

State of Florida



Public Service Commission

CAPITAL CIRCLE OFFICE CENTER • 2540 SHUMARD OAK BOULEVARD
TALLAHASSEE, FLORIDA 32399-0850

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

DATE: July 9, 2015

TO: Office of Commission Clerk (Stauffer)

FROM: Division of Engineering (Ellis, Mtenga) *SBS POE MM*
Division of Economics (S. Brown, Gilbert) *STH*
Office of the General Counsel (Ames) *AK*

RE: Docket No. 150088-EG – Petition for approval of modifications to demand-side management plan by Orlando Utilities Commission.

AGENDA: 07/21/15 – Regular Agenda – Proposed Agency Action – Interested Persons May Participate

COMMISSIONERS ASSIGNED: All Commissioners

PREHEARING OFFICER: Administrative

CRITICAL DATES: None

SPECIAL INSTRUCTIONS: Staff recommends the Commission simultaneously consider Docket Nos. 150081-EG, 150083-EG, 150085-EG, 150086-EG, 150087-EG, 150088-EG, and 150089-EG.

Case Background

By Order No. PSC-13-0645-PAA-EU, issued December 4, 2013, the Commission approved the use of a proxy methodology to establish the numeric demand-side management (DSM) goals for Orlando Utilities Commission (OUC).¹ By using this proxy methodology, OUC was able to avoid costs associated with performing the analyses required by the minimum testimony requirements which would have represented a hardship to their customers. OUC was instructed to file numeric goals based upon the proxy utility, Tampa Electric Company (TECO), within 10

¹ FPSC Order No. PSC-13-0645-PAA-EU, Docket No. 130204-EM, Commission review of numeric conservation goals (Orlando Utilities Commission), issued December 4, 2013.

days of the Final Order establishing goals for the 2015 through 2024 period. The Commission granted staff administrative authority to validate the calculations of the numeric conservation goals.

By Order No. PSC-14-0696-FOF-EU, issued December 16, 2014, the Commission established annual numeric goals for OUC's proxy.² On December 23, 2014, OUC filed its calculation of numeric conservation goals based upon its proxy utility.

On December 29, 2014, staff administratively approved the numeric conservation goals for the period 2015 through 2024.³ The DSM goals were established for both OUC's residential and commercial/industrial customer classes for three categories: summer peak demand, winter peak demand, and annual energy consumption.

Rule 25-17.0021(4), Florida Administrative Code (F.A.C.), requires a utility to file DSM programs for Commission approval no later than 90 days from when goals are established. On March 16, 2015, OUC filed a petition requesting approval of its DSM Plan. As part of this filing, OUC provided a cost-effectiveness analysis of the proposed programs pursuant to Rule 25-17.008, F.A.C.

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).

² FPSC Order No. PSC-14-0696-FOF-EU, Docket No., 130201-EI, Commission review of numeric conservation goals (Tampa Electric Company), issued December 16, 2014.

³ Document No. 06856-14 in Docket No. 130204-EI.

Discussion of Issues

Issue 1: Is OUC's DSM Plan projected to meet the Commission's annual numeric conservation goals established by the Commission in Order No. PSC-13-0645-PAA-EU?

Recommendation: OUC's DSM Plan is projected to meet or exceed the annual goals set by the Commission in all categories except winter peak demand for the commercial/industrial sector. However, OUC has not yet quantified savings from three existing commercial/industrial programs which may contribute towards meeting this goal. OUC is considering potential new programs to address this issue.

OUC's DSM Plan represents a continuation of existing programs and results in a small net increase in ratepayers' monthly rates. Although the Commission has allowed savings from audit programs to be counted towards achievement of DSM goals in previous proceedings, staff recommends that no behavioral savings be counted towards goals in this proceeding because behavioral savings are not directly monitorable. Even with the removal of projected savings from audits, OUC's DSM Plan meets or exceeds the annual goals set by the Commission, except as noted above. The Commission should approve the programs contained in OUC's DSM Plan. OUC's governing body will make its own determination as to whether expenditures are reasonable and prudent and will decide if it is necessary to modify, add, or remove programs.

Staff recommends that OUC file its administrative program standards for all programs within 30 days of the Consummating Order being issued in this docket and that the Commission grant staff administrative authority to review and approve these standards. (Mtenga)

Staff Analysis: The criteria used to review the appropriateness of conservation 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.⁴ Staff has reviewed OUC's DSM Plan, including its demand and energy savings, cost-effectiveness, and rate impact. The resulting demand and energy savings appear to not meet the goals established by the Commission in Order No. PSC-13-0645-PAA-EU. However, OUC has not quantified the savings from three existing programs. The programs that staff recommends should be counted towards the goals appear to be directly monitorable and measurable. Lastly, while the DSM Plan as a whole is not cost-effective, it represents a continuation of existing programs and will represent only a small increase in customer bills associated with conservation. As OUC is a municipal utility, the Commission does not review OUC's cost recovery process for its DSM programs.

Description of DSM Plan

OUC's DSM Plan consists of 15 programs. A complete list of the programs and a brief description of each can be found in Attachment A. Of the 15 programs, eight are residential and seven commercial/industrial. OUC has proposed to continue several existing programs with modifications to reflect current market conditions, as illustrated in Table 1-1 below.

⁴ FPSC Order No. 22176, Docket No. 890737-PU, Implementation of Section 366.80-.85, Florida Statutes, Conservation Activities of Electric and Natural Gas Utilities, issued November 14, 1989.

**Table 1-1
 OUC DSM Plan Program Listing**

Program Name	Program Status		
	Existing	Modified	New
Residential Programs			
Home Energy Survey	X		
Duct Repair/Replacement	X		
Ceiling Insulation Upgrade	X		
Window Film/Solar Screen	X		
High Performance Windows	X		
Efficient Electric Heat Pump	X		
New Home Rebate	X	X	
Residential Efficiency Delivered	X	X	
Commercial/Industrial Programs			
Energy Audits	X		
Efficient Electric Heat Pump	X		
Duct Repair/Replacement	X		
Window Film/Solar Screen	X		
Ceiling Insulation	X		
Cool/Reflective Roof	X		
Indoor Lighting	X		

Source: OUC DSM Plan Filing

Audit Programs

In accordance with Rule 25-17.003, F.A.C., OUC will continue to offer audit programs to its customers. OUC’s DSM Plan, as submitted, includes projected savings from audit programs for the residential sector through the Home Energy Surveys program and for the commercial/industrial sector through the Energy Audits program. While there may be many audit savings associated with customer behavior modifications, such savings are difficult to quantify and may expire before the end of the ten-year goal period. Although the Commission has allowed savings from these types of programs to be counted towards achieving DSM goals in previous proceedings, staff recommends that behavioral savings should no longer be counted towards achieving DSM goals because behavioral savings are not directly monitorable. Savings associated with actual equipment provided to participants, such as light bulbs, could still be included in the goal savings. Even with the savings associated with the remaining items and behavioral savings removed, OUC projects to meet its annual residential goals.

Comparison of DSM Plan to Goals

OUC’s DSM Plan, as modified by staff to exclude savings associated with residential energy audits, is projected to meet or exceed each of the established goals excluding commercial/industrial winter peak demand. However, OUC has not yet quantified savings from three existing commercial/industrial programs, Indoor Lighting, Indoor Lighting Billed Solutions, and Custom Incentive, which may contribute towards meeting this goal. The reason OUC did not include these programs towards the goals was uncertainty associated with the

amount of savings the programs would generate. In addition, OUC is considering the addition of new programs for retro-commissioning, building automation, and demand response.

The projected savings associated with the Commission’s established goals, OUC’s proposed DSM Plan, and staff’s modifications to the DSM Plan are summarized in Table 1-2 and Table 1-3 below.

**Table 1-2
 OUC Residential Sector Goals vs. DSM Plan and Staff’s Recommendation**

Year	Summer (MW)			Winter (MW)			Annual Energy (GWh)		
	Goal	DSM Plan	Staff Rec	Goal	DSM Plan	Staff Rec	Goal	DSM Plan	Staff Rec
2015	0.05	0.78	0.78	0.04	0.60	0.60	0.14	2.32	1.53
2016	0.08	0.78	0.78	0.08	0.60	0.60	0.30	2.32	1.53
2017	0.12	0.78	0.78	0.12	0.60	0.60	0.45	2.32	1.53
2018	0.16	0.78	0.78	0.16	0.60	0.60	0.60	2.32	1.53
2019	0.20	0.78	0.78	0.21	0.60	0.60	0.72	2.32	1.53
2020	0.21	0.78	0.78	0.21	0.60	0.60	0.77	2.32	1.53
2021	0.21	0.78	0.78	0.22	0.60	0.60	0.80	2.32	1.53
2022	0.19	0.78	0.78	0.20	0.60	0.60	0.72	2.32	1.53
2023	0.19	0.78	0.78	0.18	0.60	0.60	0.66	2.32	1.53
2024	0.16	0.78	0.78	0.16	0.60	0.60	0.57	2.32	1.53
Total⁵	1.57	7.82	7.82	1.58	6.02	6.02	5.73	23.15	15.23

Source: OUC DSM Plan and Staff Calculation

⁵ Totals may not equal due to rounding.

**Table 1-3
 OUC Com./Ind. Sector Goals vs. DSM Plan and Staff's Recommendation**

Year	Summer (MW)			Winter (MW)			Annual Energy (GWh)		
	Goal	DSM Plan	Staff Rec	Goal	DSM Plan	Staff Rec	Goal	DSM Plan	Staff Rec
2015	0.20	0.43	0.41	0.49	0.23	0.21	0.34	1.76	1.65
2016	0.28	0.43	0.41	0.57	0.23	0.21	0.50	1.76	1.65
2017	0.30	0.43	0.41	0.70	0.23	0.21	0.66	1.76	1.65
2018	0.36	0.43	0.41	0.70	0.23	0.21	0.75	1.76	1.65
2019	0.37	0.43	0.41	0.66	0.23	0.21	0.82	1.76	1.65
2020	0.39	0.43	0.41	0.70	0.23	0.21	0.85	1.76	1.65
2021	0.40	0.43	0.41	0.78	0.23	0.21	0.86	1.76	1.65
2022	0.37	0.43	0.41	0.78	0.23	0.21	0.85	1.76	1.65
2023	0.39	0.43	0.41	0.74	0.23	0.21	0.82	1.76	1.65
2024	0.36	0.43	0.41	0.70	0.23	0.21	0.80	1.76	1.65
Total⁶	3.42	4.31	4.11	6.82	2.29	2.09	7.25	17.64	16.49

Source: OUC DSM Plan and Staff Calculation

The values presented above are projections based upon participation rates which may or may not occur. OUC will be responsible for monitoring actual participation rates. OUC is a municipal utility and its governing body will decide if it is necessary to modify, add, or remove programs.

Section 366.82(10), F.S., requires that the Commission provide an annual report to the Governor and Legislature concerning the progress of each FEECA utility towards meeting its established goals. Rule 25-17.0021(5), F.A.C., requires that OUC submit an annual report that summarizes the achieved results of its DSM Plan no later than March 1 of each year. Staff will continue to monitor and report the actual amount of OUC's DSM savings each year, on an annual and cumulative basis, as part of the FEECA Report.

Cost-Effectiveness Review

Pursuant to Rule 25-17.008, F.A.C., OUC provided a cost-effectiveness analysis of its proposed programs using the RIM test, the Total Resource Cost (TRC) test, and the Participants test. While the Commission in Order No. PSC-14-0696-FOF-EU established goals based on the RIM test, staff reviewed the results for each test. Staff addresses the assumptions associated with OUC's avoided costs and program savings below.

Avoided Cost

OUC does not plan any additions to its generation fleet at this time, and its avoided cost does not include capacity benefits associated with deferring or delaying its next generating unit. OUC's avoided cost is therefore based on avoided energy only.

⁶ Totals may not equal due to rounding.

Program Savings

Seasonal peak demand and annual energy savings for OUC’s programs were also reviewed. OUC’s estimates and measures savings were determined using the Florida Integrated Resource Evaluator (FIRE) model to determine the most cost-effective method of evaluating program impacts. In accordance with Rule 25-17.003(10), F.A.C., OUC plans to conduct inspections of at least 10 percent of program installations to verify that the installations were performed and the installations meet quality standards.

Cost-Effectiveness Test Results

OUC performed a cost-effectiveness review of the programs included in the savings associated with the DSM Plan, including the RIM, TRC, and Participants tests. These tests consist of the benefits divided by the costs, as defined by Rule 25-17.008, F.A.C., so that programs are determined to be cost-effective if the result of the test is a ratio greater than 1.00. The programs in OUC’s DSM Plan are not cost-effective for the RIM test nor are the majority of the TRC and Participant tests, but represent a continuation of existing programs. Staff notes that OUC is a municipal utility that performs its own review of program costs and cost-effectiveness. The cost-effectiveness test results for each program are provided in Table 1-4 below.

**Table 1-4
 OUC Cost-Effectiveness Test Results by Program**

Program Name	RIM Test	TRC Test	Participants Test
Residential Programs			
Duct Repair/Replacement	0.10	0.04	0.26
Ceiling Insulation Upgrade	0.10	0.06	0.47
Window Film/Solar Screen	0.06	0.02	0.22
High Performance Windows	0.10	0.02	0.32
Efficient Electric Heat Pump	0.06	0.04	0.72
New Home	0.20	0.80	1.00
Residential Efficiency Delivered	0.07	0.13	2.94
Commercial/Industrial Programs			
Efficient Electric Heat Pump	0.24	0.05	0.46
Duct Repair/Replacement	0.15	0.01	0.07
Window Film/Solar Screen	0.06	0.28	5.62
Ceiling Insulation	0.10	0.60	9.72
Cool/Reflective Roof	0.25	0.19	0.69

Source: OUC’s DSM Plan Filing and Staff Calculation

To perform the calculations in Table 1-4 above, OUC estimated the administrative costs for implementing the programs, and added it as a cost to the relevant tests. In general, OUC should continue to explore ways to reduce the administrative costs associated with its DSM Plan. As stated, OUC is a municipal utility, therefore, the Commission does not review OUC’s cost recovery process for its DSM programs.

Rate Impact

Overall, the impact of OUC’s DSM Plan is a small portion of a customer’s bill, and is anticipated to increase over the ten-year period compared to 2014. Table 1-5 below, is an estimate of the monthly rate impact of OUC’s DSM Plan on a typical residential and commercial/industrial customer over a 10-year period.

**Table 1-5
 OUC Estimated Monthly Bill Impact of Proposed DSM Plan**

Year	Residential Customer (1200 kWh/mo)		Commercial/Industrial Customer (400,000 kWh/mo, 1000 kW)	
	Bill Impact (\$/mo)	Savings From 2014	Bill Impact (\$/mo)	Savings From 2014
2014	\$0.55	n/a	\$146.74	n/a
2015	\$0.55	\$0.00	\$146.74	\$0.00
2016	\$0.56	(\$0.01)	\$148.94	(\$2.20)
2017	\$0.57	(\$0.02)	\$151.18	(\$4.44)
2018	\$0.58	(\$0.03)	\$153.44	(\$6.70)
2019	\$0.59	(\$0.03)	\$155.75	(\$9.00)
2020	\$0.60	(\$0.04)	\$158.08	(\$11.34)
2021	\$0.61	(\$0.05)	\$160.45	(\$13.71)
2022	\$0.61	(\$0.06)	\$162.86	(\$16.12)
2023	\$0.62	(\$0.07)	\$165.30	(\$18.56)
2024	\$0.63	(\$0.08)	\$167.78	(\$21.04)

Source: OUC response to staff data request

OUC’s DSM Plan includes a variety of programs that would allow participation by a wide spectrum of customer groups, including low-income, residential, and commercial/industrial customers. By participating in a DSM program, customers should be able to reduce their bills, potentially eliminating the additional cost associated with OUC’s DSM Plan.

Conclusion

OUC’s DSM Plan is projected to meet or exceed the annual goals set by the Commission in all categories except winter peak demand for the commercial/industrial sector. However, OUC has not yet quantified savings from three existing commercial/industrial programs which may contribute towards meeting this goal. OUC is considering potential new programs to address this issue.

OUC’s DSM Plan represents a continuation of existing programs and results in a small net increase in ratepayers’ monthly rates. Although the Commission has allowed savings from audit programs to be counted towards achievement of DSM goals in previous proceedings, staff recommends that no behavioral savings be counted towards goals in this proceeding because behavioral savings are not directly monitorable. Even with the removal of projected savings from audits, OUC’s DSM Plan meets or exceeds the annual goals set by the Commission, except as noted above. The Commission should approve the programs contained in OUC’s DSM Plan.

OUC's governing body will make its own determination as to whether expenditures are reasonable and prudent and will decide if it is necessary to modify, add, or remove programs.

Staff recommends that OUC file its administrative program standards for all programs within 30 days of the Consummating Order being issued in this docket and that the Commission grant staff administrative authority to review and approve these standards.

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. If the Commission approves any programs, the programs should become effective on the date of the Consummating Order. If a protest is filed within 21 days of the issuance of the PAA Order, the programs should not be implemented until after the resolution of the protest. However, the docket should remain open for staff's verification that the program standards have been filed by the utility and approved by staff. When the PAA issues become final and the program standards have been approved, this docket should be closed administratively. (Ames)

Staff Analysis: 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. If the Commission approves any programs, the programs should become effective on the date of the Consummating Order. If a protest is filed within 21 days of the issuance of the PAA Order, the programs should not be implemented until after the resolution of the protest. However, the docket should remain open for staff's verification that the program standards have been filed by the utility and approved by staff. When the PAA issues become final and the program standards have been approved, this docket should be closed administratively.

Orlando Utilities Commission- 2015 DSM Programs

Residential Programs:

Home Energy Survey Program

OUC will provide three types of Residential Energy Surveys (walk-through, DVD, and on-line) designed to provide customers with energy conservation advice and to encourage the implementation of efficiency measures resulting in energy savings. The survey process includes a complete examination of the attic; heating, ventilation, and air conditioning (HVAC) system; air duct and air returns; window caulking; weather stripping around doors; faucets and toilets; and lawn sprinkler systems. Follow-up work monitors and tracks the installation of additional conservation features and/or duct repairs. The primary benefit of the Residential Energy Survey Program is the education it provides to customers on energy conservation measures and ways their lifestyle can directly affect their energy use.

Duct Repair/Replacement Rebate

The Duct Repair Rebate Program originated in 2000 and is designed to encourage customers to repair leaking ducts on existing systems. Qualifying customers must have an existing central air conditioning system of 5.5 tons or less.

- Customers will receive up to a \$160 rebate for duct repairs on their homes.

Ceiling Insulation Upgrade Rebate

The ceiling insulation rebate program is designed to encourage customers to upgrade their attic insulation.

- Customers receive \$0.05 per square foot for upgrading their attic insulation up to R-30 and if verified that the existing insulation is R-11 or less, OUC will pay a rebate of \$0.14 per square foot.

Window Film / Solar Screen Rebate

The window film/solar screen rebate program is designed to encourage customers to install solar shading on their windows.

- Customers will receive a rebate in the amount of \$1 per square foot for installation of solar shading film with a solar heat gain coefficient (SHGC) of 0.44 or shading coefficient of 0.5 or less on east, west and south facing windows.

High Performance Windows Rebate

Energy-efficient windows can help minimize heating, cooling, and lighting costs. The high performance windows rebate program is designed to encourage customers to install windows that improve energy efficiency in their homes.

- Customers will receive a \$2 rebate per square foot for the purchase of ENERGY STAR® rated energy efficient windows.

Efficient Electric Heat Pump Rebate

The efficient electric heat pump rebate program has been offered for several years and provides rebates to qualifying customers in existing homes who install heat pumps having a seasonal energy efficiency ratio (SEER) of 15.0 or higher.

- Customers will obtain rebate in the form of a credit on their bill ranging from \$20 to \$1275, depending on the SEER rating and capacity (tons) of the new heat pump.

New Home Rebate

Previously known as The Residential Gold Ring Home Program it is now a flexible “a la carte” program offering various choices for the builder or homebuyer. The chart below reflects an example of the incentives available.

Rebate	Rate of Rebate	Square Footage
Cool/Reflective Roof	\$0.04 per sq. ft.	2,000
Block Wall Insulation	\$0.16 per sq. ft.	1,100
Ceiling Insulation Upgrade to R-38	\$0.04 per sq. ft.	2,000
Heat Pump	up to \$1,275	2,000
Energy Star® Washing Machine	\$100	NA
Energy Star® Heat Pump Water Heater	\$650	NA
Solar Water Heater	\$1000	NA

Residential Efficiency Delivered Program

The Residential efficiency delivered program is formally known as the home energy fix-up program and is available to residential customers with a total annual family income of \$40,000 or less. Each customer must request and complete a free Residential Energy Survey. Ordinarily, Energy Survey recommendations require a customer to spend money replacing or adding energy conservation measures, which low-income customers may not have the discretionary income to implement.

- Under this program, OUC will arrange for a licensed, approved contractor to perform the necessary repairs and will pay 85 percent of the total cost, not to exceed \$2,000. The remaining 15 percent can be paid directly or over an interest-free 12-month period on the participant's monthly electric bill.

Commercial Programs:

Commercial/Industrial Programs Commercial Energy Audits

The commercial/ industrial energy audit program has been offered for several years and is focused on increasing the energy efficiency and energy conservation of commercial buildings and includes a free survey composed of a physical walk-through inspection of the commercial facility performed by trained energy experts. The survey will examine heating and air conditioning systems including duct work refrigeration equipment, lighting, water heating, motors, process equipment, and the thermal characteristics of the building including insulation.

Efficient Electric Heat Pump Rebates

The efficient electric heat pump rebate program started in 2009. The program provides rebates to qualifying customers in existing buildings who install heat pumps having a seasonal energy efficiency ratio (SEER) of 15.0 or higher.

- Customers will obtain a rebate in the form of a credit on their bill ranging from \$80 to \$1275 depending upon the SEER rating and capacity of the new heat pump.

Duct Repair Rebates

The duct repair rebate program started in 2009.

- OUC will rebate 100 percent of the cost, up to \$160 on repairs made to leaking ducts on existing systems that are 5.5 tons or less.

Window Film/Solar Screen Rebates

The window film/solar screen rebate program started in 2009 and is designed to help reflect the heat during hot summer days and retain heat on cool winter days.

- OUC will rebate customers \$1 per square foot, for window tinting and solar screening with a shading coefficient of 0.5 or less.

Ceiling Insulation Rebates

The ceiling insulation rebate program started in 2009 and was designed to increase a building's resistance to heat loss and gain.

- OUC will rebate customers \$0.05 per square foot, for upgrading their attic insulation up to R-30. If the customer arranges an OUC pre-inspection and it is verified the existing insulation is R-11 or less, OUC will pay a rebate of \$0.14 per square foot.

Cool/Reflective Roof Rebates

The cool/reflective roofs rebate program started in 2009 and was designed to reflect the sun's rays and lower roof surface temperature while increasing the lifespan of the roof.

- OUC will rebate customers at \$0.14 per square foot for ENERGY STAR@ cool/reflective roofing that has an initial solar reflectance greater than or equal to 0.70.

Indoor Lighting

The indoor lighting retrofit program reduces energy consumption for the commercial customer through the replacement of older fluorescent and incandescent lighting with newer, more efficient lighting technologies. A special alliance between OUC and the lighting contractor enables OUC to offer the customer a discounted project cost.