

AUSLEY & McMULLEN

ATTORNEYS AND COUNSELORS AT LAW

123 SOUTH CALHOUN STREET
P.O. BOX 391 (ZIP 32302)
TALLAHASSEE, FLORIDA 32301
(850) 224-9115 FAX (850) 222-7560

June 5, 2020

VIA: ELECTRONIC FILING

Mr. Adam J. Teitzman
Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850


Re: Petition for Approval of Demand Side Management Plan for Tampa Electric Company; Docket Number 20200053-EG

Dear Mr. Teitzman:

Attached for filing in the above docket are Tampa Electric Company's responses to Staff's Fourth Data Request (Nos. 1-5), as requested on May 28, 2020.

Thank you for your assistance in connection with this matter.

Sincerely,



Malcolm N. Means

MNM/bmp
Attachment

cc: Takira Thompson, Engineering Specialist
Ashley Weisenfeld, Office of General Counsel
All Parties of Record (w/attachment)

**TAMPA ELECTRIC COMPANY
DOCKET NO. 2020053-EG
STAFF'S FOURTH DATA REQUEST
REQUEST NO. 1
PAGE 1 OF 2
FILED: JUNE 5, 2020**

1. Please refer to TECO's response to staff's first data request, number 6(c). If the cost cap of the Utility's Conservation Research and Development (R&D) program was increased to \$4 million, would the Utility be able to achieve the objectives of its proposed Integrated Renewable Energy System pilot program under its existing Conservation R&D program? If not, please explain.
 - A. Tampa Electric does not believe it would achieve the objectives of the proposed Integrated Renewable Energy System Pilot Program under its existing Conservation Research and Development (R&D) Program if the cost cap were to increase to four million dollars. For the following reasons, the company believes the most appropriate method would be for Commission to approve it as a formal stand-alone Pilot Program:
 - 1) The magnitude of this program makes it better served as a stand-alone pilot program. Typically, Commission approval is not required to initiate R&D projects. Instead, the company typically notifies the Commission Staff at the first opportunity through a filing the company submits within the Energy Conservation Cost Recovery Clause Docket with the Commission. The company views this pilot program as similar to the solar energy system initiative program that was run for five years from 2010 through 2015 and believes that it would be very irregular to embark on a R&D project with a total spend projected to be around four million dollars in this fashion.
 - 2) The company currently has other R&D projects that it would like to explore over the next five-year period, including one R&D project that is currently underway. If the Commission required the Integrated Renewable Energy System Pilot Program to be performed under a \$4 million dollar cap, there would be a question as to whether the company could actually complete the installation of the integrated system while still funding the home energy management system R&D project that is underway. In addition, the company has not determined the final costs of the integrated renewable energy system, so if the costs were capped at four million, there is a possibility that the company would not be able to fully install the system and complete the ongoing monitoring, testing, reporting and education within the five-year study period.
 - 3) The company views pilot programs differently than R&D projects. The company's R&D projects tend to require the need for flexibility during

**TAMPA ELECTRIC COMPANY
DOCKET NO. 20200053-EG
STAFF'S FOURTH DATA REQUEST
REQUEST NO. 1
PAGE 2 OF 2
FILED: JUNE 5, 2020**

the study period. The company's pilot programs, including the proposed Integrated Renewable Energy System, have very specific equipment, objectives and longer time of study periods. The company does view the end result of a pilot program or R&D project as being similar – both answer the question of whether the technology or information gained can be used to create a cost-effective Demand Side Management (“DSM”) program.

- 4) R&D programs the company has embarked in the past typically involve installation of equipment in customer facilities or homes to enable the measurement of achieved energy or demand savings. The company believes there are opportunities to utilize the integrated systems in a controlled environment to maximize their DSM benefits and achieve cost-effectiveness while at the same time making the technology available for viewing and education by potential commercial/industrial customers that are interested in these systems.

**TAMPA ELECTRIC COMPANY
DOCKET NO. 2020053-EG
STAFF'S FOURTH DATA REQUEST
REQUEST NO. 2
PAGE 1 OF 3
FILED: JUNE 5, 2020**

2. Please refer to TECO's response to staff's third data request, number 1. For each existing residential and commercial program with failing cost-effectiveness test results, please explain the reason for the failing result(s).
- a. For the Utility's proposed residential Energy and Renewable Education, Awareness, and Agency Outreach, and Neighborhood Weatherization programs, please identify and describe possible solutions to achieve passing Rate Impact Measure test results. If this is not possible, please explain why.
- A. For each of the existing residential programs listed below – there were no significant isolated reasons why the program failed cost effectiveness as compared to prior years' cost-effectiveness results. The main common reasons/inputs why these programs each failed cost effectiveness are:
- + K factor decrease from 1.5213 to 1.4147
 - + Decrease in non-fuel cost from 5.957 cents/kWh to 5.771 cents/kWh
 - + Expected unserved energy ("EUE") summer reduced from 79.59 percent to 68.10 percent
 - + Decreased avoided transmission cost from \$33.02/kW to \$22.07/kW
 - + Generator, transmission and distribution cost escalation rate decreased from 2.4 percent to 2.2 percent
 - + Generating capacity factor decreased from 9.1 percent to 2.9 percent

Residential Programs

- Ceiling Insulation:
- Duct Repair:
- Electronically Commutated Motors:
- Energy Education, Awareness and Agency Outreach
- ENERGY STAR for Multi-Family Residences:
- ENERGY STAR for New Homes:
- Heating and Cooling:
- Neighborhood Weatherization:
- Wall Insulation:
- Window Replacement:

For each of the existing commercial programs listed below – there were no significant isolated reasons why the program failed cost effectiveness as compared to prior years' cost-effectiveness results. The main common reasons/inputs why these programs each failed cost effectiveness are:

- + K factor decrease from 1.5213 to 1.4147

**TAMPA ELECTRIC COMPANY
DOCKET NO. 2020053-EG
STAFF'S FOURTH DATA REQUEST
REQUEST NO. 2
PAGE 2 OF 3
FILED: JUNE 5, 2020**

- + Decrease in non-fuel cost from 2.096 cents/kWh to 1.816 cents/kWh
- + Expected unserved energy ("EUE") summer reduced from 79.59 percent to 68.10 percent
- + Decreased avoided transmission cost from \$33.02/kW to \$22.07/kW
- + Generator, transmission and distribution cost escalation rate decreased from 2.4 percent to 2.2 percent
- + Generating capacity factor decreased from 9.1 percent to 2.9 percent

Commercial Programs:

- Ceiling Insulation:
 - Chiller:
 - Duct Repair:
 - Cool Roof:
 - Cooling-DX:
 - Lighting Occupancy Sensors
 - Thermal Energy Storage:
 - Wall Insulation:
 - Water Heating:
- a. For Tampa Electric's proposed residential Energy and Renewable Education, Awareness, and Agency Outreach, and Neighborhood Weatherization programs to achieve cost-effectiveness under the Rate Impact Measure test ("RIM"), the programs would each need to charge customers a fee to participate in the program. For the Energy and Renewable Education, Awareness, and Agency Outreach program, a fee of \$68.55 to participate in receiving the energy efficiency kit would be needed. For the Neighborhood Weatherization program, a fee of \$613.20 to participate in receiving the energy efficiency measures would be needed.

Tampa Electric has explained in prior discovery responses and explanations through filings to the Commission on this specific topic, the company does not endorse or recommend charging a fee for participation in attempt to raise the cost-effectiveness RIM score in these programs for two reasons. First, it is recognized there may be times where customers may not have the financial resources to install energy efficient technologies. The company believes that if a charge were imposed to these customers for the kit, there would be a dramatic drop to the number of participants in this program. Second, since these same customers contribute to the Energy Conservation

**TAMPA ELECTRIC COMPANY
DOCKET NO. 20200053-EG
STAFF'S FOURTH DATA REQUEST
REQUEST NO. 2
PAGE 3 OF 3
FILED: JUNE 5, 2020**

Cost Recovery Clause in their electric bills each month, the company believes that there should be programs that these customers can participate in. This is why Tampa Electric's Low Income Programs have always been a leader in Florida.

In addition, the company does balance the cost of these programs with the overall need of the company's Residential DSM Portfolio designed to achieve the Commission's recently approved DSM goals on an annual basis for the 2020-2024 period. If a charge were imposed for participation in these two programs, the company would need to alter its proposed 2020-2029 Demand Side Management Plan because the participation levels projected would significantly affect the amount of annual energy and summer and winter kW that would be achieved by these programs. As evidence of this, a utility with a weatherization program that charges for participation was recently highly scrutinized in front of the Florida Public Service Commission for an annual participation of less than 10 customers in a given year, whereas these two Tampa Electric programs are open to qualifying single family homes, multi-family homes, and mobile/manufactured homes and are projecting 7,250 participants per year.

**TAMPA ELECTRIC COMPANY
DOCKET NO. 2020053-EG
STAFF'S FOURTH DATA REQUEST
REQUEST NO. 3
PAGE 1 OF 5
FILED: JUNE 5, 2020**

3. Please refer to TECO's response to staff's third data request, number. 4. Please explain the reason for all differences in projected annual program savings for like programs when comparing the Utility's Existing Programs and Proposed Programs.

A. Tampa Electric did not analyze each of the proposed DSM Programs and identify all of the potential drivers which would cause a change in the annual energy or contributing summer kW and winter kW. In the development of the Nexant Technical Potential study, all measures are referenced to a base energy usage, a current appliance energy efficiency code or building code. In addition, depending on the source of the program savings, these program savings can be changed due to the size of typical customers participating, the technology the customers are using (i.e. – using more energy efficient technology driving the typical savings upward), or changes in the pattern of energy usage. While the exact cause of the programs' savings change cannot be determined, in Tampa Electric's 2015-2024 DSM Plan, the company used the following four sources of information to obtain the cost-effectiveness inputs for energy kWh savings and summer and winter demand kW savings for the supporting DSM Programs:

1. Itron data: The 2009 Itron Technical Potential Study was updated as part of the order establishing procedure for the recent numeric conservation goals docket. This updated information contains the specific measures that are contained in the proposed DSM program, and this data is considered an accurate source of information and may be used for cost-effectiveness tests.
2. Historical data: Tampa Electric has cost-effectively offered DSM programs for over 30 years. The company captures data regarding the programs offered, and when a substantial amount of historical data has been gained, this information is used in cost-effectiveness tests.
3. Load research data: Tampa Electric utilized its internal Load Research Department to analyze specific measures or programs where similar customers can be clearly separated into two control groups. These control groups are those that have participated in the specific measure or program and those that have not participated in any DSM program during the monitoring period. The difference in the two control groups' usage data provided inputs for cost-effectiveness tests.

**TAMPA ELECTRIC COMPANY
DOCKET NO. 2020053-EG
STAFF'S FOURTH DATA REQUEST
REQUEST NO. 3
PAGE 2 OF 5
FILED: JUNE 5, 2020**

4. DOE2 software: Energy Gauge software produced by the Florida Solar Energy Center was used to evaluate residential building energy improvements. In these simulations, the resulting data was used for cost-effectiveness tests.

In Tampa Electric's proposed 2020-2029 DSM Plan, the company used the following four sources of information to obtain the cost-effectiveness inputs for energy kWh savings and summer and winter demand kW savings for the supporting DSM Programs:

1. Nexant data: The new 2019 Nexant Technical Potential Study was completed to support the development of the company's proposed DSM goals for the recent numeric conservation goals docket. When this information contains the specific measures that are contained in the proposed DSM program, this data is considered an accurate source of information and may be used for cost-effectiveness tests. As stated in Nexant's Market Potential Study Report, the study was designed to "Collect cost and impact data for measures: For those measures passing the qualitative screening, conduct market research and estimate costs, energy, measure life, and demand savings. We differentiated between the type of cost (capital, installation labor, maintenance, etc.) to separately evaluate different implementation modes: retrofit (capital plus installation labor plus incremental maintenance); new construction (incremental capital and incremental maintenance); and burnout costs (incremental capital and incremental maintenance)". The report was filed on April 12, 2019 as Document No. 3 of Tampa Electric's Petition for the Commission Review of Numeric Conservation Goals for Tampa Electric within Docket No. 20190021-EG.
2. Historical data: Tampa Electric has cost-effectively offered DSM programs for almost 40 years. The company captures data regarding the programs offered and when a substantial amount of history has been gained, this information is used in cost-effectiveness tests.
3. Load Research data: Tampa Electric utilized its internal Load Research Department to analyze specific measures or programs where similar customers can be clearly separated into two control groups. These control groups are those that have participated in the specific measure or program and those that have not participated in any DSM program during the monitoring period. The difference in the

two control groups' usage data provided inputs for cost-effectiveness tests.

4. DOE2 software: Energy Gauge software produced by the Florida Solar Energy Center was used to evaluate residential building energy improvements. In these simulations, the resulting data was used for cost-effectiveness tests.

The following tables provide the source for the differences in projected annual program savings for like programs when comparing the company's "Existing Programs" and "Proposed Programs".

**TAMPA ELECTRIC COMPANY
DOCKET NO. 20200053-EG
STAFF'S FOURTH DATA REQUEST
REQUEST NO. 3
PAGE 4 OF 5
FILED: JUNE 5, 2020**

Residential Programs	Reason for Changes in Annual Energy, Summer kW and/or Winter kW Contributions
Walk-Through audit (Free)	Updated Energy Auditing program analysis, No change, behavioral savings not quantified
Customer Assisted audit (Online)	Updated Energy Auditing program analysis, No change, behavioral savings not quantified
Computer Assisted audit (RCS - Paid)	Updated Energy Auditing program analysis, No change, behavioral savings not quantified
Ceiling Insulation	Updated values obtained during updated/current DOE2 software (Energy Guage) analysis
Residential Duct Repair	Updated values obtained from Nexant TPS
Electronically Commutated Motors	Program proposed to be discontinued
Energy and Renewable Education, Awareness and Agency Outreach	Updated values obtained from Nexant TPS
ENERGY STAR for Multi-Family Residences	Updated values obtained during updated/current DOE2 software (Energy Guage) analysis
ENERGY STAR for New Homes	Updated values obtained from Nexant TPS
ENERGY STAR Pool Pumps	New Program, Nexant TPS provided values
ENERGY STAR Thermostats	New Program, Nexant TPS provided values
Heating and Cooling	Updated values obtained from Nexant TPS
Neighborhood Weatherization	Updated values obtained from Nexant TPS
Energy Planner	Updated values from Energy Planner program analysis
Prime Time Plus	New Program, Nexant TPS provided values
Wall Insulation	Program proposed to be discontinued
Window replacement	Updated values obtained during updated/current DOE2 software (Energy Guage) analysis

**TAMPA ELECTRIC COMPANY
DOCKET NO. 2020053-EG
STAFF'S FOURTH DATA REQUEST
REQUEST NO. 3
PAGE 5 OF 5
FILED: JUNE 5, 2020**

Current Commercial	Reason for Changes in Annual Energy, Summer kW and/or Winter kW Contributions
Commercial/Industrial audit (Free)	Updated Energy Auditing program analysis, No change, behavioral savings not quantified
Comprehensive Commercial/Industrial audit (Paid)	Updated Energy Auditing program analysis, No change, behavioral savings not quantified
Ceiling Insulation	Program proposed to be discontinued
Chiller	Updated values obtained from Nexant TPS
Cogeneration	No changes
Conservation Value	Updated values based upon recent data from historical customer participation
Cool roof	Program proposed to be discontinued
Cooling - DX	Updated values obtained from Nexant TPS
Demand Response	Updated values based upon recent data from historical customer participation
Duct repair	Program proposed to be discontinued
Electronically Commutated Motors	Program proposed to be discontinued
Facility Energy Management System	New Program, Nexant TPS provided values
Industrial Load Management (GSLM - 2 & 3)	Updated values based upon recent data from historical customer participation
LED Street and Outdoor Lighting Conversion	No changes
Lighting - Conditioned	Updated values based upon recent data from historical customer participation
Lighting - Non-Conditioned	Updated values based upon recent data from historical customer participation
Lighting - Occupancy sensors	Updated values based upon recent data from historical customer participation
Thermal Energy Storage	Program proposed to be discontinued
Commercial Load Management (GSLM - 1)	No changes
Anti-condensate	Program proposed to be discontinued
Smart Thermostats	New Program, Nexant TPS provided values
Standby generator	Updated values based upon recent data from historical customer participation
Variable Frequency Drive Control for Compressors	New Program, Nexant TPS provided values
Wall Insulation	Program proposed to be discontinued
Water heating	Updated values obtained from Nexant TPS

**TAMPA ELECTRIC COMPANY
DOCKET NO. 20200053-EG
STAFF'S FOURTH DATA REQUEST
REQUEST NO. 4
PAGE 1 OF 3
FILED: JUNE 5, 2020**

- 4.** Please refer to TECO's response to staff's third data request, number 5. Please explain the reason for all differences in projected annual program participation for like programs when comparing the Utility's Existing Programs and Proposed Programs.

- A.** The following tables provide the source for the differences in projected annual program participation for like programs when comparing the company's "Existing Programs" and "Proposed Programs".

**TAMPA ELECTRIC COMPANY
DOCKET NO. 2020053-EG
STAFF'S FOURTH DATA REQUEST
REQUEST NO. 4
PAGE 2 OF 3
FILED: JUNE 5, 2020**

Residential Programs	Reason for Changes in Annual Program Participation
Walk-Through Audit (Free)	Participation lowered in Proposed Program based upon on historical customer participation and shifting energy audits to Neighborhood Weatherization program
Customer Assisted Audit (Online)	Participation increased in the Proposed Program based upon revamp of Online Audit platform
Computer Assisted Audit (RCS - Paid)	Participation increased in Proposed Program based on historical customer participation
Ceiling Insulation	No change in the Proposed Program participation
Residential Duct Repair	Participation increased in Proposed Program based on historical customer participation
Electronically Commutated Motors	Program proposed to be discontinued
Energy and Renewable Education, Awareness and Agency Outreach	Participation increased in Proposed Program based on historical customer participation
ENERGY STAR for Multi-Family Residences	Participation lowered in Proposed Program based on historical customer participation
ENERGY STAR for New Homes	Participation increased in Proposed Program based on historical customer participation
ENERGY STAR Pool Pumps	Proposed new program, participation based on projected customer participation
ENERGY STAR Thermostats	Proposed new program, participation based on projected customer participation
Heating and Cooling	Participation lowered in Proposed Program based on historical customer participation
Neighborhood Weatherization	Participation lowered in Proposed Program based on historical customer participation
Energy Planner	Participation lowered in Proposed Program based on historical customer participation
Prime Time Plus	Proposed new program, participation based on projected customer participation
Wall Insulation	Program proposed to be discontinued
Window Replacement	Participation increased in Proposed Program based on historical customer participation

**TAMPA ELECTRIC COMPANY
DOCKET NO. 2020053-EG
STAFF'S FOURTH DATA REQUEST
REQUEST NO. 4
PAGE 3 OF 3
FILED: JUNE 5, 2020**

Commercial Programs	Reason for Changes in Annual Program Participation
Commercial/Industrial Audit (Free)	No change in the Proposed Program participation
Comprehensive Commercial/Industrial Audit (Paid)	No change in the Proposed Program participation
Ceiling Insulation	Program proposed to be discontinued
Chiller	No change in the Proposed Program participation
Cogeneration	No change in the Proposed Program participation
Conservation Value	Participation lowered in Proposed Program based on historical customer participation
Cool Roof	Program proposed to be discontinued
Cooling - DX	Participation lowered in Proposed Program based on historical customer participation
Demand Response	No change in the Proposed Program participation
Duct Repair	Program proposed to be discontinued
Electronically Commutated Motors	Program proposed to be discontinued
Facility Energy Management System	Proposed new program, participation based on projected customer participation
Industrial Load Management (GSLM - 2 & 3)	No change in the Proposed Program participation
LED Street and Outdoor Lighting Conversion	No change in the Proposed Program participation
Lighting - Conditioned	Participation increased in Proposed Program based on historical customer participation
Lighting - Non-Conditioned	Participation increased in Proposed Program based on historical customer participation
Lighting - Occupancy sensors	No change in the Proposed Program participation
Thermal Energy Storage	Program proposed to be discontinued
Commercial Load Management (GSLM - 1)	No change in the Proposed Program participation
Refrigeration Anti-Condensate Control	Program proposed to be discontinued
Smart Thermostats	Proposed new program, participation based on projected customer participation
Standby Generator	No change in the Proposed Program participation
Variable Frequency Drive Control for Compressors	Proposed new program, participation based on projected customer participation
Wall Insulation	Program proposed to be discontinued
Water Heating	No change in the Proposed Program participation

**TAMPA ELECTRIC COMPANY
DOCKET NO. 2020053-EG
STAFF'S FOURTH DATA REQUEST
REQUEST NO. 5
PAGE 1 OF 2
FILED: JUNE 5, 2020**

5. Please refer to TECO’s response to staff’s third data request, number 6. Please detail the reason for all projected program cost increases for the Utility’s Proposed Programs as compared to its Existing Programs.
- A. The following tables provide the source for all projected program cost increases in projected annual program costs when comparing the company’s “Existing Programs” and “Proposed Programs”. The following program cost increases are due to either an increase program administrative costs to facilitate the program or an increase in program incentives rebated to customers. All other programs either had no change, decrease in program costs, or are proposed to be discontinued.

Residential Programs	Reason for increase in Annual Program Costs
Walk-Through Audit (Free)	Administrative costs increased to \$228 due to current historical costs, and the addition of conservation advertising costs to the program
Computer Assisted Audit (RCS - Paid)	Administrative costs increased to \$325 due to current historical costs, and the addition of conservation advertising costs to the program
Ceiling Insulation	Program incentives increased to \$.015 per square foot due to program's cost-effectiveness to drive more participation
Energy and Renewable Education, Awareness and Agency Outreach	Administrative costs increased to \$44 due to current historical costs, and the addition of conservation advertising costs to the program
ENERGY STAR for New Homes	Program incentives increased to \$1,000 per rebate due to program's cost-effectiveness to drive more participation to home builders that currently do not build to energy star standards
Neighborhood Weatherization	Administrative costs increased to \$814 due to current historical costs, addition of conservation advertising costs to the program and the addition of the Walk-Through Energy Audit. Increase slightly offset by the removal of water heating blankets from installed measures
Energy Planner	Administrative costs increased to \$896 due to current historical costs and the addition of conservation advertising costs to the program

**TAMPA ELECTRIC COMPANY
DOCKET NO. 2020053-EG
STAFF'S FOURTH DATA REQUEST
REQUEST NO. 5
PAGE 2 OF 2
FILED: JUNE 5, 2020**

Commercial Programs	Reason for increase in Annual Program Costs
Commercial/Industrial Audit (Free)	Administrative costs increased to \$413 due to current historical costs, and the addition of conservation advertising costs to the program
Comprehensive Commercial/Industrial Audit (Paid)	Administrative costs increased to \$912 due to current historical costs, and the addition of conservation advertising costs to the program
Cooling - DX	Program incentives increased to \$19 per ton due to program's cost-effectiveness to drive more participation
Industrial Load Management (GSLM - 2 & 3)	Program incentives increased due to the Contracted Credit Value (CCV) in settlement agreements
Lighting - Conditioned	Program incentives increased to \$0.250 per Watt due to program's cost-effectiveness to drive more participation
Lighting - Non-Conditioned	Program incentives increased to \$0.200 per Watt due to program's cost-effectiveness to drive more participation
Lighting - Occupancy sensors	Program incentives increased to \$40 per sensor due to program's cost-effectiveness to drive more participation
Commercial Load Management (GSLM - 1)	Administrative costs increased to \$850 due to projected costs of retrofitting existing technology within the same technology the company uses in the Energy Planner Program
Standby Generator	Program incentives increased to \$5.35 per kW due to settlement agreements