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#### May 25, 2016

#### VIA: ELECTRONIC FILING

Ms. Carlotta S. Stauffer Commission Clerk Florida Public Service Commission 2540 Shumard Oak Boulevard Tallahassee, Florida 32399-0850

Re: Docket No. 160000-OT – Undocketed 2016 FEECA Report Data Collection

Dear Ms. Stauffer:

Attached for filing in the above docket is Tampa Electric Company's Responses to Staff's First Data Request (Nos. 1-7) dated April 29, 2016.

Thank you for your assistance in connection with this matter.

Sincerely,

James D. Beasley

JDB/pp Attachment

cc: Robert Margolis (w/attachment)

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- 1. For each DSM program offered during 2015, please provide the implementation date for each of the new / modified program approved by the Commission for the recent goal period and the termination date for each retired program approved under the prior goal period.
- A. Tampa Electric received approval of its 2015-2024 Demand Side Management ("DSM") goals in Docket No. 130201-EI, Order No. PSC-14-0696-FOF-EU, issued December 16, 2014. The company received approval of its 2015-2024 DSM Plan on August 11, 2015 in Docket No. 150081-EG, Order No. PSC-15-0323-PAA-EG. Tampa Electric transitioned to the DSM programs within the 2015-2024 DSM Plan on November 3, 2015 pursuant to receiving final approval of the supporting DSM standards on September 24, 2015. The tables below show the residential and commercial/industrial programs implementation date for each of the new/modified programs approved by the Commission for the recent goal period and the termination date for each retired program approved under the prior goal period.

Residential Programs			
Walk-Through Energy Audit (Free Energy Check)	This program discontinued the eight free compact fluorescent lamps portion of the program as of November 3, 2015.		
On-Line Energy Audit	This program was consolidated to become the Customer Assisted Energy Audit on November 3, 2015.		
Phone Assisted Audit	This program was consolidated to become the Customer Assisted Energy Audit on November 3, 2015.		
Customer Assisted Energy Audits	This program was started on November 3, 2015 as a combination of the prior DSM Plan's Phone Energy Audits and Online Energy Audits. This program also discontinued the eight free compact fluorescent lamps portion of the program as of November 3, 2015.		
Computer Assisted Energy Audit (RCS-Paid)	This program discontinued the eight free compact fluorescent lamps portion of the program as of November 3, 2015.		

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Building Envelope	This program was modified on November 3, 2015 to become separate programs for Ceiling Insulation, Wall Insulation and Window Replacement. The Window Film portion of this program was retired on November 3, 2015.
Ceiling Insulation	This program was modified as of November 3, 2015.
Duct Repair	This program was modified as of November 3, 2015.
Electronically Commutated Motors	This program was modified as of November 3, 2015.
Energy Education, Awareness and Agency Outreach	Agency Outreach was part of Neighborhood Weatherization program in prior DSM Plan. On November 3, 2015 this portion of the program was placed with Energy Education and Awareness.
ENERGY STAR for New Homes	This program was started on November 3, 2015 and took the place of the New Construction Program.
Lipsting and Capling	This program was modified as of November
Heating and Cooling	3, 2015.
Neighborhood Weatherization	3, 2015. This program contained Agency Outreach which was moved to be part of the Energy Education, Awareness and Agency Outreach program on November 3, 2015.
Neighborhood Weatherization	3, 2015. This program contained Agency Outreach which was moved to be part of the Energy Education, Awareness and Agency Outreach program on November 3, 2015. This program was retired on November 3, 2015 and became the ENERGY STAR for New Homes program.
Neighborhood Weatherization New Construction Wall Insulation	<ul> <li>3, 2015.</li> <li>This program contained Agency Outreach which was moved to be part of the Energy Education, Awareness and Agency Outreach program on November 3, 2015.</li> <li>This program was retired on November 3, 2015 and became the ENERGY STAR for New Homes program.</li> <li>This program was modified as of November 3, 2015.</li> </ul>
Neighborhood Weatherization New Construction Wall Insulation Window Replacement	<ul> <li>3, 2015.</li> <li>This program contained Agency Outreach which was moved to be part of the Energy Education, Awareness and Agency Outreach program on November 3, 2015.</li> <li>This program was retired on November 3, 2015 and became the ENERGY STAR for New Homes program.</li> <li>This program was modified as of November 3, 2015.</li> <li>This program was modified as of November 3, 2015.</li> </ul>
Neighborhood Weatherization New Construction Wall Insulation Window Replacement Renewable Energy Systems Initiative - PV	<ul> <li>3, 2015.</li> <li>This program contained Agency Outreach which was moved to be part of the Energy Education, Awareness and Agency Outreach program on November 3, 2015.</li> <li>This program was retired on November 3, 2015 and became the ENERGY STAR for New Homes program.</li> <li>This program was modified as of November 3, 2015.</li> <li>This program was modified as of November 3, 2015.</li> <li>This program was retired on December 31, 2015.</li> </ul>
Neating and Cooling         Neighborhood Weatherization         New Construction         Wall Insulation         Window Replacement         Renewable Energy Systems         Initiative - PV         Renewable Energy Systems         Initiative – Solar Water Heating	<ul> <li>3, 2015.</li> <li>This program contained Agency Outreach which was moved to be part of the Energy Education, Awareness and Agency Outreach program on November 3, 2015.</li> <li>This program was retired on November 3, 2015 and became the ENERGY STAR for New Homes program.</li> <li>This program was modified as of November 3, 2015.</li> <li>This program was modified as of November 3, 2015.</li> <li>This program was retired on December 31, 2015.</li> <li>This program was retired on December 31, 2015.</li> </ul>

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HVAC Re-Commissioning	This program was retired on November 3, 2015.
Window Film	This program was retired on November 3, 2015.

Commercial/Industrial Programs			
Commercial/Industrial Audit (Free)	This program discontinued the eight free compact fluorescent lamps portion of the		
	program as of November 3, 2015.		
Comprehensive Commercial/Industrial Audit (Paid)	This program discontinued the eight free compact fluorescent lamps portion of the program as of November 3, 2015.		
Building Envelope	This program was modified on November 3, 2015 to become separate programs for Ceiling Insulation, and Wall Insulation. The Roof Insulation and Window Film portions of this program were retired on November 3, 2015.		
Ceiling Insulation	This program was modified as of November 3, 2015.		
Chiller	This program was modified as of November 3, 2015.		
Conservation Value	This program was modified as of November 3, 2015.		
Cool Roof	This program was modified as of November 3, 2015.		
Cooling	This program was modified as of November 3, 2015. The packaged terminal unit portion of the program was retired on November 3, 2015.		
Duct Repair	This program was modified as of November 3, 2015.		
Electronically Commutated Motors	This program was modified as of November 3, 2015.		
Lighting	This program was modified on November 3, 2015 to become separate programs for Conditioned Space and Non-Conditioned Space. The Exist Sign portion of this program was retired on November 3, 2015.		

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Lighting Conditioned Space	This program was modified as of November 3, 2015.
Lighting Non-Conditioned Space	This program was modified as of November 3, 2015.
Lighting Occupancy Sensors	This program was modified as of November 3, 2015.
Refrigeration Anti-Condensate Control	This program was modified as of November 3, 2015.
Thermal Energy Storage	This program was started new as of November 3, 2015.
Wall Insulation	This program was modified as of November 3, 2015.
Water Heating	This program was modified as of November 3, 2015.
Renewable Energy Systems Initiative – PV	This program was retired on December 31, 2015.
Renewable Energy Systems Initiative – PV schools	This program was retired on December 31, 2015.
Energy Recovery Ventilation	This program was retired on November 3, 2015.
HVAC Re-Commissioning	This program was retired on November 3, 2015.
Energy Efficient Motors	This program was retired on November 3, 2015.
Window Film	This program was retired on November 3, 2015.

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- 2. Please provide a detailed description of the company's research and development programs related to customer-owned solar technologies and how these programs may impact the company's conservation efforts. Please provide any final reports or data to support your findings.
- A. Tampa Electric completed the five-year pilot of the Renewable Energy Systems Initiative which was retired on December 31, 2015. The company provided the summary report of the findings for conducting this program from 2011 through 2015 as part of the DSM Annual report which was filed on March 1, 2016. A copy of these findings as filed is found further below noted "DSM Annual Report Copy".

Tampa Electric recently completed the construction of the company's first large scale photovoltaic ("PV") project on the south economy parking lot at Tampa International Airport ("TIA"). This PV system is rated at 2 MW of capacity. One of the main goals of this project is to study how large scale solar compares to small scale rooftop solar as related to installation costs, operations, grid planning and forecasting, overall system efficiencies and cost effectiveness. The company has begun monitoring of the TIA PV system in order to determine how to improve the efficiency and overall performance of large scale PV systems. The TIA project will provide Tampa Electric valuable insight into the installation, ownership and the ongoing operational knowledge of how large scale PV systems will interact with traditional sources of generation, potential impacts to conservation and the impacts this system brings to delivering reliable, safe and cost effective power to the company's customers.

In addition to studying the TIA system, Tampa Electric currently has 874 customer-owned PV systems interconnected to the company's grid. Tampa Electric is initiating the company's Advanced Meter Program ("AMP") program which was approved by the Commission in Docket 150213 in Order No. PSC-15-0581-TRF-EI and finalized in Consummating Order No. PSC-16-0037-CO-EI. The AMP program will initially solicit voluntary participation by existing Tampa Electric residential customers who own solar PV systems. The participating customer will allow Tampa Electric to install an advanced meter on their home. The advanced meter installation will record the energy output of the customer's PV system and will communicate the output of the system to a secure website where the data can be viewed by the customer and Tampa Electric. This data will further the company's knowledge and understanding of how these smaller PV systems affect the overall distribution system as well as learning how this data can be utilized by Tampa Electric for research, planning and forecasting purposes. The company is in the very early stages of the

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AMP program and does not have reports or data to provide for this question at this time.

"DSM Annual Report Copy"

# TAMPA ELECTRIC COMPANY-SUMMARY OF 2015 DEMAND SIDE MANAGEMENT PROGRAM ACCOMPLISHMENTS

# Appendix A - Renewable Energy Systems Initiative 2011-2015

In 2009, the FPSC directed Tampa Electric and the other investor-owned utilities to spend 10 percent of their historic energy conservation cost recovery expenditures as an annual cap for a pilot program consisting of solar water heating ("SWH") and solar photovoltaic ("PV") programs. Pursuant to Order No. PSC-09-0855-FOF-GU, Tampa Electric initiated the company's five-year pilot program as the Renewable Energy Systems Initiative in April 2011. Tampa Electric successfully retired the Renewable Energy Systems Initiative pilot program on December 31, 2015. Below are the summaries for Renewable Energy Systems Initiative for 2015, the cumulative report covering the life of the program and other lessons learned while conducting the pilot program.

Name of Program	Program Implementation Date	Number of Installs (#)	For PV installed kW-DC	Total Rebate Amount Paid to Customers (\$)	Total Rebate & Program Expenditures (\$)
Residential PV	April 2011	53	516.66	¢1 024 860	¢1 020 262
Commercial PV	April 2011	1	10.40	\$1,024,000	\$1,000,000
School PV <sup>(1)</sup>	April 2011	1	10	\$123,995	\$130,142
Residential SWH	April 2011	54	n/a	\$46,000	\$64,971
Low Income SWH	April 2011	0	n/a	\$0	\$0
			Total	\$1,194,855	\$1,275,981

# **Renewable Energy Systems Initiative Program Activity in 2015**

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Note 1: The School PV program partnered with the Florida Solar Energy Center and provided capital funding in lieu of a rebate for the installation of a 10 kW PV system on emergency shelter schools within Tampa Electric's service area.

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Name of Program	Program Implementation Date	Number of Installs (#)	For PV installed kW-DC	Total Rebate Amount Paid to Customers (\$)	Total Rebate & Program Expenditures (\$)
Residential PV	April 2011	280	2,392.43	\$5 150 558	\$5 470 542
Commercial PV	April 2011	26	305.25	φ0, 109,000	\$J,479,545
School PV <sup>(1)</sup>	April 2011	5	50	\$633,085	\$662,916
Residential SWH	April 2011	228	n/a	\$220,000	\$321,892
Low Income SWH	April 2011	14	n/a	\$59,010	\$60,204
		Cumulative Total		\$6,071,653	\$6,524,555
		Average Annual Spend		ual Spend	\$1,304,911
		Annual Spending Cap as per Commission Order			\$1,531,018

#### Renewable Energy Systems Initiative Program Cumulative Participation and Program Costs 2011-2015

Note 1: The School PV program partnered with the Florida Solar Energy Center and provided capital funding in lieu of a rebate for the installation of a 10 kW PV system on emergency shelter schools within Tampa Electric's service area.

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	Cumulative Five Year Summer/Winter kW and Annual Energy (kWh) Savings Pilot Program - Renewable Energy Systems Initiative (Savings at Generator)					
	Residential PV	Commercial PV	School PV	Residential SWH	Low- Income SWH	Total All Pilot Programs
SkW	1,394.09	170.95	29.89	73.24	4.50	1,672.67
WkW	0.00	0.00	0.00	148.92	9.13	158.05
AE	3,876,739	462,791	83,130	572,740	35,193	5,030,593

# Renewable Energy Systems Initiative Program

# **Residential and Commercial PV systems**

Over the five years of the program Tampa Electric observed a similar decline in the total upfront cost per kW-DC in both the residential and commercial segments of the program as shown by the following charts.



For the residential segment, this price decrease in overall upfront cost per kW-DC equates to an overall decrease in 2015, as compared to 2011, of 43.1 percent.

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For the commercial segment, this price decrease in overall upfront cost per kW-DC equates to an overall decrease in 2015, as compared to 2011, of 43.4 percent.

Tampa Electric observed that larger systems have a lower installed cost per kW-DC arising from customers taking advantage of economies of scale. The largest PV system installed during the pilot program was a 30.855 kW-DC array. This system had the lowest overall cost per kW-DC installed (before the rebate or any tax credits) of \$2,372.42 per kW-DC. This installation occurred in 2013 and the price difference was 31.4 percent lower than the current annual average installed cost of \$3,458 per kW-DC. Tampa Electric presents the following statistical data on the residential and commercial portions of the program:

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# **Residential PV:**

Residential PV Statistics			
Cost of System (\$)			
Mean	\$31,446		
Median	\$29,196		
Mode	\$26,000		
Standard Deviation	\$10,778		
Minimum	\$2,414		
Maximum	\$66,900		
Cost/kW-L	DC		
Mean	\$3,876		
Median	\$3,450		
Mode	\$2,564		
Standard Deviation	\$1,432		
Minimum	\$1,800		
Maximum	\$10,627		
Actual Total kW size -Installed (kW -DC)			
Mean	8.544		
Median	9.933		
Mode	10.000		
Standard Deviation	2.493		
Minimum	1.020		
Maximum	16.900		
Amount Rebate Approved (\$)			
Mean	\$16,537		
Median	\$19,770		
Mode	\$20,000		
Standard Deviation	\$4,542		
Minimum	\$2,000		
Maximum	\$20,000		

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Commercial PV:

Commercial PV Statistics				
Cost of Sys	tem (\$)			
Mean	\$47,436			
Median	\$43 <i>,</i> 953			
Mode	\$43,953			
Standard Deviation	\$17,955			
Minimum	\$17,900			
Maximum	\$82,537			
Cost/kV	V-DC			
Mean	4,242			
Median	4,081			
Mode	4,467			
Standard Deviation	1,375			
Minimum	2,372			
Maximum	7,952			
Actual Total kW size -Installed (kW -DC)				
Mean	11.740			
Median	10.100			
Mode	10.000			
Standard Deviation	5.285			
Minimum	5.060			
Maximum	30.855			
Amount Rebate Approved (\$)				
Mean	\$18,828			
Median	\$20,000			
Mode	\$20,000			
Standard Deviation	\$3,031			
Minimum	\$10,000			
Maximum	\$20,000			

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## Issues Identified:

Tampa Electric encountered similar issues to that of the Department of Energy, the National Renewable Energy Laboratories and the Florida Solar Energy Center during the pilot program with not all customers having a suitable or optimal location for the installation of a PV system on their premise. This issue can occur due in following situations:

- 1. Excessive shading due to trees.
- 2. Excessive shading due to adjacent homes, buildings or structures.
- 3. Orientation of the home does not support the installation to maximize energy generation.
- 4. Location only supports a fixed panel with very limited tilt and axis optimization

During the pilot program, Tampa Electric followed recommendations from the Florida Solar Energy Center for determining which premises would be eligible for rebates by requiring the proposed location of the installed panels to have zero shading during the hours of 9am and 3pm. This requirement ensured that the PV array installation would have the maximum potential for energy production during the day and would bring the most energy savings to that individual customer.

Another issue Tampa Electric encountered was renter limitations on what can be permanently installed at the premises.

These issues resulted in approximately one of every four customers having a location that is optimal for the installation of a PV array for energy generation.

#### School PV systems

Tampa Electric provided capital funding for the installation of PV on emergency shelter schools and also provided energy education for teachers and students to evaluate and understand the performance and benefits of PV. Tampa Electric partnered with the Florida Solar Energy Center's E-Shelter program to enhance the effectiveness and deployment of resources of this program. Over the five year program, five schools within Tampa Electric's service area each had a 10 kW-DC PV system installed. These five systems had an average cost of \$132,583. Below is the cost per kW-DC over the life of the pilot.

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# **Residential and Low-Income SWH:**

Tampa Electric provided for the installation of SWH systems in low-income residential homes through partnerships with local non-profit building organization and also provided a rebate program to encourage the installation of a SWH system. The low-income portion of the program installed 14 SWH systems over the five year pilot period. The rebate portion of the program encouraged the installation of an additional 228 SWH systems. Tampa Electric presents the following statistical data on the residential SWH portion of the program:

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Residential SWH				
No. Occupants in Hor	ne (#)			
Mean	3.1			
Median	3.0			
Mode	2.0			
Standard Deviation	1.5			
Minimum	1.0			
Maximum	10.0			
Sum	704.0			
Cost of System (\$)				
Mean	\$6,002			
Median	\$5,000			
Mode	\$4,995			
Standard Deviation	\$2,470			
Minimum	\$2,400			
Maximum	\$18,000			

# Administration Costs of the Program

Tampa Electric administered the Renewable Energy Systems Initiative Pilot Program over the five-year period with an administration cost of \$407,912. This represented only 6.25 percent of the total costs. The total rebate dollars given to customers to encourage their participation in the program was \$6,116,633.

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- **3.** Please provide a detailed description of the company's research and development programs related to emergent DSM technology and how these efforts may impact the company's conservation efforts.
- A. Tampa Electric has conducted research and development ("R&D") projects on conservation and demand response technologies in the past which have led to the successful launch of DSM programs. Here is the list of DSM programs that have launched into successful DSM programs from initial R&D projects:
  - 1. Residential Duct Repair
  - 2. Commercial Duct Repair
  - 3. Commercial Load Management
  - 4. Residential Price Responsive Load Management
  - 5. Smart Source (Tampa Electric's current Renewable Energy Program)

In addition to the programs above, Tampa Electric chose in the 2015-2024 DSM Plan to offer Thermal Energy Storage as a new program. Historically, Tampa Electric offers programs to customers that have both been studied and evaluated through the Conservation R&D Program or the Conservation Value Program. When Tampa Electric studies a measure to become a stand-alone program, the company ensures the program will meet all of the Commission's rules, be cost-effective to offer to customers, be commercially available in the Florida marketplace, be able to be efficiently managed and the technology must produce reliable results in energy and/or demand savings within Florida's climate. In the past, Thermal Energy Storage has been rebated through the Conservation Value Program where it has proven that it can be a stand-alone program. Tampa Electric followed the same protocols in the establishment of the current Commercial Chiller Program which has been offered since 2008.

Tampa Electric is aware of several potential measures that may merit gathering more information as part of an R&D project if needed to help either achieve the Commission's approved DSM goals, position an existing program for continued success or develop new programs that will better position the overall portfolio of DSM programs for customers that the company offers. At this time, Tampa Electric is exploring two technologies for suitability for conducting an R&D project. The first of these technologies is looking at incorporating residential heat pump water heaters/hybrid water heaters into the Energy Planner Program as an electric thermal storage device. The

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second technology being explored is battery storage for commercial/industrial facilities and the ability to shift peak usage. If selected, these technologies would be fully tested just as the prior programs under the Conservation R&D program were to ensure the technology and supporting savings would be measurable, monitorable and verifiable before petitioning the Commission for approval to establish it as part of or one of Tampa Electric's DSM programs.

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- **4.** Please describe the company's process for monitoring any new energy efficiency standards or Florida Building Code requirements and modifying programs to reflect these changes if necessary.
- A. Tampa Electric recognizes that staying on top of building codes and appliance efficiency standards is a challenge. To ensure that the DSM programs the company offers is aligned with building codes and appliance efficiency standards, Tampa Electric's Energy Management Services ("EMS") Department stay abreast and ahead of changing appliance efficiency standards and buildings codes. These Program Managers and select EMS team members ensure the DSM programs the company offers are correctly positioned to enhance energy efficiency above the base/minimum level required. Here are specific examples of the company's approach for monitoring any new energy efficiency standards or Florida Building Code requirements and identifying the resultant future impact to the existing DSM Program:
  - Tampa Electric DSM Program Managers subscribe to the annual Florida Building Code - Energy Conservation Edition. The company has individual team members within EMS that serve as a designated team member whom is associated with the Florida Department of Business Professional Regulations.
  - Tampa Electric Commercial Energy Management Team ("CEMT") members receive updates from the State of Florida's Energy Technical Advisory Committee ("TAC") and also actively participate in webinars offered by the TAC.
  - The CEMT belongs to several energy efficiency associations and consortiums such as the Association of Energy Engineers or the Consortium for Energy Efficiency.
  - The CEMT will also attend national level training events which provide insight into current and future industry changes along with legislative changes that are scheduled to occur.
  - Program Managers are responsible for charting a timeline comparison with the current program standards and identifying the needed changes to ensure the program is in alignment with the new energy efficiency standard or building code.
  - Program Managers will reach out to recognized experts or vendors to discuss the impacts of changes and determine the most appropriate adjustments to make to the DSM program. An example of this was Tampa Electric's approach to the recent NESHAP rules

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change for the use of generators as standby. Tampa Electric's Manager of Energy Management Services several years ago invited the Environmental Protection Agency ("EPA") and other experts from the industry to collaborate and determine what these changing requirements were. The program was positioned so that when the changes came this year (2016), the changes would not affect the program or its participants. This was done by making the change in the recent DSM Standards, supporting the new Commission approved DSM Plan, which requires that the generator installation and operation must comply with all applicable regulations, including air emission guidelines and EPA's rules in order for participation.

- Program Managers that facilitate programs which have designated vendors ensure the vendor is aware of potential and future advancements in appliance energy efficiency standards and building codes and to position the supporting technology so that is compatible and it enhances the overall program.
- Program Managers and individual team members also achieve professional certifications by attending classes, participating in trade shows, formal meetings or other training events which cover appliance energy efficiency standards and building codes such as:
  - Certified Energy Manager (CEM)
  - Business Energy Professional (BEP)
  - Commercial Energy Auditor (CEA)
  - Residential Energy Auditor (REA)
  - Florida Building Engineering & Facility Maintenance Show
  - o RESNET Certified Energy Rater seminars
  - o Energy Management Congress events
  - EPA ENERGY STAR training
  - ENERGY STAR Certified Homes Stakeholder meeting
  - Association chapter meetings: Association of Energy Engineers (AEE), Tampa Bay Builders Association (TBBA), Refrigeration & Air Conditioning Contractors Association (RACCA) and American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE)

Also, in addition to Standby Generator DSM Program standard mentioned above, it is important to note that Tampa Electric writes other DSM Program standards in a manner that supports enhancing the building code or appliance energy efficiency standard as it is increased, while not

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requiring any modification to the program. An example of this is how the company wrote the standards for the Residential Heating and Cooling Program where the rebate will be paid if the customer installs a qualifying air condition system that exceeds the Department of Energy ("DOE") energy efficiency standard or the Florida Building Code, whichever is more stringent, by equal to or greater than 1.000 ARI SEER rating.

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- 5. Please describe the process for ensuring low-income customers are aware of and have access to conservation programs offered by the company.
- A. Tampa Electric utilizes a multi-pronged communication and education approach to ensure low-income customers are aware, understand and have access to the conservation programs approved by the Commission for the company to offer. The communication and education methods the company uses include the following:
  - Door-to-door advertising in low-income neighborhoods recognized by the US census bureau. When the company is having Neighborhood Weatherization work done in a low-income neighborhood, the company will go door-to-door to educate customers on the availability of programs that Tampa Electric offers.
  - Tampa Electric requires the vehicles utilized within the neighborhoods to have wrapping giving the name of the "Neighborhood Weatherization Program" and how to participate.
  - Tampa Electric Energy Management Services Team Members participate in local community events, fairs and trade shows to educate customers on DSM programs and how to participate.
  - Tampa Electric partners with Neighborhood Service Centers, Senior Outreach Centers and Elder Affairs offering educational video and brochures. In these centers, the hosting center will frequently display poster size information in the customer lobby with program details that the customers can take advantage of.
  - Tampa Electric utilizes social media such as Facebook, social media tweets and press releases to communicate the company's DSM programs.
  - Tampa Electric Team Members also volunteer with non-profit organizations delivering the program and will participate in neighborhood events and community sweeps for neighborhood improvements at various times during each year.

In addition to the approaches above to educate low-income customers on the access to DSM programs specifically targeted to them, low-income customers remain eligible for all of the other approved residential DSM programs Tampa Electric offers.

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- **6.** Please describe the overall advertising approach taken by the company to promote the current DSM programs to its customers.
- A. Tampa Electric has been promoting DSM programs and educating customers on their benefits of energy efficiency and demand savings for almost 40 years. From 1979 through 2015, Tampa Electric has performed more than 458,000 energy audits and paid over 482,000 rebates to customers who have participated in Tampa Electric's energy-efficiency programs. Currently, Tampa Electric offers 36 programs to the company's residential and commercial/industrial customers. To ensure the company's DSM programs have the participation necessary to achieve the DSM goals as approved by the Commission, Tampa Electric uses an advertising approach that is conservative and effective. The advertising approach focuses on these three core attributes:
  - Creative Development
  - Correct Target Audience
  - Correct Media Placement

**Creative Development**: Tampa Electric's Corporate Communications Department works closely with its Tampa-based corporate advertising agency to research, develop and produce television, cable, radio, digital and print communications. Tampa Electric leverages these communications on the company's website, in customer bills, on social media, and during community events that promote and encourage customers to inquire about and participate in Tampa Electric's DSM programs. Together, the agency, Corporate Communications, Regulatory and others throughout the company monitor the effectiveness of the advertising. New campaigns and refined creative messaging are developed after significant use of a given campaign determines the reach and frequency has been met or exceeded.

**Correct Target Audience:** Tampa Electric's primary target for advertising the company's DSM programs are adult home owners ages 35-64 that reside within Tampa Electric's 2,000 square-mile service area. The secondary target for advertising is all home owners that reside within Tampa Electric's service area. In addition to the primary and secondary targets for advertising, the DSM program Energy Planner's advertising is more focused on computer-savvy customers that have broadband Internet service in their homes.

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#### Correct Media Placement:

**Agency Partnership:** Tampa Electric partners with a local advertising agency to assist the company in its media placement. The agency partner provides guidance, prepares quarterly advertising plans, purchases and places media through various channels including cable television, local radio, internet sites and newspapers that optimize delivery to match the company's target audience. At the end of each month, the agency provides Tampa Electric with proof of performance metrics.

**Internal and External Channels:** Tampa Electric's Corporate Communications department utilizes internal and external channels throughout the year to promote the company's energy-efficiency programs. These internal channels include marketing materials as well as newsletter and inserts that are included with customers' bills, bill messages, envelop messages, e-mail communications, and the corporate Internet. External channels include social media such as Facebook, Twitter, community events and advertisements.

Community Events: Tampa Electric's Energy Management Service Department participates in a variety of community events such as chamber of commerce events, home owner association meetings, trade show participation, professional society and association events throughout the year where they will talk with customers about the many ways they can use energy wisely, hand them marketing materials that promote energy-efficiency programs and sign up customers to participate in programs. Another key component of community events is the day-to-day interactions Tampa Electric Team Members have with customers. This could be the team member whether working directly with the customer on a DSM program or even when stopped for questions or assistance by one of the company's customers like in a grocery store. Another approach Tampa Electric utilizes is participation in school events and teaching the youngsters in the communities the company serves to use energy wisely which will encourage future generations of good energy stewards. All of these interactions allows for a very personalized and quality interaction to discuss the

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many benefits of participating in one of the company's DSM programs as well as educating the public on energy awareness.

**Sports Advertising:** Tampa Electric's Corporate Communications Department also promotes energy-efficiency programs through sports advertising that optimizes delivery to match the company's target audiences and to associate the company's brand and DSM program offering with other positive brands that include the Tampa Bay Lightning hockey, the Tampa Bay Storm arena football and the University of South Florida football and basketball. At the end of each season, the company receives proof of performance metrics from these sports affiliates. Tampa Electric also leverages these relationships on social media to encourage participation in the company's DSM programs.

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- **7.** Please describe the company's approach to educate customers on potential self-initiated conservation opportunities.
- A. As described in prior responses above within this Staff's 1<sup>st</sup> Data Request, Tampa Electric utilizes many approaches to communicate and educate customers on energy efficiency and how to take advantage of the company's DSM programs by initiating and installing conservation opportunities. The approach with the largest impact the company utilizes for educating customers on potential self-initiated conservation opportunities is through the performance of energy audits with individual customers.

Many of the DSM programs Tampa Electric offers allows for customers to self-initiate and also self-install. While the EMS Team Member will identify the DSM programs the company offers during the energy audit, they will also identify and communicate other conservation measures that will also benefit the customer receiving the energy audit. These other energy conservation measures include the following:

- No cost behavioral or operational change recommendations
- Identification of energy wastes
- Low cost conservation measures not covered by a rebate program
- Quick/short term payback energy conservation measures
- Medium and long term payback energy conservation measures not covered by a rebate program
- Maintenance opportunities
- Process changes and improvements

Tampa Electric's EMS Team Members that perform energy audits are required to obtain a nationally recognized professional certification demonstrating their expertise in their specific area of energy management. By having this credential, the team member demonstrates their knowledge and ability to educate customers on what energy conservation measures will work for the specific home, facility or industrial plant they are assessing.

In addition to educating customers on the potential energy conservation opportunities in front of them, Tampa Electric's energy audits also provides additional information to assist the customer in making their conservation decisions. In the energy audits the company performs,

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significant detail is provided to educate the customer on how much the inefficiency is actually costing them. This energy cost education is a vital component to help get the customer focused on using energy more wisely through either participating in one of the company's many DSM programs or choosing to self-initiate an energy conservation measure within their home or facility.