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Jacksonville, Florida 32202-3139



E L E C T R I C

W A T E R

S E W E R

March 1, 2019

Tripp Coston
Economic Supervisor, Conservation
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850
Phone: (850) 413-6814

Re: Demand Side Management Plan, 2018 FEECA Annual Report

Dear Mr. Coston:

Enclosed is JEA's 2018 FEECA annual report on Demand Side Management activities.

The data confirms that JEA has exceeded its total FEECA goals for 2018; the attached summary contains the relevant details.

If you have any questions, please do not hesitate to contact me at (904) 665-7065.

Sincerely,

Donald Wucker

Donald Wucker, P.E.
Technology Research Consultant

Encl: 2018 FEECA Annual Report

cc: Aaron Zahn
Kerri Stewart
Caren Anders
Melissa Dykes
Mike Hightower
Ryan Wannemacher
Vicki Nichols

JEA Demand Side Management (DSM) FEECA Annual Report for 2018

Public Service Commission (PSC) Goals

Sections 366.S0 through 366.S5, and 403.519, Florida Statutes (F.S.), are collectively known as the Florida Energy Efficiency and Conservation Act (FEECA). Section 366.82(2), (F.S.), requires the Florida PSC to adopt appropriate goals designed to increase the conservation of expensive resources, such as petroleum fuels, to reduce and control the growth rates of electric consumption and weather-sensitive peak demand.

In accordance with the FEECA sections noted above, JEA's goals were established in DOCKET NO. 130203-EM, ORDER NO. PSC-14-0696-FOF-EG, ISSUED December 16, 2014.

DSM Plan 2015 – 2024

Pursuant to Sections 366.81 and 366.82, F.S., Rule 25-17.0021, Florida Administrative Code (F.A.C.), JEA petitioned the Florida PSC to approve the DSM plan filed on March 16, 2015. Subsequently, JEA's plan was approved on August 11, 2015 under docket number: 150087-EG.

DSM Reporting Requirements

In accordance with Section 366.82 (10), F.S., Rule 25-17.0021(5), F.A.C., each utility shall submit an annual report no later than March 1 of each year summarizing its DSM plan and the total actual achieved results for its approved DSM plan in the preceding calendar year.

2018 Total Actual Achieved Results

JEA met PSC goals as established in DOCKET NO. 130203-EM, ORDER NO. PSC-14-0696-FOF-EG, ISSUED December 16, 2014.

JEA is submitting 2018 annual performance values for its non-RIM (i.e. not part of FEECA) DSM programs consistent with form EIA-861 as required by the U.S. Energy Information Administration (EIA).

As a not-for-profit, community-owned utility, JEA will continue to review and adjust its investment in energy and efficiency.

JEA's DSM FEECA Portfolio

JEA's FEECA portfolio consists of four (4) residential programs, two (2) commercial programs as described below. Achieved kW and kWh reductions are on page 5.

A. Residential FEECA Programs

- **Residential Energy Audit Program** uses auditors to examine homes, educate customers and make recommendations on low-cost or no-cost energy-saving practices and measures.
- **Residential Solar Water Heating** pays a financial incentive to customers to encourage the use of solar water heating technology.
- **Residential Solar Net Metering** promotes the use of solar photovoltaic systems by purchasing excessive power from residential customers implementing these systems.
- **Neighborhood Efficiency Program** offers education concerning the efficient use of energy & water as well as the direct installation of an array of energy & water efficient measures at no cost to income-qualified customers.

B. Commercial FEECA Programs

- **Commercial Energy Audit Program** uses auditors to examine businesses, educate customers and make recommendations on low-cost or no-cost energy-saving practices and measures.
- **Commercial Solar Net Metering** promotes the use of solar photovoltaic systems by purchasing excessive power from commercial customers implementing these systems.

JEA's DSM Non-RIM Portfolio

JEA's non-RIM portfolio consists of four (4) residential programs, three (3) commercial programs as described below. Achieved kW and kWh reductions are summarized on page 4.

A. Residential Non-RIM Programs

- **Residential Efficiency Upgrade** pays a financial incentive to encourage the use of high efficiency HVAC and water heating products and services.
- **Energy Efficient Products** pays a financial incentive to encourage the use of high efficiency lighting and appliance products.

- **Residential New Build** promotes the use high efficiency HVAC, water heating, lighting and appliances in the new construction market.
- **MyWay Prepaid Program** is available to all residential customers and especially appropriate for those who prefer to prepay for services. It is consumer-focused experience for environmentally conscious consumers who like to keep consumption in mind. Customers who participate in prepaid programs like MyWay typically reduce consumption because they're frequently informed of how they're using their utilities.

B. Commercial Non-RIM Programs

- **Commercial Prescriptive Program** pays a financial incentive to encourage the use of high efficiency HVACR, lighting, cooking and water heating products and services.
- **Small Business Direct Install Program** promotes the use high efficiency HVAC, water heating, lighting and appliances in the small business sector.
- **Custom Commercial Program** promotes the use of custom efficiency measures based on specific applications for each customer.

JEA's 2018 NON-RIM PORTFOLIO	Winter Peak MW Reduction	Summer Peak MW Reduction	GWh Energy Reduction
Total	3.99	4.60	37.8
Residential	1.58	0.22	15.8
Commercial	2.41	4.38	22.0

JEA

Comparison of Achieved kW and kWh Reductions
with Annual Target Included in Public Service Commission Approved Goals
Report Period: **2018**

Total									
<u>Year</u>	<u>Winter Peak MW Reduction</u>			<u>Summer Peak MW Reduction</u>			<u>GWh Energy Reduction</u>		
	Cumulative Total	Cumulative Commission Approved	%	Cumulative Total	Cumulative Commission Approved	%	Cumulative Total	Cumulative Commission Approved	%
	<u>Achieved</u>	<u>Goal</u>	<u>Variance**</u>	<u>Achieved</u>	<u>Goal</u>	<u>Variance**</u>	<u>Achieved</u>	<u>Goal</u>	<u>Variance**</u>
2015	2.530	0.967	162%	3.305	1.080	206%	7.4	2.58	186%
2016	4.873	1.934	152%	6.974	2.160	223%	16.0	5.16	210%
2017	6.910	2.901	138%	10.943	3.240	238%	25.6	7.74	231%
2018	8.947	3.868	131%	14.912	4.320	245%	35.2	10.32	241%
2019		4.835			5.400			12.90	
2020		5.802			6.480			15.48	
2021		6.769			7.560			18.06	
2022		7.736			8.640			20.64	
2023		8.703			9.720			23.22	
2024		9.670			10.800			25.80	

Residential									
<u>Year</u>	<u>Winter Peak MW Reduction</u>			<u>Summer Peak MW Reduction</u>			<u>GWh Energy Reduction</u>		
	Cumulative Total	Cumulative Commission Approved	%	Cumulative Total	Cumulative Commission Approved	%	Cumulative Total	Cumulative Commission Approved	%
	<u>Achieved</u>	<u>Goal</u>	<u>Variance**</u>	<u>Achieved</u>	<u>Goal</u>	<u>Variance**</u>	<u>Achieved</u>	<u>Goal</u>	<u>Variance**</u>
2015	2.499	0.960	160%	3.259	0.940	247%	7.2	2.50	188%
2016	4.816	1.920	151%	6.797	1.880	262%	15.4	5.00	208%
2017	6.836	2.880	137%	9.810	2.820	248%	22.4	7.50	198%
2018	8.856	3.840	131%	12.823	3.760	241%	29.3	10.00	193%
2019		4.800			4.700			12.50	
2020		5.760			5.640			15.00	
2021		6.720			6.580			17.50	
2022		7.680			7.520			20.00	
2023		8.640			8.460			22.50	
2024		9.600			9.400			25.00	

Commercial/Industrial									
<u>Year</u>	<u>Winter Peak MW Reduction</u>			<u>Summer Peak MW Reduction</u>			<u>GWh Energy Reduction</u>		
	Cumulative Total	Cumulative Commission Approved	%	Cumulative Total	Cumulative Commission Approved	%	Cumulative Total	Cumulative Commission Approved	%
	<u>Achieved</u>	<u>Goal</u>	<u>Variance**</u>	<u>Achieved</u>	<u>Goal</u>	<u>Variance**</u>	<u>Achieved</u>	<u>Goal</u>	<u>Variance**</u>
2015	0.031	0.007	343%	0.046	0.140	-67%	0.18	0.08	122%
2016	0.057	0.014	306%	0.177	0.280	-37%	0.58	0.16	264%
2017	0.074	0.021	253%	1.133	0.420	170%	3.25	0.24	1255%
2018	0.091	0.028	226%	2.089	0.560	273%	5.92	0.32	1751%
2019		0.035			0.700			0.40	
2020		0.042			0.840			0.48	
2021		0.049			0.980			0.56	
2022		0.056			1.120			0.64	
2023		0.063			1.260			0.72	
2024		0.070			1.400			0.80	

** - Variance calculated based on unrounded values

JEA

Program Name: REA: Residential Energy Audits
 Program Start Date: 1978
 Reporting Period: **2018**

a	b	c	d	e	f	g	h	i
Year	Total Number of Customers	Total Number of Eligible Customers	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (d/cx100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (g/cx100)	Actual Participation Over (Under) Projected Participants (g-d)
2015	390,376	390,376	4,500	1.2%	20,171	20,171	5.2%	15,671
2016	397,057	397,057	9,000	2.3%	16,730	36,901	9.3%	27,901
2017	403,655	403,655	13,500	3.3%	16,516	53,417	13.2%	39,917
2018	409,756	409,756	18,000	4.4%	14,681	68,098	16.6%	50,098
2019	415,662	415,662	22,500	5.4%				
2020	421,331	421,331	27,000	6.4%				
2021	426,984	426,984	31,500	7.4%				
2022	432,669	432,669	36,000	8.3%				
2023	438,312	438,312	40,500	9.2%				
2024	443,879	443,879	45,000	10.1%				

Estimated Annual Demand and Energy Savings

	Per Installation		Program Total	
	@meter	@generator	@meter	@generator
Summer kW Reduction	0.100	0.106	1,468.1	1,556.2
Winter kW Reduction	0.100	0.105	1,468.1	1,541.5
kWH Reduction	200	208	2,936,200.0	3,053,648.0

Utility Cost per Installation	\$ 102.80
Total Program Cost of the Utility (Administration and Incentives)	\$ 1,509,207
Net Benefits of Measures Installed During Reporting Period	\$ (6,075)

JEA

Program Name: RSWH: Residential Solar Water Heating
 Program Start Date: 2002
 Reporting Period: **2018**

a	b	c	d	e	f	g	h	i
Year	Total Number of Customers	Total Number of Eligible Customers	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (d/cx100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (g/cx100)	Actual Participation Over (Under) Projected Participants (g-d)
2015	390,376	390,376	20	0.01%	20	20	0.0%	0
2016	397,057	397,057	40	0.01%	1	21	0.0%	(19)
2017	403,655	403,655	60	0.01%	0	21	0.0%	(39)
2018	409,756	409,756	80	0.02%	2	23	0.0%	(57)
2019	415,662	415,662	100	0.02%				
2020	421,331	421,331	120	0.03%				
2021	426,984	426,984	140	0.03%				
2022	432,669	432,669	160	0.04%				
2023	438,312	438,312	180	0.04%				
2024	443,879	443,879	200	0.05%				

Estimated Annual Demand and Energy Savings

	Per Installation		Program Total	
	@meter	@generator	@meter	@generator
Summer kW Reduction	0.420	0.443	0.8	0.9
Winter kW Reduction	0.475	0.496	1.0	1.0
kWH Reduction	2,322	2,417	4,644.5	4,834.0

Utility Cost per Installation	\$	1,130
Total Program Cost of the Utility (Administration and Incentives)	\$	2,260
Net Benefits of Measures Installed During Reporting Period	\$	(987)

JEA

Program Name: RSNM: Residential Solar Net Metering
 Program Start Date: 2009
 Reporting Period: **2018**

a	b	c	d	e	f	g	h	i
Year	Total Number of Customers	Total Number of Eligible Customers	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (d/cx100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (g/cx100)	Actual Participation Over (Under) Projected Participants (g-d)
2015	390,376	390,376	41	0.01%	250	250	0.06%	209
2016	397,057	397,057	82	0.02%	406	656	0.17%	574
2017	403,655	403,655	123	0.03%	349	1,005	0.25%	882
2018	409,756	409,756	164	0.04%	330	1,335	0.33%	1,171
2019	415,662	415,662	205	0.05%				
2020	421,331	421,331	246	0.06%				
2021	426,984	426,984	287	0.07%				
2022	432,669	432,669	328	0.08%				
2023	438,312	438,312	369	0.08%				
2024	443,879	443,879	410	0.09%				

Estimated Annual Demand and Energy Savings

	Per Installation		Program Total	
	@meter	@generator	@meter	@generator
Summer kW Reduction	2.80	2.95	924.0	973.5
Winter kW Reduction	0.00	0.00	0.0	0.0
kWH Reduction	7,982	8,309	2,634,060.0	2,741,970.0

Utility Cost per Installation	\$ 770.88
Total Program Cost of the Utility (Administration and Incentives)	\$ 254,390
Net Benefits of Measures Installed During Reporting Period	\$ (863,532)

JEA

Program Name: NEE: Neighborhood Energy Efficiency
 Program Start Date: 2008
 Reporting Period: **2018**

a	b	c	d	e	f	g	h	i
Year	Total Number of Customers	Total Number of Eligible Customers	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (d/cx100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (g/cx100)	Actual Participation Over (Under) Projected Participants (g-d)
2015	368,783	117,113	1,500	1.3%	1,005	1,005	0.9%	(495)
2016	372,471	119,117	3,000	2.5%	1,518	2,523	2.1%	(477)
2017	376,196	121,097	4,500	3.7%	1,225	3,748	3.1%	(752)
2018	379,958	122,927	6,000	4.9%	1,294	5,042	4.1%	(958)
2019	383,758	124,699	7,500	6.0%				
2020	387,595	126,399	9,000	7.1%				
2021	391,471	128,095	10,500	8.2%				
2022	395,386	129,801	12,000	9.2%				
2023	399,340	131,494	13,500	10.3%				
2024	403,333	133,164	15,000	11.3%				

Estimated Annual Demand and Energy Savings

	Per Installation		Program Total	
	@meter	@generator	@meter	@generator
Summer kW Reduction	0.353	0.373	456.8	482.7
Winter kW Reduction	0.353	0.369	456.8	477.5
kWH Reduction	858	893	1,110,252.0	1,155,542.0

Utility Cost per Installation	\$	331
Total Program Cost of the Utility (Administration and Incentives)	\$	428,314
Net Benefits of Measures Installed During Reporting Period	\$	16,854

JEA

Program Name: CEA: Commercial Energy Audits
 Program Start Date: 1978
 Reporting Period: **2018**

a	b	c	d	e	f	g	h	i
Year	Total Number of Customers	Total Number of Eligible Customers	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (d/cx100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (g/cx100)	Actual Participation Over (Under) Projected Participants (g-d)
2015	50,506	50,506	200	0.4%	245	245	0.5%	45
2016	51,136	51,136	400	0.8%	207	452	0.9%	52
2017	51,698	51,698	600	1.2%	146	598	1.2%	(2)
2018	52,187	52,187	800	1.5%	137	735	1.4%	(65)
2019	52,639	52,639	1,000	1.9%				
2020	53,069	53,069	1,200	2.3%				
2021	53,492	53,492	1,400	2.6%				
2022	53,908	53,908	1,600	3.0%				
2023	54,321	54,321	1,800	3.3%				
2024	54,735	54,735	2,000	3.7%				

Estimated Annual Demand and Energy Savings

	Per Installation		Program Total	
	@meter	@generator	@meter	@generator
Summer kW Reduction	0.120	0.127	16.4	17.4
Winter kW Reduction	0.120	0.125	16.4	17.1
kWH Reduction	540	562	73,980.0	76,994.0

Utility Cost per Installation	\$	221
Total Program Cost of the Utility (Administration and Incentives)	\$	30,277
Net Benefits of Measures Installed During Reporting Period	\$	898

JEA

Program Name: CSNM: Commercial Solar Net Metering
 Program Start Date: 2009
 Reporting Period: **2018**

a	b	c	d	e	f	g	h	i
Year	Total Number of Customers	Total Number of Eligible Customers	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % (d/cx100)	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % (g/cx100)	Actual Participation Over (Under) Projected Participants (g-d)
2015	50,506	50,506	8	0.02%	1	1	0.00%	(7)
2016	51,136	51,136	16	0.03%	7	8	0.02%	(8)
2017	51,698	51,698	24	0.05%	74**	82	0.16%	58
2018	52,187	52,187	32	0.06%	63**	145	0.28%	113
2019	52,639	52,639	40	0.08%				
2020	53,069	53,069	48	0.09%				
2021	53,492	53,492	56	0.10%				
2022	53,908	53,908	64	0.12%				
2023	54,321	54,321	72	0.13%				
2024	54,735	54,735	80	0.15%				

Estimated Annual Demand and Energy Savings

	Per Installation		Program Total	
	@meter	@generator	@meter	@generator
Summer kW Reduction	14.10	14.900	888.3	938.7
Winter kW Reduction	0.00	0.000	0.0	0.0
kWH Reduction	39,553	41,175	2,491,839.0	2,594,025.0

Utility Cost per Installation	\$ 2,300
Total Program Cost of the Utility (Administration and Incentives)	\$ 144,900
Net Benefits of Measures Installed During Reporting Period	\$ (925,775)

** Participant count determined by taking savings values and dividing by the filed, deemed kWh savings per participant