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June 14, 2016

VIA E-FILING

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

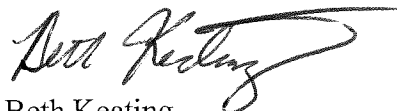
Re: **Docket No. 160000-OT-Undocketed Filings-2016 FEECA Report Data Collection**

Dear Ms. Stauffer:

Enclosed for filing, please find Florida Public Utilities Company's Responses to Commission Staff's Data Requests for FEECA information.

Thank you for your assistance with this filing. As always, please don't hesitate to let me know if you have any questions or concerns.

Sincerely,



Beth Keating
Gunster Yoakley & Stewart
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Tallahassee, FL 32301
850-521-1706

cc: Tripp Coston (FPSC/Economic Supervisor)

FPUC Response to Staff’s First Data Request in Docket No. 160000 – OT - Undocketed Filings – 2016 FEECA Report Data Collection.

1. For each DSM program offered during 2015, please provide the 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.

Company Response: The table below shows both the Company’s new/modified and terminated programs, their current status and their implementation/modified or termination dates.

New Program Name	Program Status	Date Implemented
Commercial Reflective Roof Program	New	September 8, 2015
Commercial Energy Consultation Program	New	September 8, 2015
Modified Program Name	Program Status	Date Modified
Residential Heating and Cooling Efficiency Upgrade Program	Modified	September 8, 2015
Commercial Heating and Cooling Efficiency Upgrade Program	Modified	September 8, 2015
Commercial Chiller Upgrade Program	Modified	September 8, 2015
Low Income Energy Outreach Program	Modified	September 8, 2015
Terminated Program Name	Program Status	Date Terminated
Commercial Energy Survey Program	Terminated	September 8, 2015
Commercial Indoor Efficient Lighting Rebate Program	Terminated	September 8, 2015
Commercial Window Film Installation Program	Terminated	September 8, 2015
Solar Water Heating Program	Terminated	December 31, 2015
Solar Photovoltaic Program	Terminated	December 31, 2015

2. 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.

Company Response: The Company currently has an approved Conservation, Demonstration and Development program whose primary purpose is to pursue research, development and demonstration projects that are designed to promote energy efficiency and conservation. These efforts impact the Company’s conservation efforts by allowing the Company to explore and research new end use

technologies, demonstrate their effectiveness for energy efficiency and conservation and potentially create programs for customers to assist with their energy efficiency and conservation needs.

3. On page 2 of the 2015 DSM Annual Report, FPUC states that it was not able to achieve its Commercial winter peak demand, summer peak demand and overall GWh goals.
 - a. Please describe the company's assessment for not achieving its Commercial winter peak demand, summer peak demand, and overall GWh goals.

Company Response: The Company did not achieve its Commercial winter peak demand, summer peak demand and overall GWh goals in 2015 due to a lack of participation in its commercial programs. The Company has made several modifications to its DSM plan to help increase participation including adding a Commercial Reflective Roofing program, however, these modifications were not approved until August 11, 2015, by Order No. PSC-15-0326-PAA-EG, which was rendered final and effective by Order No. PSC-15-0360-CO-EG issued September 8, 2016. Thus, these new programs did not have a significant impact on commercial program participation in 2015.

- b. Is the company evaluating changes or modifications to any DSM programs to address these results? If so, please describe the company's considerations.

Company Response: The Company made changes to its DSM programs in 2015 which it believes will address these results. Because the 2015 DSM plan was not approved until September 2015, the changes made did not have a significant impact on the 2015 results. However, the Company is actively promoting the new programs to its customers and is confident that it will achieve its Commercial winter peak demand, summer peak demand and overall GWh goals in 2016.

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.

Company Response: The Company continually strives to remain up-to-date and informed of all changes to the Energy industry including any new energy efficiency standard or Florida Building Code

requirements. The Company's Energy Conservation employees responsible for updating and implementing the Company's DSM programs keep abreast of any changes to efficiency standards and code requirements each year by participating in several energy related organizations and continuing education opportunities. The Company also engages external consultants with regards to new energy efficiency standards and Florida Building code requirements when making any revisions to its DSM plan and programs.

5. Please describe the process for ensuring low-income customers are aware of and have access to conservation programs offered by the company.

Company Response: The Company ensures that low-income customers are aware of and have access to its conservation programs by partnering with Department of Economic Opportunity approved Low Income Weatherization Program operators within its service territory and offering energy surveys, contractor training, energy efficiency literature and hosting events specifically geared towards low income households. The Company also promotes its conservation programs by using more traditional advertising mediums (like newspaper, television and radio advertising) in low-income areas of its service territory.

6. Please describe the overall advertising approach taken by the company to promote the current DSM programs to its customers.

Company Response: The Company's overall advertising approach to promoting its current DSM program varies based on the program and the intended audience. The Company continuously reviews its advertising plan, evaluating opportunities for more cost effective advertising methods, in order to most efficiently use its conservation funding. As such, the Company is gradually decreasing the amount of its traditional advertising (television, direct mail, radio, etc.) and increasing its online advertising efforts (mobile, social media, etc.) The Company is currently evaluating the cost effectiveness of online advertising versus more traditional methods but believes that a combination of various advertising methods is currently the best way to reach its audience successfully and increase program participation.

7. Please describe the company’s approach to educate customers on potential self-initiated conservation opportunities.

Company Response: The Company is always encouraging its customers to participate in energy efficiency and conservation opportunities. The Company primarily educates its customers on potential self-initiated conservation opportunities through its Energy Expert webpage which offers energy tips, videos, advice, blog content and other conservation information. The Company also educates its customers of potential conservation opportunities through its Residential Energy Survey program which provides customers with customized energy efficiency and conservation tips and advice based on the customer’s home or business.

8. In Order No. PSC-15-0326-PAA-EG, the goals established by the Commissions were the following:

FPUC Residential Sector Goals vs. DSM Plan and Staff’s Recommendation

Year	Summer (MW)			Winter (MW)			Annual Energy (GWh)		
	Goal	DSM Plan	Approved Plan	Goal	DSM Plan	Approved Plan	Goal	DSM Plan	Approved Plan
2015	0.036	0.213	0.203	0.012	0.122	0.115	0.023	0.416	0.392

FPUC Commercial/Industrial Sector Goals vs. DSM Plan

Year	Summer (MW)		Winter (MW)		Annual Energy (GWh)	
	Goal	DSM Plan	Goal	DSM Plan	Goal	DSM Plan
2015	0.021	0.067	0.010	0.046	0.055	0.122

a. In the company’s 2015 FEECA Conservation Report, the goals used for the Residential Sector are noted as 0.20, 0.12, and 0.39. Please explain this discrepancy.

Company Response: The residential goals used in the Company’s 2015 FEECA Conservation Report were the Approved DSM Plan projections and not the Commission approved goals. This was done in error and a revised copy of the company’s 2015 FEECA report has been provided.

b. In the company’s 2015 FEECA Conservation Report, the goals used for the Commercial/Industrial Sector are 0.067, 0.046, and 0.122. Please explain this discrepancy.

Company Response: The commercial goals used in the Company's 2015 FEECA Conservation Report were the Approved DSM Plan projections and not the Commission approved goals. This was done in error and a revised copy of the company's 2015 FEECA report has been provided.

c. If necessary, please update the company's overall percentage-to-goal results.

Company Response: This information has been updated and a revised copy of the Company's 2015 FEECA Conservation Report has been provided.

2015 ANNUAL CONSERVATION REPORT

PREPARED FOR

Florida Public Utilities Company

13 JUNE 2015 *(Revised 2016)*

Table of Contents

- 1 Introduction 1
- 2 Comparison to 2014 Goals 2
- 3 Existing Programs and 2014 Goals 5
 - 3.1 Program Costs 16
 - 3.2 Net Benefits 17
 - 3.3 Other Conservation Activities 17

List of Tables

- Table 2-1 Residential Class Programs (At the Generator) 2
- Table 2-2 Commercial/Industrial Class Programs (At the Generator) 2
- Table 2-3 Total Savings Across All Programs and Classes (At the Generator) 3
- Table 2-4 Residential Class Programs (At the Meter) 3
- Table 2-5 Commercial/Industrial Class Programs (At the Meter) 3
- Table 2-6 Total Savings Across All Programs and Classes (At the Meter) 4
- Table 3-1 Residential Energy Survey Current Participation and Expected Future Savings 6
- Table 3-2 Residential Heating & Cooling Upgrade Current Participation and Expected Future Savings.. 7
- Table 3-3 Commercial Heating & Cooling Current Participation and Expected Future Savings 8
- Table 3-4 Commercial Chiller Current Participation and Expected Future Savings 9
- Table 3-5 Commercial Reflective Roof Current Participation and Expected Future Savings 10
- Table 3-6 Commercial Energy Survey Historical Participation- Discontinued 11
- Table 3-7 Commercial Indoor Efficient Lighting Rebate Historical Participation- Discontinued 12
- Table 3-8 Commercial Window Film Historical Participation- Discontinued 13
- Table 3-9 Solar Photovoltaic Historical Participation 14
- Table 3-10 Solar Water Heater Historical Participation 15
- Table 3-11 Program Costs 16
- Table 3-12 Annual Net Benefits 17

1 Introduction

This document contains Florida Public Utilities Company's (FPUC) annual report summarizing its demand-side management activities and the total actual achieved results for its approved DSM goals for the 2015 calendar year in accordance with 25-17.0021 (5) FAC. FPUC's 2014 conservation goals were approved in Order No. PSC-14-0696-FOF-EU dated December 29, 2014. In this document, FPUC's conservation plan performance for 2015 is compared to the 2014 goals. FPUC's 2015 Demand-Side Management (DSM) Plan, which was developed to meet the 2014 conservation goals, significantly changed FPUC's conservation programs. These changes were implemented with the approval of the 2015 DSM plan with Consummating Order No. PSC-15-0326-PAA-EG dated August 11, 2015.

Several programs being offered under the 2010 DSM plan were not included in the 2015 DSM plan. Because FPUC offered these programs for the majority of 2015 before they were discontinued, this report includes their savings, costs, and participation figures under Section 3.0. However, these discontinued programs do not contribute towards 2015 DSM plan goals under Section 2.0. Also, the 2015 DSM plan revised the 'savings per installation' figures for measures continued from the previous plan, and these changes are reflected in all report calculations.

2 Comparison to 2014 Goals

Tables 2-1 through 2-6 present FPUC's 2015 demand and energy conservation program savings compared to the 2014 goals for residential, commercial/industrial, and total both at the generator and meter. Order No. PSC-14-0696-FOF-EU only specifies goals at the generator. For Tables 2-4 through 2-6 at the meter, the goals from PSC-14-0696-FOF-EU are reduced by losses. Detailed performance of the individual programs is shown in Section 3.0. As the first year of comparison to 2014 goals, the 2015 figures reflect all updates to renewed measures and exclude discontinued programs per the 2015 DSM plan. 2011-2014 goals are based on the 2010 DSM Plan, and are presented in Tables 2-1 through 2-6 for purposes of comparison.

Table 2-1 Residential Class Programs (At the Generator)

Year	Winter Peak (MW) Reduction			Summer Peak (MW) Reduction			GWh Energy Reduction		
	Total Achieved	Commission Approved Goal	% Variance	Total Achieved	Commission Approved Goal	% Variance	Total Achieved	Commission Approved Goal	% Variance
2011	0.47	0.13	265.12%	0.77	0.20	285.59%	1.65	0.51	224.22%
2012	0.35	0.13	159.58%	0.54	0.20	167.39%	1.16	0.51	127.48%
2013	0.39	0.13	197.50%	0.63	0.20	212.53%	1.34	0.51	163.45%
2014	0.43	0.13	230.77%	0.68	0.20	240.00%	1.48	0.51	190.20%
2015	0.43	0.012	3464.61%	0.76	0.036	2000.46%	1.46	0.023	6245.17%

Table 2-2 Commercial/Industrial Class Programs (At the Generator)

Year	Winter Peak (MW) Reduction			Summer Peak (MW) Reduction			GWh Energy Reduction		
	Total Achieved	Commission Approved Goal	% Variance	Total Achieved	Commission Approved Goal	% Variance	Total Achieved	Commission Approved Goal	% Variance
2011	0.08	0.06	39.40%	0.12	0.23	-46.67%	0.41	0.78	-47.07%
2012	0.05	0.06	-23.36%	0.07	0.23	-69.44%	0.20	0.78	-74.20%
2013	0.04	0.06	-31.92%	0.06	0.23	-72.60%	0.18	0.78	-77.26%
2014	0.13	0.06	116.67%	0.20	0.23	-13.04%	0.70	0.78	-10.25%
2015	0.00	0.010	-78.20%	0.00	0.021	-81.14%	0.01	0.055	-86.28%

Table 2-3 Total Savings Across All Programs and Classes (At the Generator)

Year	Winter Peak (MW) Reduction			Summer Peak (MW) Reduction			GWh Energy Reduction		
	Total Achieved	Commission Approved Goal	% Variance	Total Achieved	Commission Approved Goal	% Variance	Total Achieved	Commission Approved Goal	% Variance
2011	0.56	0.19	193.84%	0.89	0.43	107.87%	2.07	1.29	60.18%
2012	0.38	0.19	101.65%	0.61	0.43	40.70%	1.36	1.29	5.50%
2013	0.43	0.19	125.06%	0.69	0.43	60.02%	1.52	1.29	17.90%
2014	0.56	0.19	194.74%	0.89	0.43	106.98%	2.18	1.29	68.99%
2015	0.43	0.022	1854.24%	0.76	0.057	1233.55%	1.47	0.078	1780.69%

Table 2-4 Residential Class Programs (At the Meter)

Year	Winter Peak (MW) Reduction			Summer Peak (MW) Reduction			GWh Energy Reduction		
	Total Achieved	Commission Approved Goal	% Variance	Total Achieved	Commission Approved Goal	% Variance	Total Achieved	Commission Approved Goal	% Variance
2011	0.45	0.11	323.30%	0.74	0.20	268.14%	1.58	0.48	227.76%
2012	0.32	0.11	192.90%	0.51	0.20	155.29%	1.11	0.48	130.75%
2013	0.37	0.11	235.68%	0.60	0.20	198.39%	1.28	0.48	167.24%
2014	0.41	0.11	272.73%	0.65	0.20	225.00%	1.42	0.48	195.83%
2015	0.39	0.011	3463.73%	0.69	0.033	2000.30%	1.42	0.022	6245.22%

Table 2-5 Commercial/Industrial Class Programs (At the Meter)

Year	Winter Peak (MW) Reduction			Summer Peak (MW) Reduction			GWh Energy Reduction		
	Total Achieved	Commission Approved Goal	% Variance	Total Achieved	Commission Approved Goal	% Variance	Total Achieved	Commission Approved Goal	% Variance
2011	0.08	0.05	52.10%	0.12	0.20	-41.81%	0.39	0.75	-47.45%
2012	0.04	0.05	-12.20%	0.07	0.20	-65.00%	0.19	0.75	-74.39%
2013	0.04	0.05	-22.00%	0.06	0.20	-71.52%	0.17	0.75	-77.42%
2014	0.12	0.05	140.00%	0.19	0.20	-5.00%	0.67	0.75	-10.67%
2015	0.00	0.009	-78.27%	0.00	0.019	-81.18%	0.01	0.053	-86.28%

Table 2-6 Total Savings Across All Programs and Classes (At the Meter)

Year	Winter Peak (MW) Reduction			Summer Peak (MW) Reduction			GWh Energy Reduction		
	Total Achieved	Commission Approved Goal	% Variance	Total Achieved	Commission Approved Goal	% Variance	Total Achieved	Commission Approved Goal	% Variance
2011	0.53	0.16	237.79%	0.85	0.41	105.81%	1.97	1.23	60.99%
2012	0.37	0.16	128.80%	0.58	0.41	40.91%	1.30	1.23	5.67%
2013	0.41	0.16	155.16%	0.65	0.41	59.45%	1.45	1.23	18.06%
2014	0.54	0.16	237.50%	0.85	0.41	107.32%	2.09	1.23	69.92%
2015	0.39	0.020	1853.73%	0.69	0.052	1233.44%	1.42	0.076	1780.70%

In 2015, FPUC significantly exceeded the residential winter peak, summer peak, and energy reduction goals. The main reason for this level of exceedance is due to higher than projected participation in the Residential Heating and Cooling Upgrade Program. Individual residential program participation is discussed further in Section 3.

In 2015, FPUC missed the commercial/industrial winter peak demand goal, the summer peak demand goal, and energy goals. The goals only reflect those commercial programs included in the 2015 Demand-Side Management Plan. The Commercial Heating and Cooling and Chiller programs both fell short of their participation goals. The commercial Reflective Roof was a new program in 2015 with no participation goals in the first year. Individual commercial/industrial program participation is discussed further in Section 3.

FPUC discontinued several commercial/industrial programs including Commercial Energy Survey, Indoor Efficient Lighting, and Window Film. Also, the Consummating Order No. PSC-14-0696-FOF-EU required that existing Solar Photovoltaic and Water Heater pilot programs presented in FPUC's 2010 Demand-Side Management Plan continue until December 31, 2015. While several of these programs had some participation in 2015, they are not factored into goals as they were not part of the 2015 Demand-Side Management Plan.

FPUC significantly exceeded all three of its overall goals for 2015. FPUC exceeded the total winter peak demand goal by 1854 percent, the total summer peak demand by 1234 percent, and energy reduction goal by 1781 percent.

3 Existing Programs and 2014 Goals

FPUC's 2015 Demand-Side Management Plan was approved in August 2015. Under this plan, FPUC implemented the following quantifiable programs.

- Residential Energy Survey
- Residential Heating and Cooling Upgrade
- Commercial Heating and Cooling Upgrade
- Commercial Chiller
- Commercial Reflective Roof

The following programs were part of the 2010 DSM Plan and were discontinued in 2015. They are not counted toward 2015 goals, but their savings are quantified in this section.

- Commercial Energy Survey
- Commercial Indoor Efficient Lighting Rebate
- Commercial Window Film

In addition, FPUC provided the following Solar Pilot Programs in 2015. They are not part of the 2015 DSM Plan, but their savings are quantified in this section.

- Solar Photovoltaic
- Solar Hot Water Heaters

Tables 3-1 through 3-10 present the performance for each of the programs.

Table 3-1 Residential Energy Survey Current Participation and Expected Future Savings

Year	Number of Customers	Number of Eligible Customers	Annual Program Participants	Cumulative Program Participants	Total Penetration Level
2015	23,284	23,284	354	354	1.52%
2016	23,335	23,335	100	454	1.95%
2017	23,387	23,387	100	554	2.37%
2018	23,513	23,513	100	654	2.78%
2019	23,639	23,639	100	754	3.19%
2020	23,766	23,766	100	854	3.59%
2021	23,894	23,894	100	954	3.99%
2022	24,022	24,022	100	1054	4.39%
2023	24,151	24,151	100	1154	4.78%
2024	24,281	24,281	100	1254	5.16%

Year	Actual/Projected Participants	Reduction Per Installation			Total Annual Reduction		
		kWh	Winter kW	Summer kW	kWh	Winter kW	Summer kW
At The Meter							
2015	354	141	0.057	0.049	50,065	20	17
2016	100	141	0.057	0.049	14,143	6	5
2017	100	141	0.057	0.049	14,143	6	5
2018	100	141	0.057	0.049	14,143	6	5
2019	100	141	0.057	0.049	14,143	6	5
2020	100	141	0.057	0.049	14,143	6	5
2021	100	141	0.057	0.049	14,143	6	5
2022	100	141	0.057	0.049	14,143	6	5
2023	100	141	0.057	0.049	14,143	6	5
2024	100	141	0.057	0.049	14,143	6	5
At The Generator							
2015	354	146	0.063	0.054	51,613	22	19
2016	100	146	0.063	0.054	14,580	6	5
2017	100	146	0.063	0.054	14,580	6	5
2018	100	146	0.063	0.054	14,580	6	5
2019	100	146	0.063	0.054	14,580	6	5
2020	100	146	0.063	0.054	14,580	6	5
2021	100	146	0.063	0.054	14,580	6	5
2022	100	146	0.063	0.054	14,580	6	5
2023	100	146	0.063	0.054	14,580	6	5
2024	100	146	0.063	0.054	14,580	6	5

Table 3-2 Residential Heating & Cooling Upgrade Current Participation and Expected Future Savings

Year	Number of Customers	Number of Eligible Customers	Annual Program Participants	Cumulative Program Participants	Total Penetration Level
2015	23,284	23,284	373	373	1.60%
2016	23,335	23,335	100	473	2.03%
2017	23,387	23,387	100	573	2.45%
2018	23,513	23,513	100	673	2.86%
2019	23,639	23,639	100	773	3.27%
2020	23,766	23,766	100	873	3.67%
2021	23,894	23,894	100	973	4.07%
2022	24,022	24,022	100	1073	4.47%
2023	24,151	24,151	100	1173	4.86%
2024	24,281	24,281	100	1273	5.24%

Year	Actual/ Projected Participants	Reduction Per Installation			Total Annual Reduction		
		kWh	Winter kW	Summer kW	kWh	Winter kW	Summer kW
At The Meter							
2015	373	3,661	0.99	1.80	1,365,553	369	671
2016	100	3,661	0.99	1.80	366,100	99	180
2017	100	3,661	0.99	1.80	366,100	99	180
2018	100	3,661	0.99	1.80	366,100	99	180
2019	100	3,661	0.99	1.80	366,100	99	180
2020	100	3,661	0.99	1.80	366,100	99	180
2021	100	3,661	0.99	1.80	366,100	99	180
2022	100	3,661	0.99	1.80	366,100	99	180
2023	100	3,661	0.99	1.80	366,100	99	180
2024	100	3,661	0.99	1.80	366,100	99	180
At The Generator							
2015	373	3,774	1.087	1.976	1,407,777	405	737
2016	100	3,774	1.087	1.976	377,420	109	198
2017	100	3,774	1.087	1.976	377,420	109	198
2018	100	3,774	1.087	1.976	377,420	109	198
2019	100	3,774	1.087	1.976	377,420	109	198
2020	100	3,774	1.087	1.976	377,420	109	198
2021	100	3,774	1.087	1.976	377,420	109	198
2022	100	3,774	1.087	1.976	377,420	109	198
2023	100	3,774	1.087	1.976	377,420	109	198
2024	100	3,774	1.087	1.976	377,420	109	198

Table 3-3 Commercial Heating & Cooling Current Participation and Expected Future Savings

Year	Number of Customers	Number of Eligible Customers	Annual Program Participants	Cumulative Program Participants	Total Penetration Level
2015	4,275	4,275	2	2	0.05%
2016	4,275	4,275	10	12	0.28%
2017	4,275	4,275	10	22	0.51%
2018	4,275	4,275	10	32	0.75%
2019	4,275	4,275	10	42	0.98%
2020	4,275	4,275	10	52	1.22%
2021	4,275	4,275	10	62	1.45%
2022	4,275	4,275	10	72	1.68%
2023	4,275	4,275	10	82	1.92%
2024	4,275	4,275	10	92	2.15%

Year	Actual/ Projected Participants	Reduction Per Installation			Total Annual Reduction		
		kWh	Winter kW	Summer kW	kWh	Winter kW	Summer kW
<i>At The Meter</i>							
2015	2	3,661	0.99	1.80	7,322	2	4
2016	10	3,661	0.99	1.80	36,610	10	18
2017	10	3,661	0.99	1.80	36,610	10	18
2018	10	3,661	0.99	1.80	36,610	10	18
2019	10	3,661	0.99	1.80	36,610	10	18
2020	10	3,661	0.99	1.80	36,610	10	18
2021	10	3,661	0.99	1.80	36,610	10	18
2022	10	3,661	0.99	1.80	36,610	10	18
2023	10	3,661	0.99	1.80	36,610	10	18
2024	10	3,661	0.99	1.80	36,610	10	18
<i>At The Generator</i>							
2015	2	3,774	1.09	1.98	7,548	2	4
2016	10	3,774	1.09	1.98	37,742	11	20
2017	10	3,774	1.09	1.98	37,742	11	20
2018	10	3,774	1.09	1.98	37,742	11	20
2019	10	3,774	1.09	1.98	37,742	11	20
2020	10	3,774	1.09	1.98	37,742	11	20
2021	10	3,774	1.09	1.98	37,742	11	20
2022	10	3,774	1.09	1.98	37,742	11	20
2023	10	3,774	1.09	1.98	37,742	11	20
2024	10	3,774	1.09	1.98	37,742	11	20

Table 3-4 Commercial Chiller Current Participation and Expected Future Savings

Year	Number of Customers	Number of Eligible Customers	Annual Program Participants	Cumulative Program Participants	Total Penetration Level
2015	4,275	4,275	0	0	0.00%
2016	4,275	4,285	1	1	0.02%
2017	4,275	4,294	1	2	0.05%
2018	4,275	4,317	1	3	0.07%
2019	4,275	4,340	1	4	0.09%
2020	4,275	4,364	2	6	0.14%
2021	4,275	4,387	2	8	0.18%
2022	4,275	4,411	2	10	0.23%
2023	4,275	4,435	2	12	0.27%
2024	4,275	4,458	2	14	0.31%

Year	Actual/Projected Participants	Reduction Per Installation			Total Annual Reduction		
		kWh	Winter kW	Summer kW	kWh	Winter kW	Summer kW
At The Meter							
2015	0	81,943	31.70	42.80	0	0	0
2016	1	81,943	31.70	42.80	81,943	32	43
2017	1	81,943	31.70	42.80	81,943	32	43
2018	1	81,943	31.70	42.80	81,943	32	43
2019	1	81,943	31.70	42.80	81,943	32	43
2020	2	81,943	31.70	42.80	163,886	63	86
2021	2	81,943	31.70	42.80	163,886	63	86
2022	2	81,943	31.70	42.80	163,886	63	86
2023	2	81,943	31.70	42.80	163,886	63	86
2024	2	81,943	31.70	42.80	163,886	63	86
At The Generator							
2015	0	84,477	34.80	47.00	0	0	0
2016	1	84,477	34.80	47.00	84,477	35	47
2017	1	84,477	34.80	47.00	84,477	35	47
2018	1	84,477	34.80	47.00	84,477	35	47
2019	1	84,477	34.80	47.00	84,477	35	47
2020	2	84,477	34.80	47.00	168,954	70	94
2021	2	84,477	34.80	47.00	168,954	70	94
2022	2	84,477	34.80	47.00	168,954	70	94
2023	2	84,477	34.80	47.00	168,954	70	94
2024	2	84,477	34.80	47.00	168,954	70	94

Table 3-5 Commercial Reflective Roof Current Participation and Expected Future Savings

Year	Number of Customers	Number of Eligible Customers	Annual Program Participants	Cumulative Program Participants	Total Penetration Level
2015	13,600	13,600	0	0	0.00%
2016	13,600	13,600	5	5	0.04%
2017	13,600	13,600	10	15	0.11%
2018	13,600	13,600	15	30	0.22%
2019	13,600	13,600	20	50	0.37%
2020	13,600	13,600	25	75	0.55%
2021	13,600	13,600	25	100	0.74%
2022	13,600	13,600	25	125	0.92%
2023	13,600	13,600	25	150	1.10%
2024	13,600	13,600	25	175	1.29%

Year	Actual/Projected Participants	Reduction Per Installation			Total Annual Reduction		
		kWh	Winter kW	Summer kW	kWh	Winter kW	Summer kW
At The Meter							
2015	0	2,450	0.00	0.91	0	0	0
2016	5	2,450	0.00	0.91	12,250	0	5
2017	10	2,450	0.00	0.91	24,500	0	9
2018	15	2,450	0.00	0.91	36,750	0	14
2019	20	2,450	0.00	0.91	49,000	0	18
2020	25	2,450	0.00	0.91	61,250	0	23
2021	25	2,450	0.00	0.91	61,250	0	23
2022	25	2,450	0.00	0.91	61,250	0	23
2023	25	2,450	0.00	0.91	61,250	0	23
2024	25	2,450	0.00	0.91	61,250	0	23
At The Generator							
2015	0	2,526	0.00	0.99	0	0	0
2016	5	2,526	0.00	0.99	12,629	0	5
2017	10	2,526	0.00	0.99	25,258	0	10
2018	15	2,526	0.00	0.99	37,886	0	15
2019	20	2,526	0.00	0.99	50,515	0	20
2020	25	2,526	0.00	0.99	63,144	0	25
2021	25	2,526	0.00	0.99	63,144	0	25
2022	25	2,526	0.00	0.99	63,144	0	25
2023	25	2,526	0.00	0.99	63,144	0	25
2024	25	2,526	0.00	0.99	63,144	0	25

Table 3-6 Commercial Energy Survey Historical Participation- Discontinued¹

Year	Number of Customers	Number of Eligible Customers	Annual Program Participants	Cumulative Program Participants	Total Penetration Level
2011	4,407	4,407	65	65	1.47%
2012	4,352	4,352	54	119	2.73%
2013	4,372	4,372	49	168	3.84%
2014	4,412	4,412	41	209	4.74%
2015	4,453	4,453	38	247	5.55%

Year	Actual/Projected Participants	Reduction Per Installation			Total Annual Reduction		
		kWh	Winter kW	Summer kW	kWh	Winter kW	Summer kW
<i>At The Meter</i>							
2011	65	1,861	0.534	0.534	120,965	35	35
2012	54	1,861	0.534	0.534	100,494	29	29
2013	49	1,861	0.534	0.534	91,189	26	26
2014	41	1,861	0.534	0.534	76,301	22	22
2015	38	1,861	0.534	0.534	70,718	20	20
<i>At The Generator</i>							
2011	65	1,949	0.559	0.559	126,700	36	36
2012	54	1,949	0.559	0.559	105,258	30	30
2013	49	1,949	0.559	0.559	95,512	27	27
2014	41	1,949	0.559	0.559	79,909	23	23
2015	38	1,949	0.559	0.559	74,062	21	21

¹ Total annual reductions not counted towards 2015 Demand-Side Management Goals plan goals.

Table 3-7 Commercial Indoor Efficient Lighting Rebate Historical Participation- Discontinued²

Year	Number of Customers	Number of Eligible Customers	Annual Program Participants	Cumulative Program Participants	Total Penetration Level
2011	4,407	4,407	2	2	0.05%
2012	4,352	4,350	1	3	0.07%
2013	4,372	4,369	1	4	0.09%
2014	4,412	4,408	6	10	0.23%
2015	4,453	4,453	10	20	0.45%

Year	Actual/ Projected Participants	Reduction Per Installation			Total Annual Reduction		
		kWh	Winter kW	Summer kW	kWh	Winter kW	Summer kW
At The Meter							
2011	2	16,259	2.08	3.2	32,518	4	6
2012	1	16,259	2.08	3.2	16,259	2	3
2013	1	16,259	2.08	3.2	16,259	2	3
2014	6	16,259	2.08	3.2	97,554	12	19
2015	10	16,259	2.08	3.2	162,590	21	32
At The Generator							
2011	2	17,030	2.179	3.352	34,060	4	7
2012	1	17,030	2.179	3.352	17,030	2	3
2013	1	17,030	2.179	3.352	17,030	2	3
2014	6	17,030	2.179	3.352	102,180	13	20
2015	10	17,030	2.179	3.352	170,300	22	34

² Total annual reductions not counted towards 2015 Demand-Side Management Goals plan goals.

Table 3-8 Commercial Window Film Historical Participation- Discontinued³

Year	Number of Customers	Number of Eligible Customers	Annual Program Participants	Cumulative Program Participants	Total Penetration Level
2011	4,407	4,407	0	0	0.00%
2012	4,352	4,352	3	3	0.07%
2013	4,372	4,372	1	4	0.09%
2014	4,412	4,412	0	4	0.09%
2015	4,453	4,453	1	5	0.11%

Year	Actual/Projected Participants	Reduction Per Installation			Total Annual Reduction		
		kWh	Winter kW	Summer kW	kWh	Winter kW	Summer kW
At The Meter							
2011	0	3,670	0	0.84	0	0	0
2012	3	3,670	0	0.84	11,010	0	3
2013	1	3,670	0	0.84	3,670	0	1
2014	0	3,670	0	0.84	0	0	0
2015	1	3,670	0	0.84	3,670	0	1
At The Generator							
2011	0	3,844	0	0.88	0	0	0
2012	3	3,844	0	0.88	11,532	0	3
2013	1	3,844	0	0.88	3,844	0	1
2014	0	3,844	0	0.88	0	0	0
2015	1	3,844	0	0.88	3,844	0	1

³ Total annual reductions not counted towards 2015 Demand-Side Management Goals plan goals.

Table 3-9 Solar Photovoltaic Historical Participation⁴

Year	Number of Customers	Number of Eligible Customers	Annual Program Participants	Cumulative Program Participants	Total Penetration Level
2011	28,004	28,004	10	10	0.04%
2012	28,022	28,012	8	18	0.06%
2013	28,115	28,097	9	27	0.10%
2014	28,346	28,319	9	36	0.13%
2015	28,578	28,542	8	44	0.15%

Year	Actual/Projected Participants	Reduction Per Installation			Total Annual Reduction		
		kWh	Winter kW	Summer kW	kWh	Winter kW	Summer kW
At The Meter							
2011	10	4,380	0.07	2.50	43,800	1	25
2012	8	4,380	0.07	2.50	35,040	1	20
2013	9	4,380	0.07	2.50	39,420	1	23
2014	9	4,380	0.07	2.50	39,420	1	23
2015	8	4,380	0.07	2.50	35,040	1	20
At The Generator							
2011	10	4,588	0.08	2.62	45,876	1	26
2012	8	4,588	0.08	2.62	36,701	1	21
2013	9	4,588	0.08	2.62	41,292	1	24
2014	9	4,588	0.08	2.62	41,292	1	24
2015	8	4,588	0.08	2.62	36,704	1	21

⁴ Total annual reductions not counted towards 2015 Demand-Side Management Goals plan goals.

Table 3-10 Solar Water Heater Historical Participation⁵

Year	Number of Customers	Number of Eligible Customers	Annual Program Participants	Cumulative Program Participants	Total Penetration Level
2011	28,004	28,004	3	3	0.01%
2012	28,022	28,019	2	5	0.02%
2013	28,115	28,110	1	6	0.02%
2014	28,346	28,340	0	6	0.02%
2015	28,578	28,560	0	6	0.02%

Year	Actual/Projected Participants	Reduction Per Installation			Total Annual Reduction		
		kWh	Winter kW	Summer kW	kWh	Winter kW	Summer kW
At The Meter							
2011	3	1,482	0.45	0.22	4,446	1	1
2012	2	1,482	0.45	0.22	2,964	1	0
2013	1	1,482	0.45	0.22	1,482	0	0
2014	0	1,482	0.45	0.22	0	0	0
2015	0	1,482	0.45	0.22	0	0	0
At The Generator							
2011	3	1,552	0.47	0.23	4,657	1	1
2012	2	1,552	0.47	0.23	3,105	1	0
2013	1	1,552	0.47	0.23	1,552	0	0
2014	0	1,552	0.47	0.23	0	0	0
2015	0	1,552	0.47	0.23	0	0	0

⁵ Total annual reductions not counted towards 2015 Demand-Side Management Goals plan goals.

As shown in Table 3-1 and 3-2 above, the number of residential energy surveys and the number of participants in the heating and cooling upgrade program significantly exceeded projections. Both programs achieved over three times the level of projected participation. The high participation was responsible for significantly exceeding the program goals and residential goals.

As shown in Tables 3-3 through 3-5 above, the commercial/industrial programs included in the 2015 Demand-Side Management Plan fell short of their participation goals. The Commercial Heating & Cooling program achieved 20% of its participation goal, while the Chiller program did not have any participants. The Commercial Reflective Roof was a new program without any expected participation in 2015. Overall the commercial programs failed to meet their winter peak demand, summer peak demand, and energy reduction goals.

Among the commercial/industrial programs being discontinued in 2015, the Commercial Energy Survey and Indoor Efficient Lighting programs achieved over 75 percent of their annual participation goals. The Commercial Window Film program had one participant in 2015. As shown in Tables 3-9 and 3-10, the solar photovoltaic program equaled the goal of 8 participants, while there was no participation in the solar water heater program. The annual savings for discontinued programs are not counted towards the 2015 Demand-Side Management Goals plan goals.

3.1 PROGRAM COSTS

The per installation cost and total program cost for FPUC for each program for 2015 are presented in Table 3-11 for each program. The total program costs are based on the actual 2015 costs and are a function of actual participation and actual administrative and general costs. Common costs, averaging 10%, are allocated to individual programs based on net benefit calculations. The exact date the programs started is August 11, 2015, when the consummating order approving the Demand-Side Management plan was issued.

Table 3-11 Program Costs

Program	2015 Per Installation Cost	2015 Total Program Cost
Residential Energy Survey	\$314	\$111,245
Residential Heating and Cooling Upgrade	\$271	\$100,980
Commercial Energy Survey	\$549	\$20,869
Commercial Indoor Efficient Lighting Rebate	\$1,028	\$10,280
Commercial Heating and Cooling Upgrade	\$477	\$955
Commercial Window Film	\$203	\$203
Commercial Chiller	-	\$384
Solar Photovoltaic	\$5,002	\$40,013
Solar Water Heater	-	-



Commercial Energy Consultation	\$116	\$1,852
Commercial Reflective Roof	-	\$2,030

3.2 NET BENEFITS

The annual net benefits for each program are shown in Table 3-12 based on the 2015 actual program cost versus avoided costs for electricity generation, transmission, and distribution developed for the 2015 Demand-Side Management Plan. Since FPUC purchases all of its power, the avoided generation costs are based on avoiding power purchases from JEA and Gulf. In order to have a single avoided generation cost for evaluating cost effectiveness of the conservation programs, the avoided purchase power costs for JEA and Gulf were weighted averaged using the actual 2015 Net Energy for Load for the Northeast and Northwest Divisions respectively. The avoided transmission & distribution costs are based on FPUC’s operation and maintenance costs from 2009-2013, escalated to 2015 dollars.

Table 3-12 Annual Net Benefits

Program	Annual Net Benefits
Residential Energy Survey	(\$52,521)
Residential Heating and Cooling Upgrade	\$1,512,508
Commercial Energy Survey	\$47,864
Commercial Indoor Efficient Lighting Rebate	\$108,922
Commercial Heating and Cooling Upgrade	\$7,710
Commercial Window Film	\$2,150
Commercial Chiller	(\$384)
Solar Photovoltaic	(\$5,450)
Solar Water Heater	\$0
Commercial Energy Consultation	(\$1,852)
Commercial Reflective Roof	(\$2,030)

3.3 OTHER CONSERVATION ACTIVITIES

With the implementation of a new 2015 DSM plan, FPU will focus on providing its customers and contractors with information about its new programs in 2016. FPUC will focus on promoting its Commercial/Industrial programs since they have traditional not met participation levels in the past. For the Commercial Heating and Cooling and Commercial Reflective Roof programs, FPUC will work with industry partners and contractors in its service territories to promote these programs to its customers. For the Commercial Chiller program, FPUC will work closely with its large commercial and industrial customers for whom this program would be beneficial. For all programs,

FPUC will continue its participation in education and advertising opportunities that promote each program to its particular target audience.

FPUC continues to emphasize activities where it can reach many of their customers at one time with its conservation message. FPUC's small size and proportionate resources necessitate this approach to obtain cost effective conservation in its service area. FPUC was very effective with this approach in 2015. FPUC held or attended 12 energy conservation related events with an estimated total attendance of 8,045. These events are generally at the community level. The purpose of participating in these events is to educate FPUC's customers about energy efficiency and to offer energy conservation surveys and measures as a way to combat high electrical usage and the rising costs of energy. Conservation kits (containing two LED lightbulbs, weather stripping, etc.), energy saving tips, and conservation brochures are distributed to FPUC's customers during these events and contribute to conservation by stressing the importance of using energy efficiency as a means to reduce high energy bills. Events provide FPUC a great opportunity to interact one-on-one with consumers and to efficiently distribute FPUC's conservation kits which have a direct impact on energy consumption.

In 2014, FPUC introduced its Energy Conservation School program aimed at educating students about the basics of energy efficiency and how they could help to conserve energy in their homes. During 2015, FPUC made several presentations to schools within its territory and continues to promote this program to school boards in the area. The goal is not only to educate students who will be future consumers of energy but for them to relay the message to their parents and get educational materials into more households.

FPUC has also continued to serve its customers through its Energy Expert program which provides resources like energy-related tips and advice, articles, videos, blog content and other downloadable materials. One of the more popular features of this program is the "Ask the Energy Expert" tool which allows customers to submit energy-related questions and receive a response from FPUC personnel. These questions and answers are also made available on the FPUC website so that other customers may benefit from the information. As part of the Energy Expert program, FPUC energy conservation employees continually work with employees from other departments to provide basic energy efficiency and conservation training. This training gives Customer Service, Sales and other customer-facing employees the training they need to address high-bill complaints and confidently speak to customers about their energy usage, energy conservation measures and the programs that are offered by FPUC. All of these customer touch points are used to promote FPUC's energy conservation programs and help achieve program goals.