

State of Florida



Public Service Commission

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TALLAHASSEE, FLORIDA 32399-0850

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

DATE: April 24, 2017

TO: Office of Commission Clerk (Stauffer)

FROM: Division of Engineering (Thompson) *TPoE*
Division of Economics (Whitchurch) *WPC*
Office of the General Counsel (Murphy, Cuello) *SAC CM JSH TWT*

RE: Docket No. 170015-EI – Petition to Amend Energy Education, Awareness and Agency Outreach Program, 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 issued an order approving Tampa Electric Company's (TECO or Utility) Demand-Side Management (DSM) Plan.¹ The plan included the Utility's Energy Education, Awareness and Agency Outreach Program (Education Program), which had an original start date of March 2010. The Education Program includes three conservation initiatives: public energy education, energy awareness, and agency outreach. The energy education and awareness initiatives are aimed toward engaging groups of customers and students in discussions related to energy efficiency. The agency outreach initiative allows for delivery of

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

energy efficiency kits that will help educate ratepayers on practices that help reduce energy consumption. These kits contain the following: (1) four compact fluorescent lamps; (2) two low-flow faucet aerators; (3) an air filter whistle to remind residents to clean or change their filter monthly; (4) a hot water temperature card to check the water heater's temperature setting for opportunity for turn down; (5) a wall plate thermometer to check the accuracy of their existing thermostat setting; and (6) no-cost energy efficiency recommendations that can be immediately adopted. In 2016, these kits produced an estimated annual energy savings of 166,491 kilowatt-hours (kWh) at the generator and contributed towards TECO's conservation goals set by the Commission.

On January 10, 2017, TECO filed a petition to amend its Education Program to offer energy education to select high school students on electric vehicles (EVs) including ownership considerations, operation, and maintenance. The Utility proposed to provide six EVs, three charger stations, and other supplemental supplies to each participating high school as a part of the driver's education program. The estimated total cost for this amendment was approximately \$1.8 million through the year 2020.

On April 10, 2017, staff held an informal meeting with the Utility to discuss the proposed amendment to its Education Program. During the meeting, staff expressed its concerns that the proposed amendment was initially a load building program that contained a relatively large amount of capital costs which are not normally associated with an education program. In addition, the Utility provided additional information regarding the proposed amendment and discussed a conservation Research & Development (R&D) project to assert the benefits of EVs that is currently in the works.

On April 19, 2017, the Utility filed a revised petition for its proposed amendment. This revision substantially reduced the capital cost previously associated with the proposed amendment to the Education Program. As a part of the revision, the Utility reduced the number of EVs and charging stations to one at each school, and will only fund the incremental costs to lease or purchase the EV for each school's driver's education program. The estimated total cost of the revised amendment to the Education Program is \$439,800 through the year 2020. The Utility has requested a decision by May 4, 2017, so that the amended program can be implemented by the fall 2017 school year.

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 revised petition to amend its Energy Education, Awareness and Agency Outreach Program?

Recommendation: Yes. The proposed amendment to the Education Program will educate future ratepayers regarding the impact of EVs on the electrical system and the importance of reducing the total energy usage consumed while owning an EV. 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 the costs associated with the amended Education Program are eligible for cost recovery through the Energy Conservation Cost Recovery (ECCR) clause.

While the amendment to the Education Program advances the policy objectives of FEECA and its implementing rules, the provision of an EV will initially increase overall energy consumption. The potential for future energy savings resulting from the proposed amendment to the Education Program is speculative and should be carefully considered before expansion of this program or similar programs. (Thompson, Whitchurch)

Staff Analysis: The criteria used by the Commission 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 However, education programs are behavioral programs and, therefore, it may not be possible for the program to pass the Commission's cost-effectiveness tests due to the difficulty of measuring the savings. Staff reviewed TECO's revised petition to amend its Education Program and associated Program Participation Standards and recommends that the proposed amendment meets the criteria of an education program.

Program Description

TECO is proposing to amend its Education Program to offer energy education on the operation, maintenance, and ownership considerations of EVs to select high school students within its service territory. The Utility will partner with a limited number of high schools' driver's education training programs (one in the fall semester of 2017, expanding to a maximum of five through 2020). In its petition, TECO states that:

This new aspect of the company's program will offer students the opportunity to learn: the proper driving skills needed to maximize energy efficient driving with EV; types, characteristics and operations of different EV charging technologies; considerations of EV ownership which will help reduce the anxiety of maintaining and operating an EV; about electric rates and when charging the EV

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

is the least expensive; and the importance of reducing the total energy usage consumed while owning an EV.³

TECO originally proposed to provide six EVs, three charger stations, and other supplemental supplies to each participating high school as a part of the driver's education program. On April 19, 2017, the Utility filed a revised petition that substantially reduced the capital cost previously associated with the proposed amendment to the Education Program. As a part of the revision, the Utility reduced the number of EVs and charging stations to one at each school, and will only fund the incremental costs to lease or purchase the EV for each school's driver's education program. The Utility seeks to recover the incremental costs, above the cost of a traditional gasoline-fueled vehicle, necessary to lease or purchase one EV and the total cost to purchase and install one charging station. This revision substantially reduced the cost of the amendment to the minimum level required to fully implement the proposed amended Education Program. The Utility estimates that the amended program will cost approximately \$439,000 through the year 2020. The Program Participation Standards were submitted concurrently with the program description.

Program Advancement of FEECA Objectives

The Utility states in paragraph 3 of its amended petition that the amended program is:

. . . consistent with the Commission's past practice of focusing on energy education and making customers aware of energy efficient technologies while expanding it to place emphasis on decreasing the energy consumption from the resultant use of an EV as well as educating the driver when to charge the EV to minimize any concurrent peak demand impacts to the company.⁴

Education programs seek to inform ratepayers about the impact of electric consuming devices and appliances on the electric system, their role as consumers of electricity, and behaviors or actions that could help conserve energy or reduce peak demand. The Utility's revised petition addresses this by providing education associated with EVs and the associated components discussed above. While staff has some concerns regarding the potential load building role of EVs as discussed later in this recommendation, providing general information regarding the impact of EVs on the electric system and efficient use of appliances is consistent with the policy objectives of the FEECA.

Program Cost

While the costs of implementing the revised proposed amendments to the Education Program appear to include more capital items than other educational programs, TECO's revised petition seeks to minimize the capital needed for implementation of its Education Program. As shown in Table 1-1 below, of the incremental costs of the amended program, 26.3 percent is allocated to educational purposes. Capital projects and their maintenance make up 57.5 percent of the proposed amended program's incremental costs which includes the lease of EVs, installation of chargers, and annual inspections.

³Document No. 04295-17, dated April 19, 2017, in Docket No. 170015-EI, p. 2.

⁴Document No. 04295-17, dated April 19, 2017, in Docket No. 170015-EI, p. 2.

**Table 1-1
 Amended Program Cost Breakdown**

	2017	2018	2019	2020	Total	% of Grand Total
Electric Vehicles	\$3,000	\$18,000	\$24,000	\$24,000	\$69,000	15.7%
Charger	\$8,000	\$32,000	\$0	\$0	\$40,000	9.1%
Charger Installation	\$27,000	\$108,000	\$0	\$0	\$135,000	30.7%
Charger Inspections	\$0	\$800	\$4,000	\$4,000	\$8,800	2.0%
Program Manager	\$10,000	\$15,000	\$15,000	\$15,000	\$55,000	12.5%
Materials	\$8,000	\$16,000	\$16,000	\$16,000	\$56,000	12.7%
Program Curriculum	\$60,000	\$0	\$0	\$0	\$60,000	13.6%
Advertising	\$4,000	\$4,000	\$4,000	\$4,000	\$16,000	3.6%
Annual Total	\$120,000	\$193,800	\$63,000	\$63,000		
Projected Grand Total					\$439,800	100%

Source: Staff's Analysis, TECO's revised petition to amend its Education Program.⁵

At the April 10, 2017, informal meeting with staff, the Utility stated that it expects approximately 350 program participants for the first year and 1,750 program participants each year thereafter for a total of 5,600 drivers over three years. Given the projected \$439,800 in total costs, this equates to a cost of approximately \$79 per participating student. By comparison, the Utility's projected 2016 costs for its existing Education Program was \$75,632,⁶ which equates to approximately \$99 per energy kit provided.

Also at the informal meeting with staff, the Utility stated that it intends to pursue a partnership with an EV manufacturing company, after the first year of the program, in hopes that the capital costs of the EVs could be eliminated. Staff encourages the Utility to pursue these partnerships in order to reduce ratepayer expenses while maintaining the amended Education Program.

Staff agrees that educating ratepayers on energy efficient technologies and energy conservation is important, but notes that the amendment to the Education Program may result in load building and may increase overall energy consumption. The potential for future energy savings resulting from the proposed amendment is speculative and should be carefully considered before expansion of this program or similar programs.

Program Monitoring and Evaluation

In order to monitor the effectiveness of the proposed amended program, TECO states, in response to Staff's First Data Request, that it plans regular collaboration with the schools, teachers and students during the amended program. It also plans, as part of the curriculum, to conduct surveys of both the teachers and students.⁷ As the Utility does not expect annual energy

⁵Document No. 04295-17, dated April 19, 2017, in Docket No. 170015-EI, p.3.

⁶Document No. 06858-16, dated August 19, 2016, in Docket No. 160002-EG, p. 33.

⁷Document No. 03664-17, dated March 17, 2017, in Docket No. 170015-EI, Response No. 4.

consumption savings immediately with the amended program, no verification of savings data would be necessary.

Cost-Effectiveness Review

As stated above, there are no demand or energy savings associated with the proposed amendment to the Education Program. As an educational program, it may not be possible for the program to pass the Commission's cost-effectiveness tests due to the difficulty of measuring the results. The current program passed the Total Resource Cost (TRC) and Participant Tests and complied with the requirements to assist and educate low-income customers. The current program failed the Rate Impact Measure (RIM) Test but includes minimal costs associated with energy efficiency kits. Upon request, TECO provided a cost-effectiveness analysis of the proposed amended program which showed a reduction in all three cost-effectiveness tests but still maintained passing results for the TRC and Participant Tests.

Conclusion

The proposed amendment to the Education Program will educate future ratepayers regarding the electrical system and the importance of reducing the total energy usage consumed while owning an EV. Therefore, the proposed amendment advances the policy objectives of FEECA and its implementing rules. Staff recommends that the costs associated with the Education Program are eligible for cost recovery through the ECCR clause. Staff has also reviewed the Program Participation Standards and recommends that they are sufficient and should be approved as well.

While the amendment to the Education Program advances the policy objectives of FEECA and its implementing rules, the provision of an EV will initially increase overall energy consumption. The potential for future energy savings resulting from the proposed amendment to the Education Program are speculative and should be carefully considered before expansion of this program or similar programs.

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, Cuello)

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.