

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: April 21, 2017

TO: Office of Commission Clerk (Stauffer)

FROM: Division of Engineering (Thompson) *IT POE TJS*
Division of Economics (Whitchurch) *WBC*
Office of the General Counsel (Murphy) *CM THT*

RE: Docket No. 170014-EI – Petition for approval of ENERGY STAR program for new multi-family residences, by Tampa Electric Company.

AGENDA: 05/04/17 – Regular Agenda – Proposed Agency Action – Interested Persons May Participate

COMMISSIONERS ASSIGNED: All Commissioners

PREHEARING OFFICER: Administrative

CRITICAL DATES: None

SPECIAL INSTRUCTIONS: None

Case Background

On August 11, 2015, the Commission entered an order approving Tampa Electric Company's (TECO or Utility) Demand-Side Management (DSM) Plan.¹ The plan included TECO's ENERGY STAR Program for New Homes (New Homes Program) that offers an \$850 rebate to encourage builders to construct new single-family homes to meet the requirements to achieve the ENERGY STAR certified new home label. By meeting the ENERGY STAR requirements, the new home uses less energy and demand which helps reduce the growth of TECO's peak demand. This program began in November 2015, and in 2016, the New Homes Program produced savings of 1,059,239 kWh at the generator and contributed towards TECO's conservation goals set by the Commission.

¹Order No. PSC-15-0323-PAA-EG, issued August 11, 2015, in Docket No. 150081-EG, *In re: Petition for Approval of Demand-Side Management Plan of Tampa Electric Company*.

Docket No. 170014-EI

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On January 10, 2017, TECO petitioned the Commission for approval of its ENERGY STAR Program for New Multi-Family Residences (Multi-Family Program). The Multi-Family Program offers a \$325 rebate to builders of new multi-family residences, being planned for construction in TECO's service area, to encourage construction of multi-family residences that meet the ENERGY STAR requirements. By meeting these requirements, the new residence will use less energy and demand, helping to reduce the growth of TECO's peak demand and helping future tenants become more energy focused and save on their electric bills in the process.

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: Should the Commission approve TECO's petition for approval of its ENERGY STAR Program for New Multi-Family Residences?

Recommendation: Yes. The Multi-Family Program advances the policy objectives of FEECA, is directly monitorable and yields measurable results, and is cost-effective. The Program Participation Standards were submitted concurrently with the program description. Staff has reviewed these standards and believes that they are sufficient. Therefore, staff recommends that costs associated with the Multi-Family Program are eligible for cost recovery through TECO's Energy Conservation Cost Recovery factor. (Thompson)

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.² Staff has reviewed TECO's petition for approval of its Multi-Family Program and it appears to be consistent with these criteria.

Program Description

TECO requests the Commission's approval of a new residential conservation program offering rebates to the builders of multi-family residential units if they adopt ENERGY STAR requirements. Upon receiving inquiries regarding the possibility of adopting a similar ENERGY STAR Program for multi-family residences, TECO conducted cost-effectiveness tests which showed that this program would be cost-effective if the rebate is set at \$325 for each multi-family unit that receives an ENERGY STAR certification. Similar to the New Homes Program, this is a residential new construction conservation program designed to reduce the growth of peak demand and energy. The proposed program differs in that it is targeted to the residential new construction apartment and condominium market. The Utility estimates its annual number of program participants for the period 2017 through 2024 to range from 600 through 1,000 as shown in Table 1-1 below. The \$325 rebate is used as an incentive to encourage the construction of new multi-family residences that meet the requirements to achieve the ENERGY STAR Certified Apartments and Condominiums Label.

²Order No. PSC-15-0323-PAA-EG, issued August 11, 2015, in Docket No. 150081-EG, *In re: Petition for Approval of Demand-Side Management Plan of Tampa Electric Company*, p. 2.

**Table 1-1
 Estimated Program Participation**

Year	Total Number of Customers	Total Number of Eligible Customers	Annual Number of Program Participants	Cumulative Number of Program Participants
2017	201,074	3,820	600	600
2018	204,894	3,893	600	1,200
2019	208,787	3,967	800	2,000
2020	212,754	4,042	800	2,800
2021	216,797	4,119	800	3,600
2022	220,916	4,197	1,000	4,600
2023	225,113	4,277	1,000	5,600
2024	229,390	4,358	1,000	6,600

Source: TECO's petition for approval of its Multi-Family Program.³

To earn the ENERGY STAR certification, a building must meet the qualifications outlined in the ENERGY STAR Multifamily High Rise National Performance Path Requirements. Based on these requirements, a building must meet the Performance Target, which is 15 percent energy cost savings over the ASHRAE 90.1 Standard 2010 based on the building codes of the State of Florida. Standards to help meet this target include providing ENERGY STAR certified heating and cooling equipment, building envelope, ventilation and infiltration, domestic water heating, and lighting. In addition, ENERGY STAR certified appliances such as refrigerators, dishwashers, ceiling fans, and clothes washers are included. TECO states that many multi-family residences are being planned for construction in its service area. Therefore, presenting an opportunity for builders to participate in its Multi-Family Program gives the Utility an opportunity to reduce its electric peak demand and residents the opportunity to become more energy focused and save on their electricity bills.

Program Analysis Regarding FEECA Objectives

FEECA emphasizes reducing the growth rate of peak demand and reducing and controlling the growth rates of electricity consumption. The Multi-Family Program encourages builders to participate by incentivizing them with a \$325 rebate. Also, a component of FEECA's goal is addressing the accessibility of conservation programs. The Multi-Family Program will allow new multi-family residences in TECO's service area to participate in savings as well. By meeting the ENERGY STAR requirements, the new residence will use less energy and demand which would help reduce the growth of TECO's electric peak demand. Therefore, staff recommends that the Multi-Family Program aligns with FEECA's goal of conservation.

Program Monitoring and Evaluation

TECO plans to monitor and evaluate its Multi-Family Program consistent with the monitoring and evaluation standards for the New Homes Program approved in Order No. PSC-15-0323-PAA-EG and Commission Rules, such as Rule 25-17.003(10)(b), Florida Administrative Code,

³Document No. 00301-17, dated January 10, 2017, in Docket No. 170014-EI, p.17.

(F.A.C.). This Rule requires post-audit inspections of 10 percent of each type of energy conservation measure installed as a result of the Utility’s recommendation. To estimate savings, TECO utilized the energy and economic software program EnergyGauge from the University of Central Florida’s Solar Energy Center. First, TECO modeled a new multi-family residence that only satisfied the requirements of the Florida Building Code. It then utilized the checklists and guidance from the ENERGY STAR Multi-Family Program to model the facility to meet those requirements. This process is consistent with the model used for the New Homes Program. The estimated savings per customer participant are shown in Table 1-2 below.

**Table 1-2
 Estimated Program Savings per Participant**

Summer Demand (kW)	Winter Demand (kW)	Annual Energy (kWh)
0.361	0.242	1,239

Source: TECO’s petition for approval of its Multi-Family Program.⁴

Cost-Effectiveness Review

Pursuant to Rule 25-17.008, F.A.C., TECO provided a cost-effectiveness analysis of the program using the Participant Test, the Rate Impact Measure (RIM) Test, and the Total Resource Cost (TRC) Test. The Participant Test analyzes the cost and benefits from a program participant’s point of view. The RIM Test ensures that all ratepayers will benefit from a proposed DSM program, not just the program participants. The TRC Test measures the overall economic efficiency of a DSM Program from a social perspective. Each test takes the ratio of benefit and cost and the program is determined to be cost-effective if that ratio is greater than one. Staff has reviewed the assumptions associated with TECO’s program savings and recommends that they are reasonable. The results for the New Homes Program from Order No. PSC-15-0323-PAA-EG and the Multi-Family Program are compared in Table 1-3 below.

**Table 1-3
 Cost-Effectiveness Test Results**

Program	Participant Test	RIM Test	TRC Test
New Homes	1.82	1.05	1.19
Multi-Family	1.51	1.01	0.97

Source: Order No. PSC-15-0323-PAA-EG⁵; TECO’s petition for approval of its Multi-Family Program.⁶

Based on these results, the Multi-Family Program passed the Participant and RIM Tests and failed the TRC Test by a minimal amount. While a higher TRC value would be more suitable, the Participant and RIM Tests show that the Utility, participants, and the general body of

⁴Document No. 00301-17, dated January 10, 2017, in Docket No. 170014-EI, p. 8.

⁵Order No. PSC-15-0323-PAA-EG, issued August 11, 2015, in Docket No. 150081-EG, *In re: Petition for Approval of Demand-Side Management Plan of Tampa Electric Company*, p. 7.

⁶Document No. 00301-17, dated January 10, 2017, in Docket No. 170014-EI, pp. 10, 12.

ratepayers will benefit from the implementation of this program. Therefore, staff believes that the program is beneficial in meeting the goals of FEECA.

Conclusion

TECO's Multi-Family Program advances the policy objectives of FEECA and its implementing rules by encouraging builders' participation with rebates which, in turn, would promote residences that use less energy and demand and would help reduce the growth of TECO's peak demand. The program is directly monitorable and yields measurable results. Also, the program is cost-effective. Based on staff's review of this program, staff recommends that the Commission approve TECO's petition for approval of its ENERGY STAR Program for New Multi-Family Residences.

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 and the docket should be closed. (Murphy)

Staff Analysis: 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 and the docket should be closed.