

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-**

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**DATE:** July 9, 2015

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

**FROM:** Division of Engineering (Ellis, Mtenga) *POE Mmm PV*  
Division of Economics (S. Brown, Margolis) *SB*  
Office of the General Counsel (Ames) *4 Key R.M. JSHG8*

**RE:** Docket No. 150087-EG – Petition for approval of modifications to demand-side management plan by JEA.

**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.

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### Case Background

By Order No. PSC-14-0696-FOF-EU, the Commission established annual numeric demand-side management (DSM) goals for JEA for the period 2015 through 2024.<sup>1</sup> Unlike other utilities, JEA's goals were determined by stipulation. The DSM goals were established for both JEA's residential and commercial/industrial customer classes for three categories: summer peak demand, winter peak demand, and annual energy consumption.

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<sup>1</sup> FPSC Order No. PSC-14-0696-FOF-EU, Docket No. 130203-EI Commission review of numeric conservation goals (JEA), issued December 16, 2014.

Docket No. 150087-EG

Date: July 9, 2015

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, JEA filed a petition requesting approval of its DSM Plan. As part of this filing, JEA 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).

## Discussion of Issues

**Issue 1:** Is JEA's DSM Plan projected to meet the annual numeric conservation goals established by the Commission in Order No. PSC-14-0696-FOF-EU?

**Recommendation:** Yes. JEA's DSM Plan is projected to meet or exceed the annual numeric conservation goals set by the Commission in Order No. PSC-14-0696-FOF-EU. However, JEA's DSM Plan is projected not to be cost-effective based upon the Rate Impact Measure (RIM) test. The Commission should allow JEA to continue programs giving consideration to JEA's status as a municipal utility, where the local governing body is given the latitude to make local decisions regarding the community investment in energy efficiency. JEA'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 and or remove programs.

Finally, staff recommends that JEA 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 the conservation programs is: (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.<sup>2</sup> Staff has reviewed JEA's DSM Plan, including its demand and energy savings, cost-effectiveness, and rate impact. JEA's DSM Plan meets or exceeds the goals that were set by stipulation established in Order No. PSC-14-0696-FOF-EU.

### Description of DSM Plan

JEA's DSM Plan consists of six programs. A complete list of the programs and a brief description of each program can be found in Attachment A. Of the six programs, four are residential and two are commercial. JEA performed an analysis of the customer-owned energy efficiency measures and found none to be cost-effective. However, by the stipulation JEA will continue to offer DSM programs, as illustrated in Table 1-1 below.

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<sup>2</sup> 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  
 JEA DSM Plan Program Listing**

Program Name	Program Status		
	Existing	Modified	New
<b>Residential Programs</b>			
Residential Energy Audit	X		
Residential Solar Water Heating	X	X	
Residential Net Metering	X		
Neighborhood Efficiency Program	X		
<b>Commercial/Industrial Programs</b>			
Business Energy Audits	X		
Commercial Net Metering	X		

Source: JEA DSM Filing

***Audit Programs***

As required by Rule 25-17.003, F.A.C., JEA will continue to offer energy audits to each sector, residential and commercial/industrial. JEA's audit programs focus on behavioral savings. Although the Commission has allowed savings from these types of programs to be counted towards achievement of DSM goals in previous proceedings, staff is recommending that no behavioral savings be counted towards goals for the other FEECA utilities. However, the stipulation that approved JEA's goals included estimated savings from continuing core programs, including audits.

***Comparison of DSM Plan to Goals***

Based on JEA's filings the DSM Plan will meet or exceed the established goals. The savings associated with JEA's proposed DSM Plan and the Commission's established goals are summarized in Table 1-2 and Table 1-3 for residential and commercial sectors.

**Table 1-2  
 JEA Residential Sector Goals vs. DSM Plan**

Year	Summer (MW)		Winter (MW)		Annual Energy (GWh)	
	Goal	DSM Plan	Goal	DSM Plan	Goal	DSM Plan
2015	0.94	1.2	0.96	1.03	2.50	2.67
2016	0.94	1.2	0.96	1.03	2.50	2.67
2017	0.94	1.2	0.96	1.03	2.50	2.67
2018	0.94	1.2	0.96	1.03	2.50	2.67
2019	0.94	1.2	0.96	1.03	2.50	2.67
2020	0.94	1.2	0.96	1.03	2.50	2.67
2021	0.94	1.2	0.96	1.03	2.50	2.67
2022	0.94	1.2	0.96	1.03	2.50	2.67
2023	0.94	1.2	0.96	1.03	2.50	2.67
2024	0.94	1.2	0.96	1.03	2.50	2.67
<b>Total<sup>3</sup></b>	<b>9.40</b>	<b>12.0</b>	<b>9.60</b>	<b>10.30</b>	<b>25.0</b>	<b>26.7</b>

Source: JEA DSM Plan Filing

**Table 1-3  
 JEA Commercial Sector Goals vs. DSM Plan**

Year	Summer (MW)		Winter (MW)		Annual Energy (GWh)	
	Goal	DSM Plan	Goal	DSM Plan	Goal	DSM Plan
2015	0.140	0.144	0.007	0.025	0.08	0.44
2016	0.140	0.144	0.007	0.025	0.08	0.44
2017	0.140	0.144	0.007	0.025	0.08	0.44
2018	0.140	0.144	0.007	0.025	0.08	0.44
2019	0.140	0.144	0.007	0.025	0.08	0.44
2020	0.140	0.144	0.007	0.025	0.08	0.44
2021	0.140	0.144	0.007	0.025	0.08	0.44
2022	0.140	0.144	0.007	0.025	0.08	0.44
2023	0.140	0.144	0.007	0.025	0.08	0.44
2024	0.140	0.144	0.007	0.025	0.08	0.44
<b>Total<sup>4</sup></b>	<b>1.400</b>	<b>1.440</b>	<b>0.070</b>	<b>0.250</b>	<b>0.800</b>	<b>4.40</b>

Source: JEA DSM Plan Filing

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

<sup>3</sup> Totals may not equal due to rounding.

<sup>4</sup> Totals may not equal due to rounding.

Section 366.82(10), F.S., requires the Commission to provide an annual report to the Governor and Legislature on the progress of each utility toward meeting the established goals. Rule 25-17.0021(5), F.A.C., requires JEA to submit an annual report no later than March 1 of each year which summarizes the achieved results of its DSM Plan. Staff will continue to monitor and report the actual amount of DSM savings each year, on an annual and cumulative basis, as part of the FEECA Report. The Commission can address JEA's goal achievements if/when the utility files a determination of need pursuant to Section 403.519, F.S.

### **Cost-Effectiveness Review**

As required by Rule 25-17.008, F.A.C., JEA provided a cost-effectiveness analysis of the proposed programs using the RIM test, the Total Resource Cost (TRC) test and the Participants test. Commission Order No. PSC 14-0696-FOF-EU established goals for JEA based on stipulation which assumed a continuation of existing programs. Below, staff addresses the assumptions associated with the JEA's avoided costs and program savings.

#### ***Avoided Cost***

All avoided capacity additions were modeled as a series of natural gas-fired simple cycle combustion turbines, with projected in-service dates in the years 2036, 2038, 2040, and 2043. JEA's avoided unit is consistent with the utility's filings in the goal-setting proceeding in Docket No 130203-EM.

#### ***Program Savings***

Seasonal peak demand and annual energy savings for the programs were also reviewed. JEA estimates and measures savings by a program using a combination of methodologies including site-specific engineering estimates as the most cost-effective method of evaluating program impacts. As required by Rule 25-17.003(10), F.A.C., JEA will conduct inspections of at least 10 percent of program installations to verify that installations were performed and meet quality standards.

#### ***Cost-Effectiveness Test Results***

The cost-effectiveness analysis of JEA's demand-side programs shows that they are not cost-effective under the RIM test. Table 1-4 below shows that the Residential and Commercial Energy Audits and the Neighborhood Efficiency Program pass both the Participants and TRC tests. However, for the purposes of setting goals for JEA pursuant to Section 366.82, Florida Statutes, the Commission should continue to evaluate cost-effectiveness using the tests set forth in Rule 25-17.008, F.A.C., with consideration of JEA's status as a municipal utility. Because the RIM test ensures no impact to customer's rates, it is appropriate in establishing DSM goals. However, for municipal utilities such as JEA, local decisions fall within the jurisdiction of JEA's governing body regarding the investment in energy efficiency that best suits local needs and values. Accordingly, as the Commission has recognized in prior proceedings, it is appropriate to defer to municipal utilities' governing bodies to determine the level of investment if measures are not cost-effective.

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

Program Name	RIM Test	TRC Test	Participants Test
<b>Residential Programs</b>			
Residential Energy Audits	0.46	1.08	160
Residential Solar Water Heating	0.72	0.50	0.65
Residential Net Metering	0.87	0.39	0.40
Neighborhood Efficiency Program	0.51	1.45	687
<b>Commercial Programs</b>			
Business Energy Audits	0.73	1.50	304
Commercial Net Metering	0.91	0.36	0.28

Source: JEA DSM Plan Filing

**Rate Impact**

The cost to implement the programs of JEA’s DSM Plan would be established by the municipal utility’s governing body. Pursuant to the stipulation in Docket 130203-EM, JEA is committed to offering certain core programs, including neighborhood efficiency, residential/commercial energy audits, solar water heating incentives and residential/commercial solar net metering.

Overall, the DSM programs are a small amount of the customer’s bill. Table 1-5 below is an estimate of the monthly bill impact on the typical residential and commercial customer over a ten-year period. The estimated costs are based upon participation rates and administrative costs used in the cost-effectiveness analysis. Much like investments in generation, transmission, and distribution, investments in energy efficiency have an immediate rate impact, but produce savings over time.

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

Year	Residential Customer 1,200 kWh/mo		Commercial/Industrial Customer 400,000 kWh/mo & 1,000 kW Peak	
	Monthly Bill Impact (\$)	Savings from 2014	Monthly Bill Impact (\$)	Savings from 2014
2014	\$0.26	n/a	\$86.28	n/a
2015	\$0.14	\$0.12	\$46.61	\$39.67
2016	\$0.14	\$0.12	\$47.30	\$38.98
2017	\$0.14	\$0.12	\$48.00	\$38.28
2018	\$0.15	\$0.11	\$48.73	\$37.55
2019	\$0.15	\$0.11	\$49.45	\$36.83
2020	\$0.15	\$0.11	\$50.21	\$36.07
2021	\$0.15	\$0.11	\$50.97	\$35.31
2022	\$0.16	\$0.10	\$51.73	\$34.55
2023	\$0.16	\$0.10	\$52.52	\$33.76
2024	\$0.16	\$0.10	\$53.30	\$32.98

Source: JEA’s Response to Staff Data Request

**Conclusion**

JEA's DSM Plan is projected to meet or exceed the annual numeric conservation goals set by the Commission in Order No. PSC-14-0696-FOF-EU. However, JEA's DSM Plan is projected not to be cost-effective based upon the Rate Impact Measure (RIM) test. The Commission should allow JEA to continue programs giving consideration to JEA's status as a municipal utility, where the local governing body is given the latitude to make local decisions regarding the community investment in energy efficiency. JEA'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 and or remove programs.

Finally, staff recommends that JEA 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.

## **JEA- 2015 DSM Programs**

### **Residential Programs:**

#### ***Residential Energy Audit Program***

JEA offers a home energy survey for all residential customers at no charge. A JEA representative inspects the home and offers cost-effective ideas designed to help lower energy costs. Areas of the customer's home that are inspected include: attic insulation, windows and caulking, weather stripping, water heaters, water temperature, air conditioning and heating system visual inspections, supply air & return air temperature readings, and refrigerator/freezer inspection. JEA representatives also use a wide variety of tools and literature for customer education during the inspection. No cost measures such as air conditioning & heating thermostat temperature settings, proper use of ceiling fans, water heater settings, refrigeration temperature settings, management of plug (vampire) loads, management of computer, monitor and printer loads, management of lighting systems and cleaning surfaces of heat exchangers are encouraged.

#### ***Residential Solar Water Heating***

This program pays a financial incentive to customers to encourage the use of solar water heating technology. There is an \$800 incentive per installed solar water heating system.

#### ***Residential Net Metering***

The Residential Solar Net Metering Program promotes the use of solar photovoltaic systems by purchasing excess power from residential customers implementing these systems. JEA will allow customer-owned renewable generation up to 2MW under this net metering policy. Proposed installations which are greater than 2MW in capacity will be outside of this policy and would need a specific Purchased Power Agreement with JEA. The JEA net metering policy is primarily intended to facilitate generation from renewable energy sources to offset part or all of the customer's energy requirements. Customers will be charged using the customer's Retail Rate for energy, demand, fuel and environmental and conservation charges per kWh for the metered kWh received from JEA during each billing cycle. The system must pass a JEA inspection prior to connection and operation. JEA will furnish, install, own and maintain metering equipment at the installation point.

#### ***Neighborhood Efficiency Program***

JEA offers a two-phase program for low income customers. Phase 1 provides installation of 15 electric and water conservation products as well as the energy education package of printed material and consultation with an energy audit on a door-to-door basis in targeted neighborhoods identified by the City as having more than 50 percent of the neighborhood population at or below 150 percent of the Federal Poverty Guidelines, and further identified by JEA as having high winter peak consumption. Approximately 1000 homes are completed per year.

Phase two provides an Energy Efficient Home Maintenance kit of 12 electric and water conservation products for participants in a Housing Counseling workshop required for first time homebuyers involved in the City's loan assistance programs for low to moderate low income residents. Approximately 500 kits are provided annually.

## **Commercial/Industrial Programs:**

### ***Commercial Energy Audit Program***

JEA offers a business energy audit for all commercial customers located in the JEA service territory. This service is offered at no charge to JEA customers and is available for all rate classifications. As a part of this service a JEA representative will perform a rate evaluation, discuss demand strategies if relevant, and inspect the customer's business and offer cost-effective ideas designed to help lower energy costs. Areas of the customer's business that are inspected include: insulation, windows, tinting, caulking, weather stripping, water heating systems and water temperature, HVAC visual inspections, equipment and their controls, and refrigeration. JEA representatives also use a wide variety of tools and literature for customer education during the inspection. No cost measures such as air conditioning & heating thermostat temperature settings, water heater settings, refrigeration temperature settings, management of plug (vampire) loads, management of computer, monitor & printer loads, management of lighting systems and cleaning surfaces of heat exchangers are encouraged. In addition to the energy audit, JEA also offers free water management evaluations.

### ***Commercial Net Metering***

JEA will allow customer-owned renewable generation up to 2 MW under this Net Metering Policy. The JEA net metering policy is primarily intended to facilitate generation from renewable energy sources to offset part or all of the customer's energy requirements. Net metering customers will be charged for the metered kWh received from JEA during each month and credited for the metered kWh sent to JEA each month. The monetary credit to the customer will be calculated using the customer's retail energy rate, demand, fuel, environmental and conservation charges (Retail Rate) per kWh.