

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-**

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**DATE:** July 9, 2015

**TO:** Office of Commission Clerk (Stauffer)

**FROM:** Division of Engineering (Ellis, Graves) *KEG PV*  
Division of Economics (S. Brown, Lingo) *POE*  
Office of the General Counsel (Corbari) *RH GS (FH) KFC LU*

**RE:** Docket No. 150081-EG – Petition for approval of demand-side management plan of Tampa Electric 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.

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### Case Background

By Order No. PSC-14-0696-FOF-EU, the Commission established annual numeric demand-side management (DSM) goals for Tampa Electric Company (TECO) for the period 2015 through 2024.<sup>1</sup> The DSM goals were established for both TECO's residential and commercial/industrial customer classes for three categories: summer peak demand, winter peak demand, and annual energy consumption.

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<sup>1</sup>FPSC Order No. PSC-14-0696-FOF-EU, Docket No. 130201-EI, Commission review of numeric conservation goals (Tampa Electric Company), issued December 16, 2014.

Docket No. 150081-EG

Date: July 9, 2015

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, TECO filed a petition requesting approval of its DSM Plan. As part of this filing, TECO provided a cost-effectiveness analysis of the proposed programs pursuant to Rule 25-17.008, F.A.C.

On May 7, 2015, the Southern Alliance for Clean Energy (SACE) petitioned to intervene.

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).

## Discussion of Issues

**Issue 1:** Is TECO's DSM Plan projected to meet the annual numeric conservation goals established by the Commission in Order No. PSC-14-0696-FOF-EU?

**Recommendation:** Yes. TECO'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, TECO's DSM Plan is projected to meet or exceed the annual goals set by the Commission in Order No. PSC-14-0696-FOF-EU.

The Commission should approve the programs contained in TECO's DSM Plan. In addition, the Commission should allow TECO to file for cost recovery of the programs in the Energy Conservation Cost Recovery (ECCR) clause proceeding. TECO, 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 DSM programs may not be discontinued or rebate levels changed without formal Commission approval. Staff recommends that TECO may not discontinue its DSM programs or change its programs' rebate levels without seeking formal Commission approval.

Finally, staff recommends that TECO 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. (Graves)

**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.<sup>2</sup> Staff has reviewed TECO'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-14-0696-FOF-EU. The programs that staff recommends should be counted towards TECO's goals appear to be directly monitorable and measurable. Lastly, TECO's DSM Plan, as a whole, appears to be cost-effective and will reduce customer bills associated with conservation.

### Description of DSM Plan

TECO's DSM Plan consists of 39 programs. A complete list of the programs and a brief description of each can be found in Attachment A. Of the 39 programs, 15 are residential and 24 are commercial/industrial. TECO is proposing the addition of one new program as well as the continuation of many of its existing programs. TECO also proposes to discontinue several programs that are no longer cost-effective. Table 1-1 below summarizes TECO's proposed programs and the status (existing, modified, or new) of each program.

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<sup>2</sup> 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.

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

Program Name	Program Status		
	Existing	Modified	New
<b>Residential Programs</b>			
Residential Walk-Through Audit (Free)	x		
Residential Customer Assisted Energy Audit	x		
Residential Computer Assisted Energy Audit (RCS)	x		
Residential Ceiling Insulation	x	x	
Residential Duct Repair	x	x	
Residential Electronically Commutated Motor (ECM)	x	x	
Energy Education, Awareness and Agency Outreach	x	x	
Energy Star for New Homes	x	x	
Residential Heating and Cooling	x	x	
Neighborhood Weatherization	x	x	
Energy Planner-Residential Price Responsive Load Management	x	x	
Residential Wall Insulation	x	x	
Residential Window Replacement	x	x	
<b>Commercial/Industrial Programs</b>			
Commercial/Industrial Audit (Free)	x		
Comprehensive Commercial/Industrial Audit (Paid)	x		
Commercial Ceiling Insulation	x	x	
Commercial Chiller	x	x	
Conservation Value	x	x	
Cool Roof	x	x	
Commercial Cooling	x	x	
Demand Response	x	x	
Commercial Duct Repair	x	x	
Commercial Electronically Commutated Motors (ECM)	x	x	
Industrial Load Management (GSLM 2&3)	x		
Lighting Conditioned Space	x	x	
Lighting Non-Conditioned Space	x	x	
Lighting Occupancy Sensors	x	x	
Commercial Load Management (GSLM 1)	x	x	
Refrigeration Anti-Condensate Control	x	x	
Standby Generator	x	x	
Thermal Energy Storage			x
Commercial Wall Insulation	x	x	
Commercial Water Heating	x	x	
<b>Other Programs</b>			
Cogeneration (C/I)	x		
Conservation Research & Development (C/I)	x		
Renewable Energy Program (Res)	x		
Renewable Energy Program (C/I)	x		
<b>Pilot Programs<sup>3</sup></b>			
Renewable Energy Systems Initiative (Res)	x		
Renewable Energy Systems Initiative (C/I)	x		

Source: TECO DSM Plan Filing

<sup>3</sup> TECO's Pilot Programs are set to expire on December 31, 2015, pursuant to FPSC Order No. PSC-14-0632-FOF-EG.

TECO is proposing to modify several of its existing programs. Several of TECO's modifications consist of changes to rebates. TECO developed its proposed rebate amounts considering several factors, including the cost-effectiveness of its proposed programs and historical participation levels.

TECO has also modified several of its existing programs to reflect changes to codes and standards. As an example, TECO discontinued its eight free compact fluorescent lamps that were mailed to customers following an audit. TECO has discontinued this offering due to phased in changes affecting incandescent bulbs and the associated reduction in incremental energy savings that came from the Energy Independence and Security Act of 2007.

Finally, TECO is proposing to add a Thermal Energy Storage program to its DSM portfolio. The program is designed to save customers demand and energy costs by reducing or shifting the afternoon demand peak caused by conventional air conditioning equipment to other non-coincidental peak hours. In the past, Thermal Energy Storage systems have been offered under the Company's Conservation Value Program. TECO states that it has had sufficient participation to justify a stand-alone program.

#### ***Audit Programs***

In accordance with Rule 25-17.003, F.A.C., TECO will continue to offer energy audits for each sector, residential and commercial/industrial. 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 ten-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, TECO's DSM Plan still meets or exceeds the annual numeric goals set by the Commission in Order No. PSC-14-0696-FOF-EU. Savings associated with actual equipment provided to participants, such as light bulbs, could still be included in the goal savings.

#### ***Comparison of DSM Plans to Goals***

TECO's DSM Plan, as modified by staff to exclude behavioral savings associated with energy audits, meets or exceeds each of the established goals. The projected savings associated with the Commission's established goals, TECO'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  
 TECO Residential Sector Goals vs. DSM Plan**

Year	Summer (MW)			Winter (MW)			Annual Energy (GWh)		
	Goal	DSM Plan	Staff Rec	Goal	DSM Plan	Staff Rec	Goal	DSM Plan	Staff Rec
<b>2015</b>	1.1	4.9	4.4	2.6	6.8	6.3	1.8	12.5	9.9
<b>2016</b>	1.6	4.9	4.4	4.1	7.1	6.6	3.5	13.2	10.6
<b>2017</b>	2.2	5.1	4.6	5.2	7.3	6.8	4.8	14.0	11.3
<b>2018</b>	2.7	5.2	4.7	6.5	7.5	6.9	6.1	14.6	12.0
<b>2019</b>	3.1	5.9	5.4	7.6	8.6	8.0	6.9	15.4	12.7
<b>2020</b>	3.3	5.9	5.4	7.6	8.6	8.0	7.4	15.4	12.7
<b>2021</b>	3.3	5.9	5.4	8.0	8.6	8.0	7.7	15.4	12.7
<b>2022</b>	3.0	5.9	5.4	7.4	8.5	7.9	6.9	15.3	12.6
<b>2023</b>	2.9	5.9	5.4	6.8	8.5	7.9	6.3	15.3	12.6
<b>2024</b>	2.5	5.8	5.4	6.1	8.4	7.9	5.5	15.2	12.6
<b>Total<sup>4</sup></b>	<b>25.7</b>	<b>55.3</b>	<b>50.5</b>	<b>61.9</b>	<b>79.8</b>	<b>74.2</b>	<b>56.9</b>	<b>146.3</b>	<b>119.6</b>

Source: FPSC Order No. PSC-14-0632-FOF-EG, TECO's DSM Plan Filing.

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

Year	Summer (MW)			Winter (MW)			Annual Energy (GWh)		
	Goal	DSM Plan	Staff Rec	Goal	DSM Plan	Staff Rec	Goal	DSM Plan	Staff Rec
<b>2015</b>	1.7	4.2	4.1	1.2	2.3	2.2	3.9	10.3	9.6
<b>2016</b>	2.5	4.3	4.3	1.3	2.3	2.2	6.0	10.2	9.5
<b>2017</b>	2.7	4.5	4.5	1.6	2.3	2.2	8.0	10.3	9.6
<b>2018</b>	3.3	4.9	4.8	1.7	2.3	2.2	9.2	10.4	9.7
<b>2019</b>	3.3	5.3	5.2	1.6	2.6	2.5	9.9	11.9	11.2
<b>2020</b>	3.5	5.5	5.4	1.7	2.9	2.8	10.3	13.7	13.0
<b>2021</b>	3.6	5.5	5.4	1.9	2.9	2.8	10.4	13.7	13.0
<b>2022</b>	3.3	5.5	5.4	1.9	2.9	2.8	10.2	13.7	13.0
<b>2023</b>	3.5	5.5	5.4	1.8	2.9	2.8	9.9	13.7	13.0
<b>2024</b>	3.2	5.5	5.4	1.7	2.9	2.8	9.6	13.7	13.0
<b>Total<sup>5</sup></b>	<b>30.6</b>	<b>50.6</b>	<b>49.8</b>	<b>16.4</b>	<b>26.0</b>	<b>25.2</b>	<b>87.4</b>	<b>121.6</b>	<b>114.8</b>

Source: FPSC Order No. PSC-14-0632-FOF-EG, TECO's DSM Plan Filing

A majority of TECO's residential seasonal peak demand goals are met through the company's Neighborhood Weatherization program and Residential Price Responsive Load Management program. The Neighborhood Weatherization program also accounts for more than 50 percent of the company's residential energy savings. The Neighborhood Weatherization program and

<sup>4</sup> Totals may not equal due to rounding.

<sup>5</sup> Totals may not equal due to rounding.

Residential Price Responsive Load Management program account for nearly 70 percent of TECO's estimated residential program costs. For commercial/industrial goals, TECO has multiple programs that account for 10 percent or more of its seasonal peak demand savings and annual energy savings.

The values presented above are projections based upon participation rates which may or may not occur. TECO will be responsible for monitoring actual participation rates and seeking Commission action if necessary to modify, add, or remove programs. If TECO 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 TECO 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 TECO'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., TECO provided a cost-effectiveness analysis of the 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 on the RIM test, staff reviewed the results for each test. Staff addresses the assumptions associated with TECO's avoided costs and program savings below.

#### ***Avoided Cost***

TECO used a natural gas-fired combustion turbine, with an in-service date of 2019, for its avoided unit in calculating the economic benefit of its DSM programs. Savings associated with avoiding or deferring generation, transmission, distribution, operations & maintenance expenses (fixed and variable), line losses, and fuel were considered in determining the avoided costs for each program. TECO's avoided unit is consistent with its filings in the goal-setting proceeding.<sup>6</sup>

#### ***Program Savings***

Seasonal peak demand and annual energy savings for TECO's programs were also reviewed. TECO estimates program savings using a combination of resources, including historical data and information from the 2009 ITRON Technical Potential Study. TECO states that it utilized the same seasonal peak demand and energy savings for all measures during the goal-setting proceeding in Docket No. 130201-EI. In accordance with Rule 25-17.003(10), F.A.C., TECO plans 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 of TECO's proposed programs with allocated demand and energy savings pass both the RIM and Participants tests, with the exception of two residential programs. These tests consist of the benefits divided by the costs, as defined by Rule 25-17.008, F.A.C., so that programs are

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<sup>6</sup> Docket No. 130201-EI, Commission review of numeric conservation goals (Tampa Electric Company).

Date: July 9, 2015

determined to be cost-effective if the result of the test is a ratio greater than 1.00. The only programs in TECO's DSM Plan to fail the RIM test were programs that target eligible low-income ratepayers. These programs did pass the TRC test, and comply with the requirements established in Order No. PSC-14-0696-FOF-EU to assist and educate low-income customers. The only programs to fail the TRC test were the Residential Electronically Commutated Motors, the Commercial Lighting Non-Conditioned Space, and the Cool Roof programs. Each of these three programs, however, did pass the RIM and Participants tests. Overall, TECO's DSM Plan passes the RIM test on a combined basis. The cost-effectiveness test results for each program are provided in Table 1-4 below.



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

<b>Program Name</b>	<b>RIM Test</b>	<b>TRC Test</b>	<b>Participants Test</b>
<b>Residential Programs</b>			
Residential Ceiling Insulation	1.11	1.49	2.13
Residential Duct Repair	1.13	1.53	1.99
Residential Electronically Commutated Motor (ECM)	1.07	0.78	1.10
Energy Education, Awareness and Agency Outreach	0.87	4.68	infinite
Energy Star for New Homes	1.05	1.19	1.82
Residential Heating and Cooling	1.25	1.51	1.86
Neighborhood Weatherization	0.76	6.80	infinite
Energy Planner-Residential Price Responsive Load Management	4.08	4.96	infinite
Residential Wall Insulation	1.02	1.11	1.68
Residential Window Replacement	1.28	2.07	2.74
<b>Commercial/Industrial Programs</b>			
Commercial Ceiling Insulation	1.17	3.43	5.79
Commercial Chiller	1.05	1.71	2.40
Conservation Value	1.16	2.31	2.11
Cool Roof	1.02	0.77	1.27
Commercial Cooling	1.02	1.47	2.18
Demand Response	1.53	115.61	infinite
Commercial Duct Repair	1.28	8.59	14.69
Commercial Electronically Commutated Motors (ECM)	1.17	3.57	7.61
Lighting Conditioned Space	1.34	5.41	7.51
Lighting Non-Conditioned Space	1.03	0.61	1.13
Lighting Occupancy Sensors	1.04	6.96	9.179
Commercial Load Management (GSLM 1) Cyclic	2.65	6.05	infinite
Commercial Load Management (GSLM 1) Extended	2.84	54.87	infinite
Refrigeration Anti-Condensate Control	2.84	2.94	5.179
Standby Generator	13.73	9.41	1.051
Thermal Energy Storage	1.21	2.37	2.072
Commercial Wall Insulation	1.04	1.18	1.579
Commercial Water Heating	1.05	1.54	2.837

Source: TECO's DSM Plan Filing

To perform the calculations in Table 1-4 above, TECO 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. TECO should continue to explore ways to reduce the administrative costs associated with implementing its

DSM Plan. TECO 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 TECO’s DSM Plan programs would flow through to the ratepayers through the ECCR clause proceeding. In this annual docket, TECO 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 generation, transmission, and distribution, investments in energy efficiency have an immediate rate impact, but produce savings over time. In addition to one time rebates and equipment cost, some programs have continued expenses from monthly bill credits for the duration of participation. TECO has several such programs, with demand response accounting for almost 50 percent of ECCR clause expenditures over the next 10 years.

Overall, the ECCR impact of TECO’s DSM Plan is a small portion of a customer’s bill, and is anticipated to be less than the 2014 ECCR for every year over the ten-year period. 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  
 TECO 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	\$3.54	n/a	\$1,040.00	n/a
2015	\$3.06	\$0.48	\$890.00	\$150.00
2016	\$2.54	\$1.00	\$815.00	\$225.00
2017	\$2.34	\$1.20	\$761.00	\$279.00
2018	\$2.35	\$1.19	\$776.00	\$264.00
2019	\$2.38	\$1.16	\$793.00	\$247.00
2020	\$2.36	\$1.18	\$798.00	\$242.00
2021	\$2.36	\$1.18	\$808.00	\$232.00
2022	\$2.36	\$1.18	\$817.00	\$223.00
2023	\$2.35	\$1.19	\$827.00	\$213.00
2024	\$2.35	\$1.19	\$837.00	\$203.00

Source: TECO response to staff data request

Date: July 9, 2015

TECO's DSM Plan includes a variety of programs that would allow participation by a wide spectrum of customer groups, including 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 TECO'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.

### **Other Concerns**

On May 7, 2015, the Southern Alliance for Clean Energy (SACE) petitioned to intervene in this proceeding. In its Petition for Intervention, SACE posed three disputed issues: 1) do the company's DSM programs meet the requirements of the Commission's goal-setting order, 2) are the company's DSM programs designed in the most efficient way to maximize customer energy savings, and 3) is the company's evaluation, measurement and verification process adequate to capture empirical data on so called free-ridership.

With regard to SACE's first disputed issue and as discussed above, the projected demand and energy savings from TECO's DSM Plan appears to meet the goals established by the Commission in Order No. PSC-14-0696-FOF-EU. Addressing SACE's second disputed issue, SACE's issue only addresses energy savings, and not seasonal peak demand. DSM programs should not focus solely on maximizing energy savings. Rather, programs should be a method for delivering the annual goals for seasonal peak demand and energy savings in a cost-effective manner, in order to decrease fuel consumption and to avoid or defer the construction of additional generating, transmission, and distribution facilities. As noted above, it is TECO's burden to demonstrate that the administrative costs associated with implementing its DSM programs are reasonable and prudent in its annual cost recovery filings in the ECCR clause.

SACE's third disputed issue addresses the methodology used to determine free-ridership. In the goal-setting proceeding, the Commission established a two-year payback methodology to account for free riders, but that educational and low-income programs, including those with measures with a less than two-year payback, were encouraged. In its Order establishing DSM goals, the Commission stated:

In response to Rule 25-17.0021(3), F.A.C., and Order No. PSC-13-0386-PCO-EU, the FEECA utilities filed a base case with a two-year payback to account for free riders. We approved goals based on a two-year payback criterion to identify free riders since 1994 and we find it appropriate to continue this policy. Each utility should continue to broadly educate all customer groups on energy efficiency opportunities. 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>7</sup>

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<sup>7</sup> FPSC Order No. PSC-14-0696-FOF-EU, Docket No. 130201-EI, Commission review of numeric conservation goals (Tampa Electric Company), issued December 16, 2014, p. 27.

TECO has incorporated the two-year payback methodology into the design of its DSM Plan, and only includes savings from measures with a less than two-year payback in its residential low-income programs.

SACE's disputed issue focuses on the collection of additional data associated with TECO's DSM Plan regarding the adoption rates of measures in order to determine free ridership. This data collection, typically done through surveys sent to customers, would result in additional administrative cost with no additional seasonal peak demand or annual energy savings.

### **Conclusion**

TECO'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, TECO's DSM Plan is projected to meet or exceed the annual goals set by the Commission in Order No. PSC-14-0696-FOF-EU.

The Commission should approve the programs contained in TECO's DSM Plan. In addition, the Commission should allow TECO to file for cost recovery of the programs in the Energy Conservation Cost Recovery (ECCR) clause proceeding. TECO, 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 DSM programs may not be discontinued or rebate levels changed without formal Commission approval. Staff recommends that TECO may not discontinue its DSM programs or change its programs' rebate levels without seeking formal Commission approval.

Finally, staff recommends that TECO 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 company and approved by staff. When the PAA issues become final and the program standards have been approved, this docket should be closed administratively. (Corbari)

**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 company and approved by staff. When the PAA issues become final and the program standards have been approved, this docket should be closed administratively.

## **Tampa Electric Company – 2015 DSM Programs**

### **RESIDENTIAL PROGRAMS:**

#### ***Residential Walk-Through Audit (Free Energy Check)***

A conservation program was adopted by Florida under Chapter 366.82(5), Florida Statutes, and Rule 25-17.003, Florida Administrative Code (F.A.C.). This program is offered to all residential customers and is designed to increase customer awareness of energy use. Savings are dependent on the customer implementing energy saving recommendations. Recommendations are the same as the Computer Assisted Audit but are standardized and include an estimated range of savings.

The audit is conducted by a trained residential energy analyst who will perform the following at a minimum:

1. Identify, note and recommend those conservation measures and practices that apply to the specific residence.
2. Encourage customer participation in available conservation programs in which the specific residence and customer will benefit.
3. Identify and communicate to the customer identified no-cost, low-cost conservation measures and practices including those that have less than a two-year payback.

Audits are kept on file with the company for three years. There is no charge to the customer for the Residential Walk-Through Audit.

#### ***Residential Customer Assisted Energy Audit***

This program allows for residential customers to engage in the energy audit either through a phone call or completing an online energy questionnaire. Savings are dependent on the customer implementing energy conservation measure and practice recommendations. Recommendations are the same as the Computer-Assisted Audit but are standardized and include an estimated range of savings.

To access this free audit, customers can either call or go to TECO's internet site to link to the audit. Customers will answer questions about their home and energy usage. Personalized audit results are mailed, provided by the phone team, or immediately displayed on the customer's computer for review and implementation. The audit recommendations are based on the customers' answers to the questions and their actual energy consumption.

#### ***Residential Computer-Assisted Energy Audit (RCS)***

A conservation program originally developed in response to the Energy Policy Act (1978) and adopted by Florida under Chapter 366.82(5), Florida Statutes (F.S.), and Rule 25-17.003, F.A.C. This program is offered to all residential customers. Savings are achieved by increasing residential customer awareness of the energy use in personal residences. Savings are dependent on customers implementing conservation measures and practices. The audit is performed by a trained residential analyst who collects specific data about the structure of the home and the

customer's energy usage patterns. Using Energy Gauge software, the analyst will simulate different conservation measures and practices on the customer's residence to identify potential savings that can be achieved.

Analysts identify, note and recommend only those conservation measures and practices that apply to the specific residence. The following information is then provided on the applicable conservation measures and practices:

1. Estimated cost for contractor installation
2. Estimated cost for do-it-yourself installation
3. Payback period for customer investment
4. Estimated first-year energy savings

Audit findings are kept on file with the utility for three years. The audit charge to the customer is \$15.00.

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

The Residential Ceiling Insulation Program is designed to encourage customers to make cost-effective improvements to existing residences. The goal is to offer customer rebates for installing ceiling insulation to help reduce their energy consumption while reducing TECO's weather sensitive peak demand. Ceiling insulation is designed to reduce demand and energy by decreasing the load on residential air conditioning and heating equipment. Qualifying residential structures are eligible for a rebate based upon the total square footage of insulation installed over conditioned space. Customers will receive a certificate that is used as partial payment for the ceiling insulation installed.

- The Residential Ceiling Insulation rebate is set at \$0.14 per square foot of qualifying insulation.

#### ***Residential Duct Repair***

This program eliminates or reduces areas of HVAC air distribution losses by sealing and repairing the air distribution system (ADS). The ADS is defined as the air handler, air ducts, return plenums, supply plenums and any connecting structure. Customers call TECO to request appointments for duct repair and an HVAC contractor appointed by TECO will seal and repair all accessible components of the ADS in the residence. TECO's rebate is included in the payment to the participating contractor performing ADS repairs.

- The Residential Duct Repair rebate is set at \$165 per HVAC system that has its ADS repaired.

#### ***Residential Electronically Commutated Motor (ECM) Program***

The Residential ECM Program is designed to encourage customers to make cost-effective improvements to existing residences. The goal is to offer customer rebates for installing an ECM to help reduce their energy consumption and reduce TECO's peak demand. ECM motors are

designed to help residential customers improve the overall efficiency of their existing HVAC equipment by replacing the current induction motor in the air-handler with an ECM.

- The Residential ECM Program Rebate is set at \$115 for each air handler motor replaced with a qualifying ECM.

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

The Energy Education, Awareness and Agency Outreach Program is comprised of distinct initiatives:

#### ***Public Energy Education and Awareness***

This portion of the program is designed to establish opportunities for engaging groups of customers and students in energy-efficiency related discussions in an organized setting. In order to create an awareness of this offering, the company will establish participation avenues through its Speakers' Bureau and Community Relations teams.

Additionally, this program will focus on opportunities to promote energy efficiency education through local school systems. Students will be educated on ways to become active participants in saving energy at home and at school through the use of theater, educational modules, videos or other learning tools that support Sunshine State Standards and are approved by school authorities. Participants will be provided with an energy efficiency kit containing the following energy saving devices and supporting information appropriate for the audience.

- CFLs: This provides four CFLs to replace incandescent bulbs with similar lumen output.
- Water Heater Temperature Check and Adjustment: This provides a temperature check of the water heater temperature setting and informs the customer of the possibility for turn-down adjustment.
- Low Flow Faucet Aerator: This provides two low flow faucet aerators to reduce the amount of hot water used.
- Wall Plate Thermometer: This provides one wall plate thermometer to check the accuracy of the installed thermostat.
- Air Filter Whistle: This provides one filter whistle to help remind to clean or change filter monthly.
- Energy Savings Education Handout: This provides the content and directions for installation for all of the measures within the kit. The handout also includes several no-cost energy conservation tips that provide an immediate payback.

#### ***Agency Outreach***

This portion of the program will allow for delivery of energy efficiency kits that will help educate agency clients on practices that help to reduce energy consumption. The suggested



practices will mirror the recommendations provided to customers who participate in a free energy audit.

Customer eligibility is confirmed through the utilization of census data to identify eligible customer geographic regions of low income customers or by referrals through direct customer contact, distributed literature and communication through key community contacts or local community assistance agencies which serve low income households.

As a means to encourage adoption of the recommendations, agency clients who are seeking energy-related assistance will be provided with the same energy efficiency kit above.

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

This program utilizes a rebate to encourage the construction of new homes to meet the requirements to achieve the ENERGY STAR certified new home label. By receiving this certificate, the new home will use less energy and demand which will help reduce the growth of TECO's peak demand.

- The ENERGY STAR for New Homes rebate is set at \$850 for a qualifying home receiving the ENERGY STAR Certificate.

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

The Residential Heating and Cooling Program is designed to encourage customers to make cost-effective improvements to existing residences. The goal is to offer customer rebates for installing high efficiency heating and cooling systems to help reduce their energy consumption while reducing TECO's weather sensitive peak demand. High efficiency heating and cooling systems require less demand and energy as compared to standard systems. This program will rebate residential customers that install a qualifying air conditioning system.

- The Residential Heating and Cooling rebate is set at \$135 per qualifying air conditioning system.

### ***Neighborhood Weatherization***

The Neighborhood Weatherization Program is designed to assist low income families in reducing their energy usage. The goal of the program is to provide and install a package of conservation measures at no cost to the customer.

Customer eligibility is confirmed through the utilization of census data to identify eligible customer geographic regions of low income customers or by referrals through direct customer contact, distributed literature and communication through key community contacts or local community assistance agencies which serve low income households. Local residents of these qualifying geographic regions will have the opportunity enroll for participation in the program at no cost.

TECO will deliver the following applicable measures

- Duct Sealing: For qualified dwellings with a ducted central HVAC system, this will provide sealing of the ADS.

- Ceiling Insulation: For qualified dwellings where the existing ceiling insulation is below R-19, this will provide for an R-13 to be installed. Any home where roof pitch limits accessibility, a lower R-value may be installed.
- CFLs: This provides the resident with eight CFLs to replace incandescent bulbs with similar lumen output.
- Water Heater Wrap: This will furnish and install a water heater wrap for an electric water heater manufactured prior to 1996.
- Hot Water Pipe Insulation: This allows for the installation of hot water insulation on un-insulated pipes.
- Water Heater Temperature Check and Adjustment: This provides a temperature check of the water heater temperature setting and informs the customer of the possibility for turn-down adjustment.
- Low Flow Faucet Aerator: This allows for the installation of up to three low flow faucet aerators to reduce the amount of hot water used.
- Low Flow Showerhead: This allows for the installation of up to two low flow showerheads to reduce the amount of hot water used.
- Wall Plate Thermometer: This will provide for the installation of one wall plate thermometer per home to check the accuracy of the installed thermostat.
- Refrigerator Coil Cleaning and Brush: This will provide for the cleaning of the refrigerator coil. The brush will be provided to the customer for future cleaning.
- HVAC Weather Stripping Kit: This will provide for the installation of a weather stripping kit for window/wall HVAC units. The customer will receive or have installed up to two kits.
- Air Filter Whistle: This provides each homeowner with a filter whistle to help remind them to clean or change filter monthly.
- Weatherization Measures: This portion of the program will provide weather stripping, caulk and foam sealant which will be used to reduce or stop air infiltration around doors, windows, attic entries and where pipes enter the home. Reducing air infiltration is vital to saving energy and improving comfort.
- Energy Savings Education Handout: This provides each homeowner with the content and directions for installation for some of the measures within the kit. The handout also includes several no-cost energy conservation tips that provide an immediate payback.

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

The company's Energy Planner program relies on a multi-tiered rate structure combined with price signals conveyed to participating customers during the day. This price information is designed to encourage customers to make behavioral or equipment usage changes to their energy consumption thereby achieving the desired high cost period load reduction to assist in meeting system peak.

Price information from the utility is used by the customer to program a "smart" thermostat into preset actions based on the level of pricing. Equipment may be turned on, turned off or changed to a different temperature setting automatically by the smart thermostat or manually by the customer through the smart thermostat in response to either the multi-tiered rates or critical price signals.

TECO will install a communication device along with a "smart" thermostat at the customer's home used to control the operation of selected appliances such as space heating, air conditioning, water heating and pool pumps. Customers will be able to program the operation of this equipment and alter their energy consumption based the price tiers occurring at specific times of the day and year.

- The Energy Planner program incentive is approximately \$103/customer annually.

### ***Residential Wall Insulation***

The Residential Wall Insulation Program is designed to install wall insulation to help reduce their energy consumption. Wall insulation is designed to reduce demand and energy by decreasing the load on residential air conditioning and heating equipment. Qualifying residential structures are eligible for a rebate based upon the total square footage of insulation installed in exterior walls adjacent to conditioned spaces. Customers will receive a certificate that is used as partial payment for the wall insulation installed.

- The Residential Wall Insulation rebate is set at \$0.11 per square foot of qualifying insulation.

### ***Residential Window Replacement***

The Residential Window Replacement Program offers customer rebates for replacing existing external windows with high performance windows that help reduce their energy consumption. High performance windows are designed to reduce demand and energy by decreasing the solar heat gain into a residence and in turn, decrease the load on residential air conditioning equipment. Qualifying residential structures are eligible for a rebate based upon the total square footage of exterior windows replaced.

- The Residential Window Replacement rebate is set at \$2.20 per square foot of qualifying window replacement installed.

## **COMMERCIAL/INDUSTRIAL PROGRAMS:**

### ***Commercial/Industrial Audit (Free)***

The Commercial/Industrial Audit is designed to increase customer awareness of the energy use in their facilities. The savings are dependent upon the customer's implementation of conservation measures and practices recommended.

The audit is conducted by a trained commercial energy analyst who will perform at a minimum the following:

1. Identify, note and recommend only those conservation measures and practices that apply to the specific commercial or industrial facility.
2. Encourage customer and organization participation in available conservation programs in which the specific commercial or industrial facility will benefit.
3. Energy usage profiling and benchmarking showing the historical energy usage and forecasted usage with no changes.
4. Identify and communicate to the customer identified no-cost, low-cost and capital cost conservation measures and practices including those that have less than a two-year payback.

Recommendations are tailored to the specific commercial or industrial facility based upon the replacement of less efficient equipment and systems or modifications to operations to enhance the customer's overall efficiency. Recommendations are primarily standardized and encourage the customer to implement measures that, if cost-effective, move the customer beyond the efficiency level typically installed in the marketplace.

### ***Comprehensive Commercial/Industrial Audit (Paid)***

The Comprehensive Commercial/Industrial Audit is designed to increase customer awareness of the energy use in their facilities. The paid audit will involve monitoring specific equipment within a customer's facility to determine its electric usage with respect to the volume of use and time of operation. Based on the results, TECO will recommend conservation measure or practice changes to save energy and/or demand within the facility. The savings are dependent upon the customer's implementation of conservation measures and practices recommended.

The audit is conducted by a trained commercial energy analyst who will perform the following at a minimum:

1. Identify, note and recommend only those conservation measures and practices that apply to the specific commercial or industrial facility.
2. Encourage customer and organization participation in available conservation programs in which the specific commercial or industrial facility will benefit.

3. Energy usage profiling and benchmarking showing the historical energy usage and forecasted usage with no changes.
4. Set up energy and demand monitoring equipment on requested equipment.
5. Identify and communicate to the customer identified no-cost, low-cost and capital cost conservation measures and practices including those that have less than a two-year payback.
6. Provide a measurement and verification report showing the current usage and identifying the potential for energy and demand savings for the recommended conservation measures or practices recommended.

Recommendations are tailored to the specific commercial or industrial facility based upon the replacement of less efficient equipment and systems or modifications to operations to enhance the customer's overall efficiency. Recommendations are primarily standardized and encourage the customer to implement measures that, if cost-effective, move the customer beyond the efficiency level typically installed in the marketplace.

- TECO can charge \$15, \$45, or \$75 depending on rate schedule. TECO can charge more than this depending on the depth of monitoring required to perform the audit, time required for the audit, downloading and interpreting data, etc. This increased incremental cost is allowed by the Tariff due to this incremental testing cost. The cost upfront is discussed and agreed to with the facility or plant manager prior to the start of each paid audit.

#### ***Commercial Ceiling Insulation***

The Commercial Ceiling Insulation Program offers customer rebates for installing ceiling insulation to help reduce their energy consumption and demand. Ceiling insulation is designed to reduce demand and energy by decreasing the load on commercial/industrial air conditioning and heating equipment. Qualifying structures are eligible for a rebate based upon the total square footage of insulation installed over conditioned space. Certificates for participation will be issued through energy audits or by direct evaluation of the existing building envelope.

- The Commercial Ceiling Insulation rebate is \$0.15 per square foot of installed qualifying insulation.

#### ***Commercial Chiller***

The Commercial Chiller Program offers customer rebates for installing high efficiency electric water-cooled chillers and electric air cooled chillers that exceed Florida's Building Code and minimum product manufacturing standards in commercial/industrial buildings or processes to help reduce their energy consumption and demand. High efficiency chillers reduce demand and energy by decreasing the load on air conditioning and heating equipment or process cooling equipment during weather sensitive peak demand times.

- The Commercial Chiller rebate is \$146 per kW reduced over the baseline.

### ***Conservation Value***

The Conservation Value Program is designed to encourage commercial/industrial customers to make cost-effective improvements to existing facilities. This rebate program is designed to recognize those investments in demand shifting or demand reduction measures that reduce TECO's peak demand. Measures funded in this program will not be covered under any other TECO commercial/industrial conservation programs. Candidates are identified through energy audits or their engineering consultants can submit proposals for funding which offer demand and energy reduction during weather sensitive peak periods helping reduce TECO's peak demand.

- The Conservation Value Program has a maximum rebate of \$200 per kW reduced over the baseline.

### ***Cool Roof***

The Cool Roof Program offers customer rebates for installing a cool roof system above conditioned spaces to help reduce their energy consumption and demand. Cool roofs reduce the heat load transferred into a building or facility by reflecting some of the sun's energy which reduces the load on commercial/industrial air conditioning and cooling equipment. Qualifying structures are eligible for a rebate based upon the total square footage of cool roof PVC membrane installed over conditioned space.

- The Cool Roof program has a rebate of \$0.30 per square foot of installed qualifying cool roof PVC membrane.

### ***Commercial Cooling***

The Commercial Cooling Program offers customer rebates for installing high efficiency heating and cooling systems to help reduce their energy consumption and demand. High efficiency heating and cooling systems require less demand and energy as compared to standard systems.

- The Commercial Cooling rebate is \$11 per ton of qualifying air conditioning.

### ***Demand Response***

TECO's Commercial Demand Response Program is a conservation and load management program intended to reduce summer and winter demand peaks. The company will contract for a turn-key program that will induce commercial/industrial customers to reduce their demand for electricity in response to market signals. Reductions will be achieved through a mix of emergency backup generation, energy management systems, raising cooling set-points and turning off or dimming lights, signage, etc.

TECO will contract with a demand response vendor on an as needed basis for additional MW of load reduction. Vendor will market program to potential customers and secure participants. In addition, vendor will audit the customer's facility to identify equipment to be utilized in demand reduction, install automated controls and provide participant with load tracking software for the customer's use. Vendor will pay customers on a dollar per kW – month basis.

- The vendor pays the customer \$4.75 per kW based upon their metered nomination. In addition to the kW component, when a load event is called upon the demand response customers will also receive \$125 per MWh shed during the actual event.

### ***Commercial Duct Repair***

The Commercial Duct Repair Program offers rebates for sealing existing facility's duct system to reduce demand and energy by decreasing the load on commercial HVAC equipment. This program eliminates or reduces areas of HVAC air distribution losses by sealing and repairing the ADS.

Customers call TECO to request appointments for duct repair and a HVAC contractor appointed by TECO will seal and repair all accessible components of the ADS in the facility. TECO's rebate is included in the payment to the participating contractor performing ADS repairs.

- The Commercial Duct Repair rebate is \$150 per qualifying ADS.

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

The Commercial ECM Program offers rebates for installing electronically commutated motors in existing air conditioning and refrigeration equipment. The program is aimed at reducing energy and the growth of weather sensitive peak demand by encouraging customers to replace current induction motors with high efficiency ECM that exceed minimum product manufacturing standards.

- The ECM rebate is \$200 per qualifying HP of ECM.

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

The Industrial Load Management Program is a load management program for large industrial customers with interruptible loads of 500 kW or greater. The program was approved by the FPSC in Docket No. 990037-EI, FPSC Order No. PSC-99-1778-FOF-EI, issued September 10, 1999. Assessments for customer participation are conducted every six months.

### ***Lighting Conditioned Space***

The Lighting Conditioned Space Program offers customer rebates for installing energy efficient lighting technology and systems within conditioned space to help reduce their energy consumption and demand.

- The Lighting Conditioned Space rebate is \$0.148 per Watt reduction.

### ***Lighting Non-Conditioned Space***

The Lighting Non-Conditioned Space Program offers customer rebates for installing energy efficient outdoor lighting technology and systems or in non-conditioned spaces to help reduce their energy consumption and demand.

- The Lighting Non-Conditioned Space rebate is \$0.075 per Watt reduction.

### ***Lighting Occupancy Sensors***

The Lighting Occupancy Sensors Program offers customer rebates for installing lighting occupancy sensors to efficiently control lighting systems to help reduce their energy consumption and demand.

- The Occupancy Sensor rebate is \$20 per qualifying occupancy sensor.

### ***Commercial Load Management***

The Commercial Load Management Program offers customer incentives for allowing the installation and control of load management control equipment on specific technologies to reduce TECO's weather sensitive peak demand. Customers that participate in this program choose whether to have the technology controlled either interrupted for the entire control period or cycled during the control period. TECO will provide a monthly incentive credit to customers participating in this program.

- Incentive: Cyclic control receives \$3.00 per kW demand reduction per month during the summer; extended control receives \$3.50 per kW demand reduction per month annually. Both incentives are applied to the customer's monthly bill.

### ***Refrigeration Anti-Condensate Control***

The Refrigeration Anti-Condensate Control Program offers customer rebates for installing energy efficient anti-condensate control technology for their refrigerated door heaters to help reduce their energy consumption and demand and reducing TECO's peak demand.

- The Refrigeration Anti-Condensate Control rebate is \$0.35 per linear foot of heat element that is controlled by qualifying anti-condensate control.

### ***Standby Generator***

The Standby Generator Program is designed to utilize the emergency generation capacity of commercial/industrial facilities in order to reduce weather sensitive peak demand. TECO provides the participating customers a 30-minute notice that their generation will be required. This allows customers time to start generators and arrange for orderly transfer of load. TECO meters and issues monthly credits for that portion of the generator's output that could serve normal building load after the notification time. Normal building load is defined as load (type, amount and time duration) that would have been served by TECO if the emergency generator did not operate. Under no circumstances will the generator deliver power to TECO's grid. Under the Environmental Protection Agency's rules, TECO classifies the Standby Generator Program as a nonemergency program.

- The Standby Generator rebate is \$29,995 annually based upon \$4.75 per qualifying kW transferred.

### ***Thermal Energy Storage (TES)***

The Commercial TES Program offers customer rebates for installing off-peak air conditioning systems to help reduce their demand while reducing TECO's weather sensitive peak demand.

- The Thermal Energy Storage rebate is \$200 per kW transferred.

### ***Commercial Wall Insulation***

The Commercial Wall Insulation Program offers customer rebates for installing wall insulation to help reduce their energy consumption and demand. Wall insulation is designed to reduce demand and energy by decreasing the load on commercial/industrial HVAC equipment. Qualifying structures are eligible for a rebate based upon the total square footage of insulation



installed in exterior walls adjacent to conditioned spaces. Certificates for participation will be issued through energy audits or by direct evaluation of the current building envelope.

- The Commercial Wall Insulation rebate is \$0.12 per square foot of installed qualifying insulation.

***Commercial Water Heating***

The Commercial Water Heating Program offers customer rebates for installing energy efficient water heating systems to help reduce their energy consumption and demand and reducing TECO's peak demand.

- The Commercial Water Heating rebate is \$0.025 per Btu of qualifying water heating equipment.

## **OTHER PROGRAMS:**

### ***Cogeneration***

TECO's Cogeneration program manages functions related to coordination with Qualifying Facilities (QFs) including negotiations, agreements and informational requests; functions related to governmental, regulatory and legislative bodies; research, development, data acquisition and analysis; economic evaluations of existing and proposed QFs as well as the preparation of TECO's Annual Twenty-Year Cogeneration Forecast.

TECO's Cogeneration team leads TECO's involvement with prospective cogeneration projects that may be developed within the company's retail service area. This involvement includes developing and providing interconnection cost estimates, determining appropriate relaying schemes, establishing operation and maintenance procedures and negotiating purchase power and transmission service agreement when appropriate.

### ***Conservation Research and Development (R&D)***

This program is in response to Rule 25-17.001 (5) (f), F.A.C., that requires aggressive R&D projects be ". . . an ongoing part of the practice of every well managed utility's programs." It is also in support of FPSC Order No. 22176 dated November 14, 1989, requiring utilities to ". . . pursue research, development, and demonstration projects designed to promote energy efficiency and conservation." R&D activity will be conducted on proposed measures to determine the impact to the company and its ratepayers and may occur at customer premises, TECO facilities or at independent test sites. TECO will report program progress through the annual ECCR True-Up filing.

### ***Renewable Energy Program***

This program provides customers with the option to purchase 200 kWh blocks of renewable energy for five dollars per block to assist in the delivery of renewable energy to the company's grid system. This specific effort provides funding for renewable energy procurement, program administration, evaluation and market research.

Renewable energy participants will be served from the existing electrical system. Renewable energy may not be delivered to the customer, but will displace energy that would have otherwise been produced from traditional fossil fuels. TECO will report program progress through the annual ECCR True-up and Projection Filings.

## **PILOT PROGRAMS:**

### ***Renewable Energy Systems Initiative***

This initiative is a five-year renewable energy pilot program that uses rebates and incentives to encourage the following: 1) the installation of PV and SWH technologies on existing and new residential and commercial premises; 2) the installation of PV on emergency shelter schools coupled with an educational component for teachers and students; and 3) the installation of SWH on low income housing done in partnership with local non-profit building organizations.

The program will have annual funding capped at \$1.53 million. The projected annual allocation of the funding will be 69 percent for PV installations on residential and commercial premises, ten-percent for school PV, 11 percent for SWH installations, and ten-percent for overall program administration. With an annual funding cap in place, the company will use a reservation process to manage fund allocations. This will allow for any unused funds in a specific area to be reallocated to other components of the overall program so as to maximize the installation of various renewable technologies. This program will be offered until the end of 2015, at which time the pilot program will retire.

### ***Residential and Commercial PV***

This component of the program will provide incentives for the installation of PV on residential and commercial premises. The allocation of funds for this endeavor will be split at 60 percent for residential and 40 percent for commercial. Participants must agree to have the system interconnected to the grid with an interconnection agreement in place once installation has occurred.

- Residential & Commercial PV Systems are fixed at \$2 per Watt incentive, with a maximum incentive of \$20,000

### ***Residential SWH***

This component of the program will provide incentives for the installation of SWH on residential premises. The projected allocation of funds for this endeavor will be split at a minimum of 80 percent for existing residential premises and a maximum of 20 percent for new residential premises.

- Residential Solar Water Heaters receive a rebate of \$1,000 per unit.

### ***School PV***

This component of the program will provide capital funding for the installation of PV on emergency shelter schools and will be coupled with an educational component for teachers and students to evaluate and understand the performance and benefits of PV. TECO will explore partnership opportunities through the Florida Solar Energy Center's EShelter program to enhance the effectiveness and deployment of resources. The company anticipates installing one 10 kW system per year and maintaining each system for a five-year period. These five systems will allow for at least one emergency shelter school in each county of the company's service area to have PV as a backup source of power during emergencies.

- School PV receives a rebate of \$150,000 per unit.

***Low Income SWH***

This component of the program will provide for the installation of SWH systems on low income housing done in partnership with local non-profit building organizations. Based on historical building activity from these organizations, the company anticipates five installations per year for the five-year period.

- Low Income Solar Water Heaters receive a rebate of \$5,000 per unit.