

State of Florida



Public Service Commission

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

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

DATE: July 9, 2015

TO: Office of Commission Clerk (Stauffer)

FROM: Division of Engineering (Ellis) *SBB POE*
Division of Economics (S. Brown, Lingo) *JTH*
Office of the General Counsel (Ames) *FJL*

RE: Docket No. 150089-EG – Petition for approval of demand-side management plan by Florida Public Utilities Company.

AGENDA: 07/21/15 – Regular Agenda – Proposed Agency Action – Interested Persons May Participate

COMMISSIONERS ASSIGNED: All Commissioners

PREHEARING OFFICER: Administrative

CRITICAL DATES: None

SPECIAL INSTRUCTIONS: Staff recommends the Commission simultaneously consider Docket Nos. 150081-EG, 150083-EG, 150085-EG, 150086-EG, 150087-EG, 150088-EG, and 150089-EG.

Case Background

By Order No. PSC-13-0645-PAA-EU, issued December 4, 2013, the Commission approved the use of a proxy methodology to establish numeric demand-side management (DSM) goals for Florida Public Utilities Company (FPUC).¹ By using this proxy methodology, FPUC was able to avoid costs associated with performing the analyses required by the minimum testimony requirements which would have represented a hardship to their customers. FPUC was instructed to file numeric goals based upon the proxy utility, Gulf Power Company, within 10 days of the

¹ FPSC Order No. PSC-13-0645-PAA-EU, Docket No. 130205-EI, Commission review of numeric conservation goals (Florida Public Utilities Company), issued December 4, 2013.

Final Order establishing goals for the 2015 through 2024 period. The Commission granted staff administrative authority to validate the calculations of the numeric conservation goals.

By Order No. PSC-14-0696-FOF-EU, issued December 16, 2014, the Commission established annual numeric goals for FPUC's proxy.² On December 23, 2014, FPUC filed its calculation of numeric conservation goals based upon its proxy utility. FPUC subsequently filed a revised calculation to correct rounding errors identified by staff.

On December 29, 2014, staff administratively approved FPUC's numeric DSM goals for the period 2015 through 2024.³ The DSM goals were established for both FPUC's residential and commercial/industrial customer classes for three categories: summer peak demand, winter peak demand, and annual energy consumption.

Rule 25-17.0021(4), Florida Administrative Code (F.A.C.), requires a utility to file DSM programs for Commission approval no later than 90 days from when goals are established. On March 16, 2015, FPUC filed a petition requesting approval of its DSM Plan. As part of this filing, FPUC provided a cost-effectiveness analysis of the proposed programs pursuant to Rule 25-17.008, F.A.C. On April 21, 2015, FPUC filed a revised DSM Plan that corrected several calculation errors.

The Commission has jurisdiction over this matter pursuant to Sections 366.80 through 366.83 and 403.519, Florida Statutes (F.S.), collectively known as the Florida Energy Efficiency and Conservation Act (FEECA).

² FPSC Order No. PSC-14-0696-FOF-EU, Docket No. 130202-EI, Commission review of numeric conservation goals (Gulf Power Company), issued December 16, 2014.

³ Document No. 06888-14 in Docket No. 130205-EI.

Discussion of Issues

Issue 1: Is FPUC's Demand-Side Management Plan projected to meet the annual numeric conservation goals established by the Commission in Order No. PSC-13-0645-PAA-EU?

Recommendation: Yes. FPUC's DSM Plan is cost-effective based upon the Rate Impact Measure (RIM) test and results in a net decrease in ratepayers' monthly rates. Although the Commission has allowed savings from audit programs to be counted towards the achievement of DSM goals in previous proceedings, staff recommends that no behavioral savings associated with audit programs be counted towards goals in this proceeding because behavioral savings are not directly monitorable. Even with the removal of projected behavioral savings from audits, FPUC's DSM Plan is projected to meet or exceed the annual goals set by the Commission in Order No. PSC-13-0645-PAA-EU.

The Commission should approve the programs contained in FPUC's DSM Plan. In addition, the Commission should allow FPUC to file for cost recovery of the programs in the Energy Conservation Cost Recovery (ECCR) clause proceeding. FPUC, however, must demonstrate that its expenditures to implement these programs are reasonable and prudent in order to recover the expenditures through the ECCR clause. Staff recommends that FPUC may not discontinue its DSM programs or change its programs' rebate levels without seeking formal Commission approval.

Finally, Staff recommends that FPUC file its administrative program standards for all programs within 30 days of the Consummating Order being issued in this docket and that the Commission grant staff administrative authority to review and approve these standards. (Ellis)

Staff Analysis: The criteria used to review the appropriateness of DSM programs are: 1) whether the program advances the policy objectives of FEECA and its implementing rules, 2) whether the program is directly monitorable and yields measurable results, and 3) whether the program is cost-effective.⁴ Staff has reviewed FPUC's DSM Plan, including its demand and energy savings, cost-effectiveness, and rate impact. The resulting demand and energy savings appear to meet the goals established by the Commission in Order No. PSC-13-0645-PAA-EU. The programs that staff recommends should be counted towards FPUC's goals appear to be directly monitorable and measurable. Lastly, FPUC's DSM Plan as a whole appears to be cost-effective and will reduce customer bills associated with conservation.

Description of DSM Plan

FPUC's DSM Plan consists of eight programs. A complete list of the programs and a brief description of each can be found in Attachment A. Of the eight programs, two are residential, three are commercial/industrial, and three are educational programs (including research and development and low income outreach). FPUC does not include its two existing solar pilot programs as part of its DSM Plan, but will continue the programs until their expiration in December 31, 2015.

⁴ FPSC Order No. 22176, Docket No. 890737-PU, Implementation of Section 366.80-.85, Florida Statutes, Conservation Activities of Electric and Natural Gas Utilities, issued November 14, 1989.

FPUC has proposed to continue several existing programs with modifications to reflect current market conditions, as well as add a new commercial/industrial program, as illustrated in Table 1-1 below.

**Table 1-1
 FPUC DSM Plan Program Listing**

Program Name	Program Status		
	Existing	Modified	New
Residential Programs			
Residential Energy Survey	X	X	
Residential Heating & Cooling Efficiency	X	X	
Commercial/Industrial Programs			
Commercial Heating & Cooling Efficiency	X	X	
Commercial Chiller Upgrade	X	X	
Commercial Reflective Roof			X
Other Programs			
Conservation Demonstration and Development	X		
Low Income Energy Outreach	X	X	
Commercial Energy Consultation			X
Pilot Programs⁵			
Solar Water Heating	X		
Solar PV	X		

Source: FPUC revised DSM Plan

FPUC’s two residential programs are both modified to reflect changes in codes and standards. FPUC’s Residential Energy Survey program features an updated kit provided to customers including LED bulbs rather than CFLs, and an implementation of an online audit option. FPUC’s proposed demand and energy savings associated with this audit program are discussed in more detail below. The modified Residential Heating & Cooling Efficiency Program includes additional structure types, including multi-family and stationary mobile homes.

FPUC offers three commercial/industrial programs, two modified and one new. The Commercial Heating & Cooling Efficiency program has been modified to reflect changes in codes and statutes, but maintains rebate levels. The existing Commercial Chiller Upgrade Program has been modified to revise its rebates amounts. FPUC also added a new Commercial Reflective Roof program, which encourages businesses to install or convert to energy efficient roofs.

For FPUC’s other programs, the Commercial Energy Survey program is continued under a new name, Commercial Energy Consultation, but FPUC does not propose demand and energy savings based upon the program.

⁵ FPUC’s Pilot Programs are set to expire on December 31, 2015, pursuant to FPSC Order No. PSC-14-0632-FOF-EG.

Audit Programs

In accordance with Rule 25-17.003, F.A.C., FPUC will continue to offer audit programs for each sector, residential and commercial/industrial. FPUC's DSM Plan, as submitted, includes projected savings from audit programs for the residential sector only, through the Residential Energy Survey program. While there may be many audit savings associated with customer behavior modifications, such savings are difficult to quantify and may expire before the end of the 10-year goal period. Although the Commission has allowed savings from these types of programs to be counted towards achieving DSM goals in previous proceedings, staff recommends that behavioral savings should no longer be counted towards achieving DSM goals because behavioral savings are not directly monitorable. Even with the removal of behavioral savings from audits, FPUC's DSM Plan still meets or exceeds the annual numeric goals set by the Commission in Order No. PSC-13-0645-PAA-EU. Savings associated with actual equipment provided to participants, such as light bulbs, could still be included in the goal savings.

As FPUC is a smaller utility, savings of the Residential Energy Survey program are based on Duke Energy Florida's Home Energy Check program, which FPUC modified to include LED lighting. While other items are included in the kit provided to customers, the only values available that are strictly related to equipment provided are for the LED bulbs.

Comparison of DSM Plan to Goals

Based upon FPUC's DSM Plan, as modified by staff to exclude behavioral savings associated with residential energy audits, FPUC is projected to meet or exceed each of the established goals. The projected savings associated with the Commission's established goals, the company's proposed DSM Plan, and staff's modifications to the DSM Plan are summarized in Table 1-2 and Table 1-3 below.

**Table 1-2
 FPUC Residential Sector Goals vs. DSM Plan and Staff's Recommendation**

Year	Summer (MW)			Winter (MW)			Annual Energy (GWh)		
	Goal	DSM Plan	Staff Rec	Goal	DSM Plan	Staff Rec	Goal	DSM Plan	Staff Rec
2015	0.036	0.213	0.203	0.012	0.122	0.115	0.023	0.416	0.392
2016	0.046	0.213	0.203	0.015	0.122	0.115	0.030	0.416	0.392
2017	0.056	0.213	0.203	0.018	0.122	0.115	0.038	0.416	0.392
2018	0.067	0.213	0.203	0.022	0.122	0.115	0.045	0.416	0.392
2019	0.078	0.213	0.203	0.025	0.122	0.115	0.053	0.416	0.392
2020	0.089	0.213	0.203	0.028	0.122	0.115	0.060	0.416	0.392
2021	0.099	0.213	0.203	0.031	0.122	0.115	0.067	0.416	0.392
2022	0.107	0.213	0.203	0.034	0.122	0.115	0.073	0.416	0.392
2023	0.117	0.213	0.203	0.036	0.122	0.115	0.078	0.416	0.392
2024	0.123	0.213	0.203	0.039	0.122	0.115	0.084	0.416	0.392
Total⁶	0.818	2.130	2.030	0.260	1.220	1.150	0.551	4.160	3.920

Source: FPSC Order Nos. PSC-13-0645-PAA-EU & PSC-14-0696-FOF-EU, FPUC revised DSM Plan, Staff Calculation.

**Table 1-3
 FPUC Commercial/Industrial Sector Goals vs. DSM Plan**

Year	Summer (MW)		Winter (MW)		Annual Energy (GWh)	
	Goal	DSM Plan	Goal	DSM Plan	Goal	DSM Plan
2015	0.021	0.067	0.010	0.046	0.055	0.122
2016	0.027	0.072	0.008	0.046	0.078	0.135
2017	0.031	0.077	0.009	0.046	0.094	0.147
2018	0.039	0.082	0.018	0.046	0.115	0.160
2019	0.045	0.087	0.018	0.046	0.148	0.173
2020	0.052	0.138	0.018	0.080	0.168	0.270
2021	0.058	0.138	0.018	0.080	0.182	0.270
2022	0.058	0.138	0.027	0.080	0.202	0.270
2023	0.065	0.138	0.027	0.080	0.215	0.270
2024	0.071	0.138	0.027	0.080	0.229	0.270
Total⁷	0.467	1.076	0.180	0.631	1.486	2.087

Source: FPSC Order Nos. PSC-13-0645-PAA-EU & PSC-14-0696-FOF-EU, FPUC revised DSM Plan, Staff Calculation

⁶ Totals may not equal due to rounding.

⁷ Totals may not equal due to rounding.

FPUC has a single program that represents the majority of savings in each sector for all three goals categories. For residential, the majority of demand and energy savings are provided by the Residential Heating and Cooling Efficiency program, but program costs are split approximately equally between the Residential Heating and Cooling Efficiency program and the Residential Energy Survey program. For the commercial/industrial sector, the Commercial Chiller program provides the majority of demand and energy savings and program cost.

The values presented above are projections based upon participation rates which may or may not occur. FPUC will be responsible for monitoring actual participation rates and seeking Commission action if necessary to modify, add, or remove programs. If FPUC is unable to meet the Commission's goals, the company may be subject to appropriate action by the Commission, up to and including financial penalties.

Section 366.82(10), F.S., requires that the Commission provide an annual report (FEECA Report) to the Governor and Legislature concerning the progress of each FEECA utility towards meeting its established goals. Rule 25-17.0021(5), F.A.C., requires that FPUC submit an annual report that summarizes the achieved results of its DSM Plan no later than March 1 of each year. Staff will continue to monitor and report the actual amount of FPUC's DSM savings each year, on an annual and cumulative basis, as part of the FEECA Report.

Cost-Effectiveness Review

Pursuant to Rule 25-17.008, F.A.C., FPUC provided a cost-effectiveness analysis of its proposed programs using the RIM test, the Total Resource Cost (TRC) test, and the Participants test. While the Commission in Order No. PSC-14-0696-FOF-EU established goals based upon the RIM test, staff reviewed the results for each test. Staff addresses the assumptions associated with FPUC's avoided costs and program savings below.

Avoided Cost

As FPUC is the only non-generating utility subject to FEECA, it does not use the next avoidable generating unit as the avoided cost basis. Instead, avoided cost is based upon the weighted average of avoided demand and energy charges from FPUC's purchased power agreements with Gulf Power Company and JEA for its Northeast and Northwest Divisions, respectively. This methodology is reasonable and reflects past treatment by the Commission of FPUC's unique circumstances.

Program Savings

Seasonal peak demand and annual energy savings for FPUC's programs were also reviewed. FPUC estimates and measures savings by a program using estimates from government energy efficiency resources such as, Energy Star or similar programs from other Florida Utilities, including Duke Energy Florida, Tampa Electric Company, and Gulf Power Company. Given FPUC's small size, the use of data from other resources is reasonable. While not explicitly outlined in FPUC's DSM Plan, Rule 25-17.003(10), F.A.C., requires FPUC to conduct inspections of at least 10 percent of program installations to verify that the installations were performed and the installations meet quality standards.

Cost-Effectiveness Test Results

All FPUC’s proposed programs with allocated demand and energy savings pass both the RIM and Participants tests, based upon FPUC’s filing and assumptions regarding common cost allocation. These tests consist of the benefits divided by the costs, as defined by Rule 25-17.008, F.A.C., so that programs are determined to be cost-effective if the result of the test is a ratio greater than 1.00. The cost-effectiveness test results for each of FPUC’s programs are provided in Table 1-4 below. Audit programs are not included below as they are required by Rule 25-17.003, F.A.C.

**Table 1-4
 FPUC Cost-Effectiveness Test Results by Program**

Program Name	RIM Test	TRC Test	Participants Test
Residential Programs			
Residential Heating & Cooling Efficiency	1.22	1.47	1.40
Commercial/Industrial Programs			
Commercial Heating & Cooling Efficiency	1.14	1.31	1.37
Commercial Chiller Upgrade Program	1.14	1.35	1.39
Commercial Reflective Roof Program	1.01	1.17	1.39

Source: FPUC revised DSM Plan

To perform the calculations in Table 1-4 above, FPUC estimated the administrative costs for implementing the proposed programs, and added it as a cost to the relevant tests. These administrative costs are not final. Moreover, the Commission’s acceptance of these test values would not signify that these values are reasonable for cost recovery purposes. FPUC, as the smallest FEECA utility, lacks the benefits of economies of scale that are available to the other utilities. As a result, administrative costs make up a larger portion of conservation costs for FPUC. FPUC should continue to explore ways to reduce the administrative costs associated with implementing its DSM Plan. FPUC must demonstrate that the administrative costs associated with implementing its DSM programs are reasonable and prudent as part of its annual cost recovery filings in the ECCR clause proceeding.

Rate Impact

If approved, the cost to implement the programs of FPUC’s DSM Plan programs would flow through to the ratepayers through the ECCR clause proceeding. In this annual docket, FPUC would file for recovery of incentives, equipment and administrative costs. The ECCR clause represents a monthly bill impact to customers as part of the non-fuel cost of energy and/or demand charges on their bill. Much like investments in other long-lived assets, investments in energy efficiency have an immediate rate impact, but produce savings over time.

Overall, the ECCR impact of FPUC’s DSM Plan is a small portion of a customer’s bill, and is anticipated to decrease over the ten-year period compared to 2014. Table 1-5 below is an estimate of the monthly bill impact of the ECCR clause on a typical residential and commercial/industrial customer over a ten-year period. The estimated ECCR factors are based

upon the participation rates and administrative costs used in the cost-effectiveness analysis discussed above, and are not final.

**Table 1-5
 FPUC Estimated Monthly Bill Impact of Proposed DSM Plan**

Year	Residential Customer (1200 kWh/mo)		Commercial/Industrial Customer (400,000 kWh/mo, 1000 kW)	
	Bill Impact (\$/mo)	Savings From 2014	Bill Impact (\$/mo)	Savings From 2014
2014	\$1.20	n/a	\$400.00	n/a
2015	\$1.28	(\$0.08)	\$428.00	(\$28.00)
2016	\$0.90	\$0.30	\$299.00	\$101.00
2017	\$0.92	\$0.28	\$306.00	\$94.00
2018	\$0.94	\$0.26	\$312.00	\$88.00
2019	\$0.95	\$0.25	\$318.00	\$82.00
2020	\$1.00	\$0.20	\$333.00	\$67.00
2021	\$1.02	\$0.18	\$339.00	\$61.00
2022	\$1.03	\$0.17	\$344.00	\$56.00
2023	\$1.05	\$0.15	\$350.00	\$50.00
2024	\$1.07	\$0.13	\$355.00	\$45.00

Source: FPUC revised response to staff data request

FPUC’s DSM Plan includes programs for low-income, residential, and commercial/industrial customers. By participating in a DSM program, customers should be able to reduce their bills, potentially eliminating the additional cost associated with FPUC’s DSM Plan. In addition, since the Commission approved goals based on the RIM test, which considers the impact of lost revenues, even customers who do not participate in a DSM program should see a benefit of lower rates.

Conclusion

FPUC’s DSM Plan is cost-effective based upon the Rate Impact Measure (RIM) test and results in a net decrease in ratepayers’ monthly rates. Although the Commission has allowed savings from audit programs to be counted towards the achievement of DSM goals in previous proceedings, staff recommends that no behavioral savings associated with audit programs be counted towards goals in this proceeding because behavioral savings are not directly monitorable. Even with the removal of projected behavioral savings from audits, FPUC’s DSM Plan is projected to meet or exceed the annual goals set by the Commission in Order No. PSC-13-0645-PAA-EU.

The Commission should approve the programs contained in FPUC’s DSM Plan. In addition, the Commission should allow FPUC to file for cost recovery of the programs in the Energy Conservation Cost Recovery (ECCR) clause proceeding. FPUC, however, must demonstrate that its expenditures to implement these programs are reasonable and prudent in order to recover the expenditures through the ECCR clause. Staff recommends that FPUC may not discontinue its

DSM programs or change its programs' rebate levels without seeking formal Commission approval.

Finally, Staff recommends that FPUC file its administrative program standards for all programs within 30 days of the Consummating Order being issued in this docket and that the Commission grant staff administrative authority to review and approve these standards.

Issue 2: Should this docket be closed?

Recommendation: Yes. If no person whose substantial interests are affected by the proposed agency action files a protest within 21 days of the issuance of the PAA Order, a Consummating Order should be issued. If the Commission approves any programs, the programs should become effective on the date of the Consummating Order. If a protest is filed within 21 days of the issuance of the PAA Order, the programs should not be implemented until after the resolution of the protest. However, the docket should remain open for staff's verification that the program standards have been filed by the utility and approved by staff. When the PAA issues become final and the program standards have been approved, this docket should be closed administratively. (Ames)

Staff Analysis: If no person whose substantial interests are affected by the proposed agency action files a protest within 21 days of the issuance of the PAA Order, a Consummating Order should be issued. If the Commission approves any programs, the programs should become effective on the date of the Consummating Order. If a protest is filed within 21 days of the issuance of the PAA Order, the programs should not be implemented until after the resolution of the protest. However, the docket should remain open for staff's verification that the program standards have been filed by the utility and approved by staff. When the PAA issues become final and the program standards have been approved, this docket should be closed administratively.

Florida Public Utilities Company – 2015 DSM Programs

Residential Programs:

Residential Energy Survey

The objective of the Residential Energy Survey is to provide FPUC's residential customers with energy conservation advice that encourages the implementation of efficiency measures resulting in energy savings for the customer. These measures, once implemented, also lower FPUC's energy requirements and improve operating efficiencies. FPUC views this program as a way of promoting the installation of cost-effective conservation features. During the survey process, the customer is provided with specific whole-house recommendations.

The survey process also checks for possible duct leakage. If a problem is identified, recommendations are made for further analysis and repairs. Blower-door testing is required to identify and quantify the duct leakage. FPUC provides the customer a list of contractors that provide blower-door testing. After the blower-door test contractor identifies the leakage sites and quantities, the customer is given a written summary of the test findings and the potential for savings, along with a list of approved repair contractors.

During the survey, FPUC will provide the customer with a conservation kit as appropriate. The kit includes two LED bulbs, weather stripping, caulk, insulators for wall sockets and light switches, and a water temperature thermometer. While the contents of the conservation kit will result in demand and energy savings, its purpose is to provide the customer with actual samples of low and no cost measures the customer can take to reduce their energy costs.

Through follow-up survey work, FPUC monitors and tracks the installation of cost-effective conservation features and/or duct leakage repairs. As a result, the increase in operating efficiencies provides for a reduction in weather-sensitive peak demand, as well as a reduction in energy consumption.

Residential Heating & Cooling Efficiency Upgrade

This program is directed at reducing the rate of growth in peak demand and energy throughout FPUC's electricity service territories. The program will do this by increasing the saturation of high-efficiency heat pumps and central air conditioning systems. The program requires that customers install a high-efficiency central air conditioning system or heat pump with a minimum 15 SEER.

The Residential Heating & Cooling Efficiency Upgrade Program focuses in two areas. The first is to incent customers operating inefficient heat pumps and air conditioners to replace them with more efficient units. The program also incents customers with resistance heating to install a new heat pump. The second area of focus for the program is to incent customers that are replacing a heat pump or air conditioner that has reached the end of its life with a more efficient heat pump or air conditioner than is required by codes and standards. The incentive to install a more efficient heat pump or air conditioner also applies to heat pumps and air conditioners being installed in new construction.

- Customer Rebate of \$100, with Dealer Incentive of \$75 for heat pump replacing resistance heating, or \$25 for all other types.

Commercial/Industrial Programs:

Commercial Heating & Cooling Efficiency Upgrade

This program is directed at reducing the rate of growth in peak demand and energy throughout FPUC's commercial sector. The program will do this by increasing the saturation of high-efficiency heat pumps and air conditioners. The program requires that customers install a high-efficiency central air conditioning system or heat pump with a minimum 15 SEER.

The Commercial Heating & Cooling Efficiency Upgrade Program is essentially the same program as the Residential Heating & Cooling Efficiency Upgrade Program only for FPUC's commercial sector.

- Customer Rebate of \$100, with Dealer Incentive of \$75 for heat pump replacing resistance heating, or \$25 for all other types.

Commercial Chiller Upgrade

The program is directed at reducing the rate of growth in peak demand and energy throughout FPUC's commercial/industrial sector. To serve this purpose, this program requires that commercial/industrial customers replace existing chillers with a more efficient system.

The program covers water-cooled centrifugal chillers, water-cooled scroll or screw chillers, and air-cooled electric chillers. Minimum qualifications for efficiency exist for each of the chiller types based on size and are presented in the participation standards section of this program description. Interested customers will send project proposals to FPUC and a representative will schedule an on-site visit for inspection prior to installation. After the project is completed, a FPUC representative will conduct an on-site inspection. By following the guidelines, the customer will qualify for the rebate.

- Rebate of \$175/kW of savings above minimum efficiency levels.

Commercial Reflective Roof

The Commercial Reflective Roof Program is a new program that provides rebates to nonresidential customers that either convert their existing roof to a cool roof or install a new cool roof on an existing building or a new building. Roofing material must be Energy Star certified in all cases. The program will reduce energy and demand required for cooling. Participation rates are measured per 1000 sq. ft. of roof.

FPUC will work with roofing contractors to promote the program in a manner similar to the Residential and Commercial Heating & Cooling Upgrade Programs. The roofing contractors will provide copies of their proposal to provide roofing services for FPUC's customers. FPUC will inspect the roof before work begins and after the work is completed. FPUC will make the determination of which level of rebate will apply to the project and that the project qualifies for a rebate by using Energy Star certified materials.

- \$0.075/sq. ft. for new roofs and \$0.325/sq. ft. for conversions.

Energy Education Programs:

Conservation Demonstration and Development

The primary purpose of the Conservation Demonstration and Development (CDD) program is to pursue research, development, and demonstration projects designed to promote energy efficiency and conservation. This program will supplement and complement the other demand-side management programs offered by FPUC.

The CDD program is meant to be an umbrella program for the identification, development, demonstration, and evaluation of promising new end-use technologies and or energy efficiency measures. The CDD program does not focus on any specific end-use technology but, instead, will address a wide variety of energy applications. Expenditures are limited to a maximum of \$75,000 per year, and FPUC will notify the Commission of any project that individually exceeds \$15,000.

Low Income Energy Outreach

The Low Income Energy Outreach Program is an educational program designed to enhance the effectiveness of existing weatherization programs for low-income households. FPUC's Low Income Energy Outreach Program partners with Department of Economic Opportunity approved Low Income Weatherization Program operators by offering Residential Energy Surveys scheduled by the Low Income Weatherization Program operators weatherization contractor training, distributing energy efficiency educational literature to participants, and hosting energy conservation events customized for low income households. The Low Income Energy Outreach Program consists of the following four major components:

- ***Residential Energy Surveys***

The Low Income Weatherization Program operators will be responsible for scheduling Residential Energy Surveys to be conducted by FPUC with the low-income households. Each low-income household receiving a FPUC Residential Energy Survey will receive an Energy Conservation Kit from FPUC which contains caulking, weather stripping, two LED bulbs, lighting and wall socket insulation, and a water temperature thermometer. While Energy Conservation Kit components provide some demand and energy savings, the intent of the kit is to provide samples of these low cost energy conservation measures that can easily be implemented by the low-income households.

- ***Contractor Training***

Training will be provided by FPUC to educate and inform weatherization contractors about thermal envelope improvement best practices, product procurement ideas, and emerging weatherization strategies. Training events will occur on an annual basis throughout each of the counties FPUC serves. These efforts will include coordination with the Weatherization Assistance Program Technical Assistance Center.

- ***Demographic Targeted Energy Materials***

Energy Conservation materials that are specifically geared towards low income households will be compiled by FPUC and provided by the approved weatherization organization performing the energy improvements.

- ***Community Conservation Events***

Annual Community Conservation events will be conducted in each of the territories that FPUC serves. These events will educate and inform low income households about the weatherization programs offered in their county and depending upon the event each participant will receive FPUC's Energy Conservation Kit along with information about reading electric bills and energy conservation tips.

- ***Commercial Energy Consultation***

The Florida Public Utilities Company Commercial Energy Consultation Program is designed to directly communicate the availability of the commercial DSM programs to commercial customers. This program allows for FPUC energy conservation representatives to conduct commercial site visits to educate customers about FPUC's commercial DSM programs, assess the potential for applicable DSM Programs, conduct an electric bill review, offer commercial energy savings suggestions, and inform customer about FPUC's commercial online energy efficiency resources and tools.