit with energy saving devices and information.

#### **ENERGY STAR for New Homes**

The ENERGY STAR for New Homes Program incentivizes residential customers to build homes that qualify for the ENERGY STAR award by achieving energy efficiency levels greater than current Florida building code baseline practices.

#### **Residential Heating and Cooling**

The Residential Heating and Cooling Program offers rebates to residential customers for installing high-efficiency heating and cooling equipment in existing homes.

#### **Neighborhood Weatherization (Low-Income)**

The Neighborhood Weatherization Program provides for the installation of energy efficient measures for qualified low-income customers.

#### **Renewable Energy**

The Renewable Energy Program delivers renewable energy options to TECO's customers through program administration, renewable electricity generation, evaluation of potential new renewable sources, and market research.

**Residential Price Responsive Load Management (Energy Planner)**

The Residential Price Responsive Load Management (Energy Planner) Program reduces weather-sensitive loads through an innovative price responsive rate. The price responsive rate encourages residential customers to make behavioral or equipment usage changes by pre-programming HVAC, water heating, and pool pumps.

**Residential Wall Insulation**

The Residential Wall Insulation Program offers rebates to existing residential customers to install additional wall insulation in existing homes.

**Residential Window Replacement**

The Residential Window Replacement Program offers rebates to existing residential customers to install window upgrades in existing homes.

**Commercial Programs****Commercial/Industrial Energy Audits**

In the C/I Energy Audits Program, C/I customers can receive more limited free energy audits or comprehensive paid energy audits.

**Commercial Ceiling Insulation**

The Commercial Ceiling Insulation Program incentivizes C/I customers to install additional ceiling insulation in existing commercial buildings.

**Commercial Chiller**

The Commercial Chiller Program offers rebates to C/I customers for installing high efficiency chiller equipment.

**Cogeneration**

The Cogeneration Program incentivizes large industrial customers with waste heat or fuel resources to use their onsite energy to avoid fuel waste and install electric generating equipment. The large industrial customers may sell their surplus electric generation to TECO.

**Conservation Value**

The Conservation Value Program offers rebates to C/I customers to invest in energy conservation measures that are not in other C/I programs.

**Commercial Cool Roof**

The Commercial Cool Roof Program encourages C/I customers to install a cool roof system above conditioned spaces.

**Commercial Cooling**

The Commercial Cooling Program encourages C/I customers to install high efficiency direct expansion commercial air conditioning cooling equipment.

**Demand Response**

The Demand Response Program incentivizes C/I customers to reduce electricity demand at certain peak times.

**Commercial Duct Repair**

The Commercial Duct Repair Program encourages C/I customers to repair leaky ductwork of central air-conditioning systems in existing C/I facilities.

**Commercial Electronically Commutated Motors (ECM)**

The Commercial Electronically Commutated Motors Program encourages C/I customers to replace air handler motors or refrigeration fan motors with ECMs.

**Industrial Load Management (GSLM 2&3)**

The Industrial Load Management Program incentivizes large industrial customers to allow TECO to interrupt part of or their entire electrical service during periods of peak stress on the grid.

**Lighting Conditioned Space**

The Lighting Conditioned Space Program encourages C/I customers to invest in more efficient lighting technologies in existing conditioned areas of C/I facilities.

**Lighting Non-Conditioned Space**

The Lighting Non-Conditioned Space Program encourages C/I customers to invest in more efficient lighting technologies in existing non-conditioned areas of C/I facilities.

**Lighting Occupancy Sensors**

The Lighting Occupancy Sensors Program encourages C/I customers to install occupancy sensors to control C/I lighting systems.

**Commercial Load Management**

The Commercial Load Management Program incentivizes C/I customers to allow TECO to control weather-sensitive heating, cooling, and water heating systems to reduce the associated weather-sensitive peak demand.

**Refrigeration Anti-Condensate Control**

The Refrigeration Anti-Condensate Control Program encourages C/I customers to install anti-condensate equipment sensors within refrigerated door systems.

**Standby Generator**

The Standby Generator Program incentivizes C/I customers to use available emergency electrical generation capacity in order to reduce weather-sensitive peak demand on the grid.

**Thermal Energy Storage**

The Thermal Energy Storage Program encourages C/I customers to install an off-peak air conditioning system.

**Commercial Wall Insulation**

The Commercial Wall Insulation Program encourages C/I customers to install wall insulation in existing C/I structures.

**Commercial Water Heating**

The Commercial Water Heating Program encourages C/I customers to install high efficiency water heating systems.

**Research and Development****DSM Research and Development (R&D)**

The DSM Research and Development Program allows TECO to explore DSM measures that have insufficient data on cost-effectiveness and the impact on TECO's ratepayers.

# Non-IOU FEECA Utilities

## A. JEA

### Residential Programs

#### **Residential Energy Audit**

In the Residential Energy Audit Program, JEA examines homes, educates customers, and makes recommendations on low-cost or no-cost energy-saving practices and measures.

#### **Residential Solar Water Heating**

The Residential Solar Water Heating Program pays a financial incentive to customers to encourage the use of solar water heating technology.

#### **Residential Solar Net Metering**

The Residential Solar Net Metering Program promotes the use of PV by purchasing excess electricity from residential customers who have PV.

#### **Neighborhood Efficiency (Low-Income)**

The Neighborhood Efficiency Program offers education concerning the efficient use of energy and water as well as the direct installation of an array of energy and water efficiency measures at no cost to income qualified customers.

#### **Residential Efficiency Upgrade**

The Residential Efficiency Upgrade Program provides incentives to encourage the use of high efficiency HVAC and water heating. This is one of the DSM programs that JEA offers which has not been approved by the Commission and is not part of FEECA. Nevertheless, this program creates demand and energy savings.

#### **Energy Efficient Products**

The Energy Efficient Products Program provides incentives to encourage the use of high efficiency lighting and efficient appliances. This is one of the DSM programs that JEA offers which has not been approved by the Commission and is not part of FEECA.

#### **Residential New Build**

The Residential New Build Program promotes the use of high efficiency HVAC, water heating, lighting, and appliances in the new construction market. This is one of the DSM programs that JEA offers which has not been approved by the Commission and is not part of FEECA. Nevertheless, this program creates demand and energy savings.

### Commercial Programs

#### **Commercial Energy Audit**

In the Commercial Energy Audit Program, JEA examines businesses, educates customers, and makes recommendations on low-cost or no-cost energy-saving practices.

### **Commercial Solar Net Metering**

The Commercial Solar Net Metering Program promotes the use of PV by purchasing excess electricity from commercial customers who have PV.

### **Commercial Prescriptive**

The Commercial Prescriptive Program provides incentives to encourage the use of high efficiency HVAC, lighting, cooking, and water heating products. This is one of the DSM programs that JEA offers which has not been approved by the Commission and is not part of FEECA. Nevertheless, this program creates demand and energy savings.

### **Small Business Direct Install**

The Small Business Direct Install Program promotes the use of high efficiency HVAC, lighting, water heating, and appliances in the small business sector. This is one of the DSM programs that JEA offers which has not been approved by the Commission and is not part of FEECA. Nevertheless, this program creates demand and energy savings.

### **Custom Commercial**

The Custom Commercial Program promotes the use of custom efficiency measures based on specific applications for each customer. This is one of the DSM programs that JEA offers which has not been approved by the Commission and is not part of FEECA.

## **B. Orlando Utilities Commission**

### **Residential Programs**

#### **Residential Home Energy Survey**

The Residential Home Energy Survey Program consists of three measures: a Residential Energy Walk-Through Survey, a Residential Energy Survey DVD, and an interactive Online Energy Survey.

#### **Residential Duct Repair/Replacement Rebate**

The Residential Duct Repair/Replacement Rebate Program provides up to a \$160 rebate to encourage customers to repair leaking ducts on existing systems.

#### **Residential Ceiling Insulation Upgrade Rebate**

The Residential Ceiling Insulation Upgrade Rebate Program is offered to residential customers to encourage the upgrade of attic insulation.

#### **Residential Window Film/Solar Screen Rebate**

The Residential Window Film/Solar Screen Rebate Program encourages solar shading on windows.

#### **Residential High Performance Windows Rebate**

The Residential High Performance Windows Rebate Program encourages customers to install windows that minimize heating, cooling, and lighting costs.

### **Residential Efficient Electric Heat Pump Rebate**

The Residential Efficient Electric Heat Pump Rebate Program provides rebates to customers in existing homes who install heat pumps having a seasonal energy efficiency ratio (SEER) of 15.0 or higher.

### **Residential New Home Rebate**

The Residential New Home Rebate Program offers rebates for cool/reflective roofs, block wall insulation, ceiling insulation upgrades to R-38, heat pumps, ENERGY STAR washing machines, ENERGY STAR heat pump water heaters, and solar water heaters.

### **Residential Efficiency Delivered (Low-Income)**

The Residential Efficiency Delivered Program is income based and provides up to \$2,000 of energy and water efficiency upgrades based on the needs of the residential customer's home. An OUC Conservation Specialist visits the home, performs a home survey, and recommends which home improvements have the most potential of lowering utility bills.

## **Commercial Programs**

### **Commercial Energy Audits**

The Commercial Energy Audit Program includes a free survey consisting of a physical walk-through inspection of the commercial facility performed by experienced energy experts. Following the inspection, the customer receives a written report.

### **Commercial Efficient Electric Heat Pump Rebate**

The Commercial Efficient Electric Heat Pump Rebate Program provides rebates to qualifying customers in existing buildings who install heat pumps having a seasonal energy efficiency ratio (SEER) of 15.0 or higher.

### **Commercial Duct Repair Rebate**

The Commercial Duct Repair Rebate Program provides rebates of 100 percent of the cost, up to \$160, when qualifying customers have an existing central air conditioning system of 5.5 tons or less. Then, customers must seal ducts with mastic and fabric tape or Underwriters Laboratory approved duct tape.

### **Commercial Window Film/Solar Screen Rebate**

The Commercial Window Film/Solar Screen Rebate Program aims to reflect heat during hot summer days and retain heat on cool winter days. The program provides rebates of \$1 per square foot 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**

The Commercial Ceiling Insulation Rebate Program aims to increase a building's resistance to heat loss and gain. Participating customers receive a per square foot for upgrading their attic insulation up to R-30

**Commercial Cool/Reflective Roof Rebate**

The Commercial Cool/Reflective Roof Rebate Program aims to reflect the sun's rays and lower roof surface temperature while increasing the lifespan of the roof. OUC provides rebates per square foot of ENERGY STAR cool/reflective roofing that has an initial solar reflectance greater than or equal to 0.70.