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State of Florida



# Public Service Commission

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

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**DATE:** November 18, 2015

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

**FROM:** Division of Economics (Ollila, Guffey) *A.O. S.K.G. [initials]*  
Office of the General Counsel (Corbari) *[initials]*  
Office of Industry Development and Market Analysis (Clemence) *[initials]*

**RE:** Docket No. 150213-EI – Petition for approval of advanced meter program agreement, by Tampa Electric Company.

**AGENDA:** 12/03/15 – Regular Agenda – Tariff Filing – Interested Persons May Participate

**COMMISSIONERS ASSIGNED:** All Commissioners

**PREHEARING OFFICER:** Administrative

**CRITICAL DATES:** None

**SPECIAL INSTRUCTIONS:** None

## Case Background

*S (10)*  
On October 2, 2016, Tampa Electric Company (Tampa Electric or Company) filed a petition for approval of its voluntary Advanced Meter Program (AMP or program) agreement tariff. Residential Tampa Electric customers who own solar photovoltaic (PV) systems interconnected with Tampa Electric are eligible for this program.

In its petition, Tampa Electric requested that the Commission approve the proposed tariff effective December 3, 2015. Tampa Electric responded to Staff's First Data Request on October 27, 2015, and to Staff's Second Data Request on November 3, 2015. The proposed tariff is provided in Attachment 1. The Commission has jurisdiction over this matter pursuant to Section 366.04, Florida Statutes.

## Discussion of Issues

**Issue 1:** Should the Commission approve Tampa Electric's proposed AMP agreement tariff?

**Recommendation:** Yes, the Commission should approve Tampa Electric's proposed AMP agreement tariff effective December 3, 2015. (Ollila, Guffey, Clemence)

**Staff Analysis:** AMP is a voluntary program for residential customers who own PV systems that are interconnected with the Company. The signed AMP agreement permits Tampa Electric to install an advanced meter, at no cost to the customer, that will record the energy output of the customer's PV generator. The data generated by the advanced meter will be available to both the customer and the Company. Currently, customers who have installed rooftop solar PV systems do not have utility meters measuring the output of their generators. The current billing meter registers the energy purchased from Tampa Electric and the amount of excess energy from the PV system that is delivered to the Company but does not track how much of the customer's consumption is offset by the PV generator.

### AMP Details

#### Agreement

The proposed AMP agreement has an initial term of three years. Tampa Electric states that, if a customer wishes to terminate the agreement prior to the completion of the initial term, the Company will remove the advanced meter at no cost or penalty to the customer. According to the Company, only the property owner may execute the agreement to participate in the program. If a participating customer sells the house while the agreement is in effect, the new owner of the house would be required to enter into a new agreement with Tampa Electric in order to participate in the program.

#### Costs

Tampa Electric estimates up-front costs of \$566,000 and annual expenses of \$19,500, assuming approximately 100 customers elect to participate. Up-front costs include the capital costs of the AMP meters and installation. Annual expenses include communications and web-hosting costs for the AMP meters. The Company considers AMP-related costs to be base rate costs, so there will be no costs charged to participating customers during the initial term. Tampa Electric states that, if it were to charge for AMP after the initial term, it would seek Commission approval prior to the imposition of any charge.

#### Customers

As of September 30, 2015, Tampa Electric had 637 residential customers who own PV systems that are interconnected with the Company. Customers will be solicited to participate via email, reaching the approximately 500 customers with email addresses on file with the Company. Tampa Electric, however, will also accept those customers without email addresses on file into the program. Tampa Electric expects about 20 percent of the customers, or 100, to participate in the program. Tampa Electric explained that it is only seeking a portion of the eligible customers to participate in the program as it believes this strategy will secure sufficient participation level for purposes of this program. Although AMP is limited to residential customers, the Company stated that the program could be expanded to commercial PV customers at a later date.

### ***Meters and Installation***

The AMP meter will be installed at the participant's home at or near the existing Tampa Electric-owned disconnect switch located between the participant's PV system and the delivery of the PV energy to the home. A customer requesting to participate in the AMP program will have to schedule an appointment with a Tampa Electric representative who will discuss the best location for the new AMP meter, conduct an evaluation, and answer any questions the customer may have.

In addition to the installation of the AMP meter, the customer's existing billing meter will be replaced by an advanced billing meter. The advanced billing meter differs from the existing billing meter mainly in that it includes a cellular communications device. The AMP meter will communicate the output of the PV system to the advanced billing meter in 15-minute intervals. The new advanced billing meter will then communicate the data via its cellular device to the Company allowing the Company to collect the meter data remotely.

Tampa Electric states in its petition that it will also replace existing billing meters with advanced meters at some homes with no PV installations. According to Tampa Electric, the new advanced meter will allow it to evaluate the metering and communication equipment with and without PV installations and provide early testing of advanced meters. In response to staff's data request, Tampa Electric stated that it is not seeking Commission approval of the partial deployment of advanced billing meters to customers without PV generation as part of its petition. The Company notes that Commission approval is not required to change out existing billing meters to advanced billing meters. Tampa Electric stated the partial deployment of the advanced meters will be less than 5,000 meters; customers will be able to choose whether or not to participate. The Company does not have a date yet for full deployment.

### ***AMP Data***

Customers will be able to monitor the output of their PV system via a secure web portal. According to the Company, customers may wish to use the data to determine how much power their PV systems are generating as measured by the AMP meter compared to information on generator output from the PV system.

The Company states that it is concerned about not understanding the output impacts of residential solar on its grid and on its distribution system, in particular. As the use of solar continues to expand, Tampa Electric believes solar will have a more substantial impact on its load and energy forecasting process. Tampa Electric intends to use the data recorded by the AMP meter to analyze the impact of rooftop residential solar, in conjunction with residential house usage measured by the utility meter, on its distribution system for local load planning and design of the protection devices on the distribution and substation systems.

In addition, the Company will be able to measure the output characteristics of the different types of solar generators, knowing which direction faces the sun and any potential obstructions (e.g., trees or neighboring structures) in order to determine actual achieved generator output versus nameplate generator output. The Company states that a better understanding of how well solar generation will perform compared to how it might be marketed will give Tampa Electric the ability to provide more educated advice to customers considering installing rooftop solar

systems. In addition, the Company expects that, with its increased understanding of the economics of rooftop solar generation, it will be able to better engage with residential solar rooftop developers and provide advice on the impact of their developments on local areas that may require distribution line capacity upgrades.

**Conclusion**

Staff believes that this optional program is likely to provide useful information to the Company and participating customers. Staff recommends that the Commission approve Tampa Electric's proposed AMP agreement tariff, effective December 3, 2015.

**Issue 2:** Should this docket be closed?

**Recommendation:** <sup>CRB</sup> Yes. If Issue 1 is approved, the tariff should become effective on December 3, 2015. If a protest is filed within 21 days of the issuance of the order, the tariff should remain in effect pending resolution of the protest. If no timely protest is filed, this docket should be closed upon the issuance of a consummating order. (Corbari)

**Staff Analysis:** If Issue 1 is approved, the tariff should become effective on December 3, 2015. If a protest is filed within 21 days of the issuance of the order, the tariff should remain in effect pending resolution of the protest. If no timely protest is filed, this docket should be closed upon the issuance of a consummating order.



ORIGINAL SHEET NO. 7.310

THIS AGREEMENT for Advanced Metering Program (AMP) service is entered into this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, ("Effective Date") between Tampa Electric Company ("Company") and \_\_\_\_\_ ("Customer").

IN CONSIDERATION of the mutual agreements hereinafter contained, IT IS AGREED:

1. **Scope.** The Company will provide AMP service to the Customer, and the Customer will receive such service in accordance with this Agreement.

2. **Rules, Regulations and Rates.** Florida state law and the rules, regulations and applicable rate schedules of the Company, as may be filed with and regulated by the Florida Public Service Commission ("Commission"), shall govern AMP service and are incorporated herein by reference. Such laws, rules, regulations and rate schedules are subject to change during the term of this Agreement as provided by law. Copies of current rules, regulations and applicable rate schedules are available from the Company or the Commission upon request.

3. **Term.** The initial term of this Agreement shall be three (3) years from the commencement of service under this Agreement. The Agreement shall continue in effect upon completion of the initial term until terminated by either party providing written notice to the other.

4. **AMP Service.** The characteristics of AMP Service are:

a. The Company will install an advanced meter set on the Customer side of the existing AC disconnect switch near existing Company billing meter at the Customer's premises. The equipment installed will include all connection points between the Customer's electrical panel, the advanced meter, and associated disconnect switch conduit. The advanced meter and associated equipment installed will not interfere with the operation or maintenance of either the Customer's solar array or the associated inverter. The advanced meter and equipment will remain the property of the Company.

b. The advanced meter is designed to extract data on the Customer's solar output of Customer's solar array, and relay it back to the Company.

c. The data extracted from the advanced meter will be made available to the Customer through a website so that Customer can use the data to compare to solar generating data it collects through other means.

d. The Company will be allowed to use the solar production data from the advanced meter for utility system planning, load and generation forecasting and other business needs.

Continued on Sheet No. 7.315

ISSUED BY: G. L. Gillette, President

DATE EFFECTIVE:



ORIGINAL SHEET NO. 7.315

Continued from Sheet No. 7.310

5. **No Charge.** The Company will bear all costs associated with the advanced meter set, its installation and repair. The Customer will not be assessed any charges by the Company for AMP service during the term of this agreement.

6. **As-Available Nature of Program; No Warranty.** As this is a free service, the Company reserves the right to suspend or terminate AMP Service and/or the online website in its sole discretion at any time. All data is provided as-is, as-available. The Company makes no warranty as to the availability or accuracy of the data provided through the advanced meter set and website, since it is being supplied for informational purposes only, at no charge to the Customer. The Company disclaims all warranties, express or implied, including warranties of fitness for a particular purpose.

7. **Meter Access and Removal.** The Customer hereby grants the Company access to the area where the advanced meter set and related equipment are to be installed for purposes of installation, maintenance and removal of same. The Customer agrees, not to attempt or permit a third party to attempt, to adjust, modify or remove the advanced meter set without the prior written approval of the Company. Upon termination of the Agreement, the Company will remove the advanced meter set and associated equipment.

8. **Miscellaneous.** This Agreement constitutes the entire agreement between the parties regarding the subject matter hereof, and supersedes any prior or contemporaneous statements regarding the same. No modification of this Agreement shall be binding unless it is in writing and accepted by the Customer and the Company. This Agreement shall be governed by the laws of the State of Florida.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their duly authorized representatives, as of the Effective Date hereof.

CUSTOMER \_\_\_\_\_ TAMPA ELECTRIC COMPANY  
By: \_\_\_\_\_ By: \_\_\_\_\_  
Title: \_\_\_\_\_ Title: \_\_\_\_\_

ISSUED BY: G. L. Gillette, President

DATE EFFECTIVE: