2014 ANNUAL CONSERVATION REPORT

PREPARED FOR

Florida Public Utilities Company

28 FEBURARY 2014

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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 2014 calendar year in accordance with 25-17.0021 (5) FAC. FPUC's 2009 conservation goals were approved in Order No. PSC-09-0855-FOF-EG dated December 30, 2009. In this document, FPUC's conservation plan performance for 2014 is compared to the 2009 goals. FPUC's 2010 Demand-Side Management Plan, which was developed to meet the 2009 conservation goals, significantly changed FPUC's conservation programs. However, these new programs were not implemented until the approval of the 2010 Demand-Side Management Plan on December 7, 2010 with Consummating Order No. PSC-10-0713-CO-EG. This 2014 report represents the fourth full year in which FPUC utilized its new programs set forth in its 2010 Demand-Side Management Plan.

2 Comparison to 2009 Goals

Tables 2-1 through 2-6 present FPUC's 2014 demand and energy conservation program savings compared to the 2009 goals for residential, commercial/industrial, and total both at the generator and meter. Order No. PSC 09-0855-FOF-EG only specifies goals at the generator. For Tables 2-4 through 2-6 at the meter, the goals from PSC-09-0855-FOF-EG are reduced by losses. Detailed performance of the individual programs is shown in Section 3.0. The 2010 savings and goals are not presented in Tables 2-1 through 2-6 since FPUC's conservation programs for the 2009 goals were not approved until December 7, 2010 and thus the 2010 demand and energy savings were based on the 2005 Demand-Side Management Plan. The 2010 savings and goals are presented in FPUC's 2010 Annual Conservation Report.

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	0.2	285.59%	1.65	0.51	224.22%
2012	0.35	0.13	159.58%	0.54	0.2	167.39%	1.16	0.51	127.48%
2013	0.39	0.13	197.50%	0.63	0.2	212.53%	1.34	0.51	163.45%
2014	0.43	0.13	230.77%	0.68	0.2	240.00%	1.48	0.51	190.20%

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%	0.2	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	116.677%	0.2	0.23	-13.04-%	0.70	0.78	-10.25%

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%

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	0.2	268.14%	1.58	0.48	227.76%
2012	0.32	0.11	192.90%	0.51	0.2	155.29%	1.11	0.48	130.75%
2013	0.37	0.11	235.68%	0.60	0.2	198.39%	1.28	0.48	167.24%
2014	0.41	0.11	272.73%	0.65	0.2	225.00%	1.42	0.48	195.83%

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	0.2	-41.81%	0.39	0.75	-47.45%
2012	0.04	0.05	-12.20%	0.07	0.2	-65.00%	0.19	0.75	-74.39%
2013	0.04	0.05	-22.00%	0.06	0.2	-71.52%	0.17	0.75	-77.42%
2014	0.12	0.05	140.00%	0.19	0.2	-5.00%	0.67	0.75	-10.67%

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%

In 2014, 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 2014, FPUC missed the commercial/industrial summer peak demand goal and energy goal, but by less than 15 percent. For the commercial/industrial goals, FPUC was only able to achieve projected participation for the Commercial Chiller program which doubled its projected penetration rate. This doubled participation resulted in FPUC significantly exceeding its commercial winter demand goal since commercial chillers generally operate year round although the projected demand savings are much less in winter than in summer. Individual commercial/industrial program participation is discussed further in Section 3.

FPUC significantly exceeded all three of its overall goals for 2014.

3 Existing Programs and 2009 Goals

Since FPUC's 2010 Demand-Side Management Plan was not approved until December 2010, participation in the new programs did not begin until 2011.

Under the 2010 Demand-Side Management Plan, FPUC implemented the following quantifiable programs.

- Residential Energy Survey
- Residential Heating and Cooling Upgrade
- Commercial Energy Survey
- Commercial Indoor Efficient Lighting Rebate
- Commercial Heating and Cooling Upgrade
- Commercial Window Film
- Commercial Chiller

In addition, FPUC provided the following Solar Pilot Programs.

- Solar Photovoltaic
- Solar Hot Water Heaters

Tables 3-1 through 3-9 present the program performance for each of the programs. Since the Conservation Goals Docket was underway during 2014, FPUC believed it was prudent to wait until the 2014 goals were established to make modifications to their programs.

Table 3-1 Residential Energy Survey Historical Participation and Future Savings

Year	Number of Customers	Number of Eligible Customers	Annual Program Participants	Cumulative Program Participants	Total Penetration Level
2011	23,597	23,597	272	272	1.15%
2012	23,670	23,670	231	503	2.13%
2013	23,743	23,743	234	737	3.10%
2014	23,938	23,938	299	1036	4.33%
2015	24,134	24,134	250	1286	5.33%
2016	24,332	24,332	250	1536	6.31%
2017	24,531	24,531	250	1786	7.28%
2018	24,733	24,733	250	2036	8.23%
2019	24,935	24,935	250	2286	9.17%

Year	Actual/ Projected Participants	Reduction Per Installation			Total Annual Reduction		
		kWh	Winter kW	Summer kW	kWh	Winter kW	Summer kW
At The Meter							
2011	272	1,229	0.451	0.451	334,288	123	123
2012	231	1,229	0.451	0.451	283,899	104	104
2013	234	1,229	0.451	0.451	287,586	106	106
2014	299	1,229	0.451	0.451	367,471	135	135
2015	250	1,229	0.451	0.451	307,250	113	113
2016	250	1,229	0.451	0.451	307,250	113	113
2017	250	1,229	0.451	0.451	307,250	113	113
2018	250	1,229	0.451	0.451	307,250	113	113
2019	250	1,229	0.451	0.451	307,250	113	113
At The Generator							
2011	272	1,287	0.472	0.472	350,136	128	128
2012	231	1,287	0.472	0.472	297,358	109	109
2013	234	1,287	0.472	0.472	301,220	111	111
2014	299	1,287	0.472	0.472	384,813	141	141
2015	250	1,287	0.472	0.472	321,816	118	118
2016	250	1,287	0.472	0.472	321,816	118	118
2017	250	1,287	0.472	0.472	321,816	118	118
2018	250	1,287	0.472	0.472	321,816	118	118
2019	250	1,287	0.472	0.472	321,816	118	118

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

Year	Number of Customers	Number of Eligible Customers	Annual Program Participants	Cumulative Program Participants	Total Penetration Level
2011	23,597	23,597	323	323	1.37%
2012	23,670	23,670	213	536	2.26%
2013	23,743	23,743	258	794	3.34%
2014	23,938	23,938	271	1,065	4.45%
2015	24,134	24,134	150	1,215	5.03%
2016	24,332	24,332	150	1,365	5.61%
2017	24,531	24,531	150	1,515	6.18%
2018	24,733	24,733	150	1,665	6.73%
2019	24,935	24,935	150	1,815	7.28%

Year	Actual/ Projected Participants	Reduction Per Installation			Total Annual Reduction		
		kWh	Winter kW	Summer kW	kWh	Winter kW	Summer kW
At The Meter							
2011	323	3,778	1.02	1.86	1,220,294	329	601
2012	213	3,778	1.02	1.86	804,714	217	396
2013	258	3,778	1.02	1.86	974,724	263	480
2014	271	3,778	1.02	1.86	1,023,838	276	504
2015	150	3,778	1.02	1.86	566,700	153	279
2016	150	3,778	1.02	1.86	566,700	153	279
2017	150	3,778	1.02	1.86	566,700	153	279
2018	150	3,778	1.02	1.86	566,700	153	279
2019	150	3,778	1.02	1.86	566,700	153	279
At The Generator							
2011	323	3,957	1.068	1.948	1,278,145	345	629
2012	213	3,957	1.068	1.948	842,863	228	415
2013	258	3,957	1.068	1.948	1,020,933	276	503
2014	271	3,957	1.068	1.948	1,072,347	289	528
2015	150	3,957	1.068	1.948	593,566	160	292
2016	150	3,957	1.068	1.948	593,566	160	292
2017	150	3,957	1.068	1.948	593,566	160	292
2018	150	3,957	1.068	1.948	593,566	160	292
2019	150	3,957	1.068	1.948	593,566	160	292

Table 3-3 Commercial Energy Survey Historical Participation and Future Savings

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	50	259	5.82%
2016	4,494	4,494	50	309	6.88%
2017	4,535	4,535	50	359	7.92%
2018	4,577	4,577	50	409	8.94%
2019	4,619	4,619	50	459	9.94%

Year	Actual/ Projected Participants	Reduction Per Installation			Total Annual Reduction		
		kWh	Winter kW	Summer kW	kWh	Winter kW	Summer kW
At The Meter							
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	50	1,861	0.534	0.534	93,050	27	27
2016	50	1,861	0.534	0.534	93,050	27	27
2017	50	1,861	0.534	0.534	93,050	27	27
2018	50	1,861	0.534	0.534	93,050	27	27
2019	50	1,861	0.534	0.534	93,050	27	27
At The Generator							
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	50	1,949	0.559	0.559	97,461	28	28
2016	50	1,949	0.559	0.559	97,461	28	28
2017	50	1,949	0.559	0.559	97,461	28	28
2018	50	1,949	0.559	0.559	97,461	28	28
2019	50	1,949	0.559	0.559	97,461	28	28

Table 3-4 Commercial Indoor Efficient Lighting Rebate Historical Participation and Future Savings

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	12	22	0.49%
2016	4,494	4,472	12	34	0.76%
2017	4,535	4,501	12	46	1.01%
2018	4,577	4,531	12	58	1.27%
2019	4,619	4,561	12	70	1.52%

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	12	16,259	2.08	3.2	195,108	25	38
2016	12	16,259	2.08	3.2	195,108	25	38
2017	12	16,259	2.08	3.2	195,108	25	38
2018	12	16,259	2.08	3.2	195,108	25	38
2019	12	16,259	2.08	3.2	195,108	25	38
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	12	17,030	2.179	3.352	204,358	26	40
2016	12	17,030	2.179	3.352	204,358	26	40
2017	12	17,030	2.179	3.352	204,358	26	40
2018	12	17,030	2.179	3.352	204,358	26	40
2019	12	17,030	2.179	3.352	204,358	26	40

Table 3-5 Commercial Heating & Cooling Upgrade Historical Participation and Future Savings

Year	Number of Customers	Number of Eligible Customers	Annual Program Participants	Cumulative Program Participants	Total Penetration Level
2011	4,345	4,345	0	0	0.00%
2012	4,350	4,350	12	12	0.28%
2013	4,370	4,370	10	22	0.50%
2014	4,410	4,410	12	34	0.77%
2015	4,451	4,451	50	84	1.89%
2016	4,492	4,492	50	134	2.98%
2017	4,533	4,533	50	184	4.06%
2018	4,575	4,575	50	234	5.12%
2019	4,617	4,617	50	284	6.15%

Year	Actual/ Projected Participants	Reduction Per Installation			Total Annual Reduction		
		kWh	Winter kW	Summer kW	kWh	Winter kW	Summer kW
At The Meter							
2011	0	3,778	1.02	1.86	0	0	0
2012	12	3,778	1.02	1.86	45,336	12	22
2013	10	3,778	1.02	1.86	37,780	10	19
2014	12	3,778	1.02	1.86	45,336	12	22
2015	50	3,778	1.02	1.86	188,900	51	93
2016	50	3,778	1.02	1.86	188,900	51	93
2017	50	3,778	1.02	1.86	188,900	51	93
2018	50	3,778	1.02	1.86	188,900	51	93
2019	50	3,778	1.02	1.86	188,900	51	93
At The Generator							
2011	0	3,957	1.068	1.948	0	0	0
2012	12	3,957	1.068	1.948	47,485	13	23
2013	10	3,957	1.068	1.948	39,571	11	19
2014	12	3,957	1.068	1.948	47,484	13	23
2015	50	3,957	1.068	1.948	197,855	53	97
2016	50	3,957	1.068	1.948	197,855	53	97
2017	50	3,957	1.068	1.948	197,855	53	97
2018	50	3,957	1.068	1.948	197,855	53	97
2019	50	3,957	1.068	1.948	197,855	53	97

Table 3-6 Commercial Window Film Historical Participation and Future Savings

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	12	16	0.36%
2016	4,494	4,494	12	38	0.85%
2017	4,535	4,535	12	50	1.10%
2018	4,577	4,577	12	62	1.37%
2019	4,619	4,619	12	74	1.60%

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	12	3,670	0	0.84	44,040	0	10
2016	12	3,670	0	0.84	44,040	0	10
2017	12	3,670	0	0.84	44,040	0	10
2018	12	3,670	0	0.84	44,040	0	10
2019	12	3,670	0	0.84	44,040	0	10
At The Generator							
2011	0	3,844	0.000	0.880	0	0	0
2012	3	3,844	0.000	0.880	11,532	0	3
2013	1	3,844	0.000	0.880	3,844	0	1
2014	0	3,844	0.000	0.880	0	0	0
2015	12	3,844	0.000	0.880	46,128	0	11
2016	12	3,844	0.000	0.880	46,128	0	11
2017	12	3,844	0.000	0.880	46,128	0	11
2018	12	3,844	0.000	0.880	46,128	0	11
2019	12	3,844	0.000	0.880	46,128	0	11

Table 3-7 Commercial Chiller Historical Participation and Future Savings

Year	Number of Customers	Number of Eligible Customers	Annual Program Participants	Cumulative Program Participants	Total Penetration Level
2011	4,407	4,407	1	1	0.02%
2012	4,352	4,352	0	1	0.02%
2013	4,372	4,372	0	1	0.02%
2014	4,412	4,412	2	3	0.07%
2015	4,453	4,453	1	4	0.09%
2016	4,494	4,494	1	5	0.11%
2017	4,535	4,535	1	6	0.13%
2018	4,577	4,577	1	7	0.15%
2019	4,619	4,619	1	8	0.17%

Year	Actual/ Projected Participants	Reduction Per Installation			Total Annual Reduction		
		kWh	Winter kW	Summer kW	kWh	Winter kW	Summer kW
At The Meter							
2011	1	216,545	39.94	63.17	216,545	40	63
2012	0	216,545	39.94	63.17	0	0	0
2013	0	216,545	39.94	63.17	0	0	0
2014	2	216,545	39.94	63.17	433,090	80	126
2015	1	216,545	39.94	63.17	216,545	40	63
2016	1	216,545	39.94	63.17	216,545	40	63
2017	1	216,545	39.94	63.17	216,545	40	63
2018	1	216,545	39.94	63.17	216,545	40	63
2019	1	216,545	39.94	63.17	216,545	40	63
At The Generator							
2011	1	226,811	41.83	66.16	226,811	42	66
2012	0	226,811	41.83	66.16	0	0	0
2013	0	226,811	41.83	66.16	0	0	0
2014	2	226,811	41.83	66.16	453,622	84	132
2015	1	226,811	41.83	66.16	226,811	42	66
2016	1	226,811	41.83	66.16	226,811	42	66
2017	1	226,811	41.83	66.16	226,811	42	66
2018	1	226,811	41.83	66.16	226,811	42	66
2019	1	226,811	41.83	66.16	226,811	42	66

Table 3-8 Solar Photovoltaic Historical Participation and Future Savings

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%
2016	28,812	28,768	8	52	0.18%
2017	29,049	28,997	8	60	0.21%
2018	29,287	29,227	8	68	0.23%
2019	29,527	29,459	8	76	0.26%

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
2016	8	4,380	0.07	2.50	35,040	1	20
2017	8	4,380	0.07	2.50	35,040	1	20
2018	8	4,380	0.07	2.50	35,040	1	20
2019	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	36,701	1	21
2016	8	4,588	0.08	2.62	36,701	1	21
2017	8	4,588	0.08	2.62	36,701	1	21
2018	8	4,588	0.08	2.62	36,701	1	21
2019	8	4,588	0.08	2.62	36,701	1	21

Table 3-9 Solar Water Heater Historical Participation and Future Savings

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	12	18	0.06%
2016	28,812	28,782	12	30	0.10%
2017	29,049	29,007	12	42	0.14%
2018	29,287	29,233	12	54	0.18%
2019	29,527	29,461	12	66	0.22%

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	12	1,482	0.45	0.22	17,784	5	3
2016	12	1,482	0.45	0.22	17,784	5	3
2017	12	1,482	0.45	0.22	17,784	5	3
2018	12	1,482	0.45	0.22	17,784	5	3
2019	12	1,482	0.45	0.22	17,784	5	3
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	12	1,552	0.47	0.23	18,627	6	3
2016	12	1,552	0.47	0.23	18,627	6	3
2017	12	1,552	0.47	0.23	18,627	6	3
2018	12	1,552	0.47	0.23	18,627	6	3
2019	12	1,552	0.47	0.23	18,627	6	3

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. The high participation was responsible for significantly exceeding the program goals and residential goals.

As shown in Tables 3-3 through 3-7 above, the commercial programs varied in their level success, with the Commercial Chiller program doubling its participation projections while the other commercial programs failed to meet their projected penetrations. Overall the commercial programs met their winter demand saving goal, but did not meet their summer demand or energy reduction goals.

As shown in Tables 3-8 and 3-9, the number of participants in the solar photovoltaic pilot program slightly exceeded the goal of 8 participants, while there was no participation in the solar water heater program. The solar photovoltaic program stopped taking reservations after the 9th participant so that the solar pilot programs would not exceed the $47,233 annual program cost cap.

3.1 PROGRAM COSTS

The per installation cost and total program cost for FPUC for each program for 2014 are presented in Table 3-10 for each program. The total program costs are based on the actual 2014 costs and are a function of actual participation and actual administrative and general costs. The exact date the programs started is December 7, 2010, when the consummating order approving the Demand-Side Management plan was issued.

Table 3-10 Program Costs

PROGRAM	2014 PER INSTALLATION COST	2014 TOTAL PROGRAM COST
Residential Energy Survey	$515	$153,988
Residential Heating and Cooling Upgrade	$462	$125,326
Commercial Energy Survey	$1,283	$52,610
Commercial Indoor Efficient Lighting Rebate	$4,354	$26,125
Commercial Heating and Cooling Upgrade	$678	$8,141
Commercial Window Film	-	$4,299
Commercial Chiller	$6,780	$13,559
Solar Photovoltaic	$5,082	$45,734
Solar Water Heater	-	$652

3.2 NET BENEFITS

The annual net benefits for each program are shown in Table 3-11 based on the 2014 actual program cost versus 2014 avoided generation costs and avoided generation costs developed for the 2014 goals. 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 2014 Net Energy for Load for the Northeast and Northwest Divisions respectively.

Table 3-11 Annual Net Benefits

PROGRAM	ANNUAL NET BENEFITS
Residential Energy Survey	$84,476
Residential Heating and Cooling Upgrade	$838,091
Commercial Energy Survey	$9,245
Commercial Indoor Efficient Lighting Rebate	$36,191
Commercial Heating and Cooling Upgrade	$34,519
Commercial Window Film	$(4,299)
Commercial Chiller	$308,389
Solar Photovoltaic	$(13,369)
Solar Water Heater	$(652)

3.3 OTHER CONSERVATION ACTIVITIES

FPUC emphasizes activities where they can reach many of their customers at one time with their conservation message. FPUC's small size and proportionate resources necessitate this approach to obtain cost effective conservation in their service area. FPUC was very effective with this approach in 2014. FPUC held or attended 18 events with a total attendance of 6,350.

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 compact fluorescent light bulbs, 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 the year, FPUC made several presentations to schools within its territory and is currently working with school boards in the area to offer its program in more schools. 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 FPUs energy conservation programs and help achieve program goals.

GUNSTER
FLORIDA'S LAW FIRM FOR BUSINESS

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March 8, 2016

E-PORTAL/ELECTRONIC FILING

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

Re: Docket No. 160000- 2015 Annual Conservation Report

Dear Ms. Stauffer:

Attached for electronic filing, please find Florida Public Utilities Company's Annual Conservation Report, submitted in accordance with Rule 25-17.0021(5), Florida Administrative Code.

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

Sincerely,

Beth Keating
Gunster, Yoakley & Stewart, P.A.
215 South Monroe St., Suite 601
Tallahassee, FL 32301
(850) 521-1706

MEK
cc: Tripp Coston (Economic Supervisor)
Judy Harlow (Chief/Conservation and Forecasting)

2015 ANNUAL CONSERVATION REPORT

PREPARED FOR

Florida Public Utilities Company

8 MARCH 2016

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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 the 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	0.12	271.96%	0.76	0.20	272.49%	1.46	0.39	272.29%

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	0.05	-95.26%	0.00	0.07	-94.09%	0.01	0.12	-93.81%

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	0.16	167.04%	0.76	0.27	181.53%	1.47	0.51	185.40%

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	0.10	271.87%	0.69	0.18	272.47%	1.42	0.38	272.30%

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	0.04	-95.28%	0.00	0.06	-94.10%	0.01	0.12	-93.81%

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	0.15	166.97%	0.69	0.25	181.50%	1.42	0.50	185.40%

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 167 percent, the total summer peak demand by 181 percent, and energy reduction goal by 185 percent.

3 Existing Programs and 2015 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
At The Meter							
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
At The Generator							
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- Discontinued[1]

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
At The Meter							
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
At The Generator							
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- Discontinued[2]

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- Discontinued[3]

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 Participation[4]

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 Participation[5]

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 Residential 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.

Most notable, is the reduction in costs of the Residential and Commercial Energy Survey programs. Over the year, FPUC was able to reduce the per installation costs for the Residential and Commercial Energy Survey programs by 32% and 57% respectively.

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 FPUs energy conservation programs and help achieve program goals.

2016 ANNUAL CONSERVATION REPORT

PREPARED FOR

Florida Public Utilities Company

3/6/2017

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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 2016 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.

2 Comparison to 2014 Goals

Tables 2-1 through 2-6 present FPUC's 2016 demand and energy conservation program savings compared to the 2015 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.

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
2015	0.43	0.012	3464.61%	0.76	0.036	2000.46%	1.46	0.023	6245.17%
2016	0.39	0.012	3250.00%	0.63	0.036	1750.00%	1.34	0.023	5826.07%

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
2015	0.00	0.010	-78.20%	0.00	0.021	-81.14%	0.01	0.055	-86.28%
2016	0.09	0.010	900.00%	0.15	0.021	714.29%	0.46	0.055	836.36%

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
2015	0.43	0.022	1854.24%	0.76	0.057	1233.55%	1.47	0.078	1780.69%
2016	0.48	0.022	2181.81%	0.78	0.057	1368.42%	1.80	0.078	2307.69%

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
2015	0.39	0.011	3463.73%	0.69	0.033	2000.30%	1.42	0.022	6245.22%
2016	0.32	0.011	2909.10%	0.61	0.033	1848.48%	1.28	0.022	5818.18%

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
2015	0.00	0.009	-78.27%	0.00	0.019	-81.18%	0.01	0.053	-86.28%
2016	0.08	0.009	888.89%	0.13	0.019	684.21%	0.44	0.053	830.19%

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
2015	0.39	0.020	1853.73%	0.69	0.052	1233.44%	1.42	0.076	1780.70%
2016	0.40	0.020	2000.00%	0.74	0.052	1423.07%	1.72	0.076	2263.16%

In 2016, 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 2016, FPUC exceeded the commercial/industrial winter peak demand goal, the summer peak demand goal, and energy goals. Individual commercial/industrial program participation is discussed further in Section 3.

FPUC significantly exceeded all three of its overall goals for 2016.

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

Tables 3-1 through 3-7 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 Partcipants	Total Penetration Level
2015	23,284	23,284	354	354	1.52%
2016	23,335	23,335	280	634	1.95%
2017	23,387	23,387	100	734	2.37%
2018	23,513	23,513	100	834	2.78%
2019	23,639	23,639	100	934	3.19%
2020	23,766	23,766	100	1034	3.59%
2021	23,894	23,894	100	1134	3.99%
2022	24,022	24,022	100	1234	4.39%
2023	24,151	24,151	100	1334	4.78%
2024	24,281	24,281	100	1434	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	280	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	280	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 Partcipants	Total Penetration Level
2015	23,284	23,284	373	373	1.60%
2016	23,335	23,335	226	599	2.03%
2017	23,387	23,387	100	699	2.45%
2018	23,513	23,513	100	799	2.86%
2019	23,639	23,639	100	899	3.27%
2020	23,766	23,766	100	999	3.67%
2021	23,894	23,894	100	1099	4.07%
2022	24,022	24,022	100	1199	4.47%
2023	24,151	24,151	100	1299	4.86%
2024	24,281	24,281	100	1399	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	226	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	226	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 Partcipants	Total Penetration Level
2015	4,275	4,275	2	2	0.05%
2016	4,275	4,275	4	6	0.28%
2017	4,275	4,275	10	16	0.51%
2018	4,275	4,275	10	26	0.75%
2019	4,275	4,275	10	36	0.98%
2020	4,275	4,275	10	46	1.22%
2021	4,275	4,275	10	56	1.45%
2022	4,275	4,275	10	66	1.68%
2023	4,275	4,275	10	76	1.92%
2024	4,275	4,275	10	86	2.15%

Year	Actual/ Projected Participants	Reduction Per Installation			Total Annual Reduction		
		kWh	Winter kW	Summer kW	kWh	Winter kW	Summer kW
At The Meter							
2015	2	3,661	0.99	1.80	7,322	2	4
2016	4	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
At The Generator							
2015	2	3,774	1.09	1.98	7,548	2	4
2016	4	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 Partcipants	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 Partcipants	Total Penetration Level
2015	13,600	13,600	0	0	0.00%
2016	13,600	13,600	17	17	0.04%
2017	13,600	13,600	10	22	0.11%
2018	13,600	13,600	15	27	0.22%
2019	13,600	13,600	20	32	0.37%
2020	13,600	13,600	25	37	0.55%
2021	13,600	13,600	25	42	0.74%
2022	13,600	13,600	25	47	0.92%
2023	13,600	13,600	25	52	1.10%
2024	13,600	13,600	25	57	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	17	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	17	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

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.

3.1 PROGRAM COSTS

The per installation cost and total program cost for FPUC for each program for 2016 are presented in Table 3-6 for each program. The total program costs are based on the actual 2016 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.

Table 3-6 Program Costs

Program	2016 Per Installation Cost	2016 Total Program Cost
Residential Energy Survey	$420	$117,632
Residential Heating and Cooling Upgrade	$176	$39,772
Commercial Heating and Cooling Upgrade	$3,513	$14,050
Commercial Chiller	$22,792	$22,792
Commercial Energy Consultation	$510	$34,166
Commercial Reflective Roof	$1,171	$19,921

3.2 NET BENEFITS

The annual net benefits for each program are shown in Table 3-7 based on the 2016 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 2016 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 3-7 Annual Net Benefits

Program	Annual Net Benefits
Residential Energy Survey	($42,638)
Residential Heating and Cooling Upgrade	$1,512,508
Commercial Heating and Cooling Upgrade	$7,710
Commercial Chiller	$3,840
Commercial Energy Consultation	$852
Commercial Reflective Roof	$2,030

3.3 OTHER CONSERVATION ACTIVITIES

With the implementation of a new 2015 DSM plan, FPU has focused on providing its customers and contractors with information about its new programs in 2016. FPUC focused and will continue to 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 continue to 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 2016. FPUC held or attended 11 energy conservation related events with an estimated total attendance of 10,850. 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 2016, 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 FPUs energy conservation programs and help achieve program goals.

GUNSTER
FLORIDA'S LAW FIRM FOR BUSINESS

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February 28, 2018

E-PORTAL FILING

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

Re: 20180000-OT – Undocketed Filings for 2018.

Dear Ms. Stauffer:

Attached for filing on behalf of Florida Public Utilities Company, please find the Company's Annual Conservation Report, filed in accordance with Rule 25-17.0021(5), F.A.C..

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

Kind regards,

Beth Keating
Gunster, Yoakley & Stewart, P.A.
215 South Monroe St., Suite 601
Tallahassee, FL 32301
(850) 521-1706

cc:/ Judy Harlow
Tripp Coston

2017 ANNUAL CONSERVATION REPORT

PREPARED FOR

Florida Public Utilities Company

19 FEBRUARY 2018

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1 Introduction

This document contains Florida Public Utilities Company's (FPU) annual report summarizing its demand-side management activities and the total actual achieved results for its approved DSM goals for the 2017 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 2017 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.

2 Comparison to 2014 Goals

Tables 2-1 through 2-6 present FPUC's 2017 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.

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	0.470	0.130	265.12%	0.770	0.200	285.59%	1.650	0.510	224.22%
2012	0.350	0.130	159.58%	0.540	0.200	167.39%	1.160	0.510	127.48%
2013	0.390	0.130	197.50%	0.630	0.200	212.53%	1.340	0.510	163.45%
2014	0.430	0.130	230.77%	0.680	0.200	240.00%	1.480	0.510	190.20%
2015	0.428	0.012	3464.61%	0.756	0.036	2000.46%	1.459	0.023	6245.17%
2016	0.263	0.015	1655.35%	0.462	0.046	903.69%	0.894	0.030	2879.31%
2017	0.248	0.018	1279.48%	0.440	0.056	686.59%	0.849	0.038	2134.26%

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	0.080	0.060	39.40%	0.120	0.230	-46.67%	0.410	0.780	-47.07%
2012	0.050	0.060	-23.36%	0.070	0.230	-69.44%	0.200	0.780	-74.20%
2013	0.040	0.060	-31.92%	0.060	0.230	-72.60%	0.180	0.780	-77.26%
2014	0.130	0.060	116.67%	0.200	0.230	-13.04%	0.700	0.780	-10.25%
2015	0.002	0.010	-78.20%	0.004	0.012	-67.00%	0.008	0.055	-86.28%
2016	0.039	0.008	389.50%	0.072	0.027	165.74%	0.143	0.078	82.71%
2017	0.000	0.009	-100.00%	0.000	0.031	-100.00%	0.000	0.094	-100.00%

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	0.560	0.190	193.84%	0.890	0.430	107.87%	2.070	1.290	60.18%
2012	0.380	0.190	101.65%	0.610	0.430	40.70%	1.360	1.290	5.50%
2013	0.430	0.190	125.06%	0.690	0.430	60.02%	1.520	1.290	17.90%
2014	0.560	0.190	194.74%	0.890	0.430	106.98%	2.180	1.290	68.99%
2015	0.430	0.022	1854.24%	0.760	0.057	1233.55%	1.467	0.078	1780.69%
2016	0.302	0.023	1215.05%	0.533	0.073	630.75%	1.036	0.108	859.54%
2017	0.248	0.027	819.65%	0.440	0.087	406.31%	0.849	0.132	543.20%

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	0.450	0.110	323.30%	0.740	0.200	268.14%	1.580	0.480	227.76%
2012	0.320	0.110	192.90%	0.510	0.200	155.29%	1.110	0.480	130.75%
2013	0.370	0.110	235.68%	0.600	0.200	198.39%	1.280	0.480	167.24%
2014	0.410	0.110	272.73%	0.650	0.200	225.00%	1.420	0.480	195.83%
2015	0.390	0.011	3463.73%	0.689	0.033	2000.30%	1.416	0.022	6245.22%
2016	0.240	0.014	1654.92%	0.421	0.042	903.61%	0.867	0.029	2879.33%
2017	0.226	0.016	1279.14%	0.401	0.051	686.53%	0.824	0.037	2134.28%

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	0.080	0.050	52.10%	0.120	0.200	-41.81%	0.390	0.750	-47.45%
2012	0.040	0.050	-12.20%	0.070	0.200	-65.00%	0.190	0.750	-74.39%
2013	0.040	0.050	-22.00%	0.060	0.200	-71.52%	0.170	0.750	-77.42%
2014	0.120	0.050	140.00%	0.190	0.200	-5.00%	0.670	0.750	-10.67%
2015	0.002	0.009	-78.27%	0.004	0.011	-67.07%	0.007	0.053	-86.28%
2016	0.036	0.007	389.30%	0.065	0.025	166.17%	0.138	0.076	82.71%
2017	0.000	0.008	-100.00%	0.000	0.028	-100.00%	0.000	0.091	-100.00%

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	0.530	0.160	237.79%	0.850	0.410	105.81%	1.970	1.230	60.99%
2012	0.370	0.160	128.80%	0.580	0.410	40.91%	1.300	1.230	5.67%
2013	0.410	0.160	155.16%	0.650	0.410	59.45%	1.450	1.230	18.06%
2014	0.540	0.160	237.50%	0.850	0.410	107.32%	2.090	1.230	69.92%
2015	0.392	0.020	1853.73%	0.692	0.052	1233.44%	1.423	0.076	1780.70%
2016	0.275	0.021	1214.70%	0.486	0.067	630.86%	1.005	0.105	859.55%
2017	0.226	0.025	819.42%	0.401	0.079	406.27%	0.824	0.128	543.20%

In 2017, FPU significantly exceeded the residential winter peak demand goal, the summer peak demand goal, 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. FPUC fell short of the commercial/industrial winter peak, summer peak, and energy reduction goals, but significantly exceeded its overall goals for 2017. FPU exceeded the total winter peak demand goal by 820 percent, the total summer peak demand goal by 406 percent, and the total energy reduction goal by 543 percent. Individual program participation is discussed further in Section 3.

3 Existing Programs and 2014 Goals

FPU'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

Tables 3-1 through 3-7 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	280	634	2.72%
2017	23,387	23,387	180	814	3.48%
2018	23,513	23,513	100	914	3.89%
2019	23,639	23,639	100	1014	4.29%
2020	23,766	23,766	100	1114	4.69%
2021	23,894	23,894	100	1214	5.08%
2022	24,022	24,022	100	1314	5.47%
2023	24,151	24,151	100	1414	5.85%
2024	24,281	24,281	100	1514	6.24%

Year	Actual/ Projected Participants	Reduction Per Installation			Total Annual Reduction		
		kWh	Winter kW	Summer kW	kWh	Winter kW	Summer kW
At The Meter							
2015	354	141	0.057	0.049	50,065	20	17
2016	280	141	0.057	0.049	39,599	16	14
2017	180	141	0.057	0.049	25,457	10	9
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	280	146	0.063	0.054	40,824	18	15
2017	180	146	0.063	0.054	26,244	11	10
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	226	599	2.57%
2017	23,387	23,387	218	817	3.49%
2018	23,513	23,513	100	917	3.90%
2019	23,639	23,639	100	1017	4.30%
2020	23,766	23,766	100	1117	4.70%
2021	23,894	23,894	100	1217	5.09%
2022	24,022	24,022	100	1317	5.48%
2023	24,151	24,151	100	1417	5.87%
2024	24,281	24,281	100	1517	6.25%

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	226	3,661	0.99	1.80	827,386	224	407
2017	218	3,661	0.99	1.80	798,098	216	392
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	226	3,774	1.087	1.976	852,969	246	447
2017	218	3,774	1.087	1.976	822,776	237	431
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	4	6	0.14%
2017	4,275	4,275	0	6	0.14%
2018	4,275	4,275	10	16	0.37%
2019	4,275	4,275	10	26	0.61%
2020	4,275	4,275	10	36	0.84%
2021	4,275	4,275	10	46	1.08%
2022	4,275	4,275	10	56	1.31%
2023	4,275	4,275	10	66	1.54%
2024	4,275	4,275	10	76	1.78%

Year	Actual/ Projected Participants	Reduction Per Installation			Total Annual Reduction		
		kWh	Winter kW	Summer kW	kWh	Winter kW	Summer kW
At The Meter							
2015	2	3,661	0.99	1.80	7,322	2	4
2016	4	3,661	0.99	1.80	14,644	4	7
2017	0	3,661	0.99	1.80	0	0	0
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
At the generator							
2015	2	3,774	1.09	1.98	7,548	2	4
2016	4	3,774	1.09	1.98	15,097	4	8
2017	0	3,774	1.09	1.98	0	0	0
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	0	1	0.02%
2018	4,275	4,317	1	2	0.05%
2019	4,275	4,340	1	3	0.07%
2020	4,275	4,364	2	5	0.11%
2021	4,275	4,387	2	7	0.16%
2022	4,275	4,411	2	9	0.20%
2023	4,275	4,435	2	11	0.25%
2024	4,275	4,458	2	13	0.29%

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	81,943	31.70	42.80	0	0	0
2016	1	81,943	31.70	42.80	81,943	32	43
2017	0	81,943	31.70	42.80	0	0	0
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	0	84,477	34.80	47.00	0	0	0
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	17	17	0.13%
2017	13,600	13,600	0	17	0.13%
2018	13,600	13,600	15	32	0.24%
2019	13,600	13,600	20	52	0.38%
2020	13,600	13,600	25	77	0.57%
2021	13,600	13,600	25	102	0.75%
2022	13,600	13,600	25	127	0.93%
2023	13,600	13,600	25	152	1.12%
2024	13,600	13,600	25	177	1.30%

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	17	2,450	0.00	0.91	41,650	0	15
2017	0	2,450	0.00	0.91	0	0	0
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	17	2,526	0.00	0.99	42,938	0	17
2017	0	2,526	0.00	0.99	0	0	0
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

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. Taken together, the programs achieved two 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 did not have any participants and fell short of their participation goals. Overall, FPUC achieved its winter peak demand, summer peak demand, and energy reduction goals across all programs and classes.

3.1 PROGRAM COSTS

The per installation cost and total program cost for FPUC for each program for 2017 are presented in Table 3-6 for each program. The total program costs are based on the actual 2017 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. *Note; a $10,900 expense that was incurred in December 2016 was booked to the Commercial Energy Consultation program in 2017. The invoice for this 2016 expense wasn't received until mid-2017. Typically such expenses would have been accrued and booked as a 2016 expense.

Table 3-6 Program Costs

Program	2017 Per Installation Cost	2017 Total Program Cost
Commercial Chiller	-	$10,874
Commercial Demonstration and Development	-	$3,885
*Commercial Energy Consultation	$4,144	$45,580
Commercial Heating & Cooling	-	$9,924
Commercial Reflective Roofing	-	$12,772
Low Income	-	$4,232
Residential Energy Survey	$461	$82,918
Residential Heating & Cooling	$367	$79,922

3.2 NET BENEFITS

The annual net benefits for each program are shown in Table 3-7 based on the 2017 actual program cost versus avoided costs for electricity generation, transmission, and distribution developed for the 2015 Demand-Side Management Plan. Since FPU 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 2017 Net Energy for Load for the Northeast and Northwest Divisions respectively. The avoided transmission & distribution costs are based on FPU's operation and maintenance costs from 2009-2013, escalated to 2017 dollars.

Table 3-7 Annual Net Benefits

Program	Annual Net Benefits
Commercial Chiller	($10,874)
Commercial Demonstration and Development	($3,885)
Commercial Energy Consultation	($45,580)
Commercial Heating & Cooling	($9,924)
Commercial Reflective Roofing	($12,772)
Low Income	($4,232)
Residential Energy Survey	($51,091)
Residential Heating & Cooling	$925,408

3.3 OTHER CONSERVATION ACTIVITIES

Since the implementation of a new 2015 DSM plan, FPU has focused on providing its customers and contractors with information about its new programs. Given the small size of FPU's Commercial/Industrial customer base, program goals have been historically difficult to meet. FPU seeks to replicate the successes of 2016 when the Company significantly exceeded goals due to one commercial/industrial participant who qualified for several rebates as allowed in FPU's DSM program. For the Commercial Heating and Cooling and Commercial Reflective Roof programs, FPU will continue to work with industry partners and contractors in its service territories to promote these programs to its customers. For the Commercial Chiller program, FPU will work closely with its large commercial and industrial customers for whom this program would be beneficial. For all programs, FPU will continue its participation in education and advertising opportunities that promote each program to its target audience. In 2017, the conservation department saw a change in management and the adoption of a new computer-based energy audit platform. These changes coupled with the loss of manpower due to Hurricane Irma response efforts may have affected overall participation levels. New policies and procedures have been adopted to assist with returning participation numbers to 2016 levels.

FPU continues to emphasize activities where it can reach many of its customers at one time with its energy conservation message. Proportionate resources to its small customer base necessitate this approach to obtain cost-effective coverage in its service area. FPU was effective with this approach and held or attended 23 energy conservation-related events (ranging in size) focused on connecting with customers at the community level. The purpose of participating in these events is to educate FPU'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 have been replaced with energy savings tips and LED lightbulbs which are received by customers during energy audits. Energy conservation brochures are distributed during events that stress the importance of using energy efficiency as a means to reduce high energy bills and energy consumption.

FPU has also continued to serve its customers through its Energy Expert program which provides resources such as energy-related tips and advice, articles, videos, blog content and other downloadable materials. This energy conservation resource features an "Ask the Energy Expert" tool which allows customers to submit energy-related questions and receive a response from FPU personnel. These questions and answers are also made available on the FPUC website so that other customers may benefit from the information. We are actively working to promote this useful tool to give customers a chance to interact with FPU's highly trained conservation professionals. As part of the Energy Expert program, FPU 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 tools 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 FPU. All of these customer touch points are used to promote FPU's energy conservation programs and help achieve program goals.

Grassroots events remain the primary vehicle for reaching low-income customers and for promoting energy conservation awareness and programs. In 2017, FPU provided an energy conservation presentation to 65 seniors residing in low-income housing. Conservation representatives provided cold weather energy-saving tips and an electric blanket to each participant. FPU is actively looking to grow the low-income program by searching for opportunities to reach low-income housing residents.

GUNSTER
FLORIDA'S LAW FIRM FOR BUSINESS

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February 28, 2019

E-PORTAL FILING

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

Re: 20190000-OT – Undocketed Filings for 2019.

Dear Mr. Teitzman:

Attached for filing on behalf of Florida Public Utilities Company, please find the Company's Annual Conservation Report, filed in accordance with Rule 25-17.0021(5), F.A.C..

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

Kind regards,

Beth Keating
Gunster, Yoakley & Stewart, P.A.
215 South Monroe St., Suite 601
Tallahassee, FL 32301
(850) 521-1706

cc:/ Judy Harlow
Tripp Coston

2018 ANNUAL CONSERVATION REPORT

PREPARED FOR

Florida Public Utilities Company

26 FEBRUARY 2019

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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 2018 calendar year in accordance with 25-17.0021 (5) FAC. Herein, FPUC's conservation plan performance for 2018 is compared to the 2014 goals.

FPUC's 2014 conservation goals were approved in Order No. PSC-2014-0696-FOF-EU, issued December 16, 2014. 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 Order No. PSC-2015-0326-PAA-EG, issued August 11, 2015.

2 Comparison to 2014 Goals

Tables 2-1 through 2-6 present FPUC's 2018 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-2014-0696-FOF-EU only specifies goals at the generator. For Tables 2-4 through 2-6 at the meter, the goals from PSC-2014-0696-FOF-EU are reduced by losses. Detailed performance of the individual programs is shown in Section 3.0.

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	0.470	0.130	265.12%	0.770	0.200	285.59%	1.650	0.510	224.22%
2012	0.350	0.130	159.58%	0.540	0.200	167.39%	1.160	0.510	127.48%
2013	0.390	0.130	197.50%	0.630	0.200	212.53%	1.340	0.510	163.45%
2014	0.430	0.130	230.77%	0.680	0.200	240.00%	1.480	0.510	190.20%
2015	0.428	0.012	3464.61%	0.756	0.036	2000.46%	1.459	0.023	6245.17%
2016	0.263	0.015	1655.35%	0.462	0.046	903.69%	0.894	0.030	2879.31%
2017	0.248	0.018	1279.48%	0.440	0.056	686.59%	0.849	0.038	2134.26%
2018	0.225	0.022	920.68%	0.399	0.067	495.88%	0.769	0.045	1608.60%

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	0.080	0.060	39.40%	0.120	0.230	-46.67%	0.410	0.780	-47.07%
2012	0.050	0.060	-23.36%	0.070	0.230	-69.44%	0.200	0.780	-74.20%
2013	0.040	0.060	-31.92%	0.060	0.230	-72.60%	0.180	0.780	-77.26%
2014	0.130	0.060	116.67%	0.200	0.230	-13.04%	0.700	0.780	-10.25%
2015	0.002	0.010	-78.20%	0.004	0.012	-67.00%	0.008	0.055	-86.28%
2016	0.039	0.008	389.50%	0.072	0.027	165.74%	0.143	0.078	82.71%
2017	0.000	0.009	-100.00%	0.000	0.031	-100.00%	0.000	0.094	-100.00%
2018	0.000	0.018	-100.00%	0.043	0.039	9.15%	0.109	0.115	-5.56%

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	0.560	0.190	193.84%	0.890	0.430	107.87%	2.070	1.290	60.18%
2012	0.380	0.190	101.65%	0.610	0.430	40.70%	1.360	1.290	5.50%
2013	0.430	0.190	125.06%	0.690	0.430	60.02%	1.520	1.290	17.90%
2014	0.560	0.190	194.74%	0.890	0.430	106.98%	2.180	1.290	68.99%
2015	0.430	0.022	1854.24%	0.760	0.057	1233.55%	1.467	0.078	1780.69%
2016	0.302	0.023	1215.05%	0.533	0.073	630.75%	1.036	0.108	859.54%
2017	0.248	0.027	819.65%	0.440	0.087	406.31%	0.849	0.132	543.20%
2018	0.225	0.040	461.38%	0.442	0.106	316.80%	0.877	0.160	448.42%

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	0.450	0.110	323.30%	0.740	0.200	268.14%	1.580	0.480	227.76%
2012	0.320	0.110	192.90%	0.510	0.200	155.29%	1.110	0.480	130.75%
2013	0.370	0.110	235.68%	0.600	0.200	198.39%	1.280	0.480	167.24%
2014	0.410	0.110	272.73%	0.650	0.200	225.00%	1.420	0.480	195.83%
2015	0.390	0.011	3463.73%	0.689	0.033	2000.30%	1.416	0.022	6245.22%
2016	0.240	0.014	1654.92%	0.421	0.042	903.61%	0.867	0.029	2879.33%
2017	0.226	0.016	1279.14%	0.401	0.051	686.53%	0.824	0.037	2134.28%
2018	0.205	0.020	920.43%	0.364	0.061	495.84%	0.746	0.044	1608.61%

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	0.080	0.050	52.10%	0.120	0.200	-41.81%	0.390	0.750	-47.45%
2012	0.040	0.050	-12.20%	0.070	0.200	-65.00%	0.190	0.750	-74.39%
2013	0.040	0.050	-22.00%	0.060	0.200	-71.52%	0.170	0.750	-77.42%
2014	0.120	0.050	140.00%	0.190	0.200	-5.00%	0.670	0.750	-10.67%
2015	0.002	0.009	-78.27%	0.004	0.011	-67.07%	0.007	0.053	-86.28%
2016	0.036	0.007	389.30%	0.065	0.025	166.17%	0.138	0.076	82.71%
2017	0.000	0.008	-100.00%	0.000	0.028	-100.00%	0.000	0.091	-100.00%
2018	0.000	0.016	-100.00%	0.039	0.036	10.14%	0.105	0.112	-5.56%

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	0.530	0.160	237.79%	0.850	0.410	105.81%	1.970	1.230	60.99%
2012	0.370	0.160	128.80%	0.580	0.410	40.91%	1.300	1.230	5.67%
2013	0.410	0.160	155.16%	0.650	0.410	59.45%	1.450	1.230	18.06%
2014	0.540	0.160	237.50%	0.850	0.410	107.32%	2.090	1.230	69.92%
2015	0.392	0.020	1853.73%	0.692	0.052	1233.44%	1.423	0.076	1780.70%
2016	0.275	0.021	1214.70%	0.486	0.067	630.86%	1.005	0.105	859.55%
2017	0.226	0.025	819.42%	0.401	0.079	406.27%	0.824	0.128	543.20%
2018	0.205	0.036	461.24%	0.403	0.097	317.14%	0.851	0.155	448.43%

In 2018, FPUC significantly exceeded the residential winter peak demand goal, the summer peak demand goal, and energy reduction goals. The main reason for this level of exceedance is due to the high participation rate in the Residential Heating and Cooling Upgrade Program. While FPUC fell short of the commercial/industrial winter peak and energy reduction goals, FPUC exceeded the total winter peak demand goal by 461 percent, the total summer peak demand goal by 317 percent, and the total energy reduction goal by 448 percent. Thus, the Company significantly exceeded its overall goals for 2018. Individual program participation is discussed further in Section 3.

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

Tables 3-1 through 3-7 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 Partcipants	Total Penetration Level
2015	23,284	23,284	354	354	1.52%
2016	23,335	23,335	280	634	2.72%
2017	23,387	23,387	180	814	3.48%
2018	23,513	23,513	148	962	4.09%
2019	23,639	23,639	100	1062	4.49%
2020	23,766	23,766	100	1162	4.89%
2021	23,894	23,894	100	1262	5.28%
2022	24,022	24,022	100	1362	5.67%
2023	24,151	24,151	100	1462	6.05%
2024	24,281	24,281	100	1562	6.43%

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	280	141	0.057	0.049	39,599	16	14
2017	180	141	0.057	0.049	25,457	10	9
2018	148	141	0.057	0.049	20,931	8	7
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	280	146	0.063	0.054	40,824	18	15
2017	180	146	0.063	0.054	26,244	11	10
2018	148	146	0.063	0.054	21,578	9	8
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 Partcipants	Total Penetration Level
2015	23,284	23,284	373	373	1.60%
2016	23,335	23,335	226	599	2.57%
2017	23,387	23,387	218	817	3.49%
2018	23,513	23,513	198	1015	4.32%
2019	23,639	23,639	100	1115	4.72%
2020	23,766	23,766	100	1215	5.11%
2021	23,894	23,894	100	1315	5.50%
2022	24,022	24,022	100	1415	5.89%
2023	24,151	24,151	100	1515	6.27%
2024	24,281	24,281	100	1615	6.65%

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	226	3,661	0.99	1.80	827,386	224	407
2017	218	3,661	0.99	1.80	798,098	216	392
2018	198	3,661	0.99	1.80	724,878	196	356
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	226	3,774	1.087	1.976	852,969	246	447
2017	218	3,774	1.087	1.976	822,776	237	431
2018	198	3,774	1.087	1.976	747,292	215	391
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 Partcipants	Total Penetration Level
2015	4,275	4,275	2	2	0.05%
2016	4,275	4,275	4	6	0.14%
2017	4,275	4,275	0	6	0.14%
2018	4,275	4,275	0	6	0.14%
2019	4,275	4,275	10	16	0.37%
2020	4,275	4,275	10	26	0.61%
2021	4,275	4,275	10	36	0.84%
2022	4,275	4,275	10	46	1.08%
2023	4,275	4,275	10	56	1.31%
2024	4,275	4,275	10	66	1.54%

Year	Actual/ Projected Participants	Reduction Per Installation			Total Annual Reduction		
		kWh	Winter kW	Summer kW	kWh	Winter kW	Summer kW
At The Meter							
2015	2	3,661	0.99	1.80	7,322	2	4
2016	4	3,661	0.99	1.80	14,644	4	7
2017	0	3,661	0.99	1.80	0	0	0
2018	0	3,661	0.99	1.80	0	0	0
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
At The Generator							
2015	2	3,774	1.09	1.98	7,548	2	4
2016	4	3,774	1.09	1.98	15,097	4	8
2017	0	3,774	1.09	1.98	0	0	0
2018	0	3,774	1.09	1.98	0	0	0
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 Partcipants	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	0	1	0.02%
2018	4,275	4,317	0	1	0.02%
2019	4,275	4,340	1	2	0.05%
2020	4,275	4,364	2	4	0.09%
2021	4,275	4,387	2	6	0.14%
2022	4,275	4,411	2	8	0.18%
2023	4,275	4,435	2	10	0.23%
2024	4,275	4,458	2	12	0.27%

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	0	81,943	31.70	42.80	0	0	0
2018	0	81,943	31.70	42.80	0	0	0
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	0	84,477	34.80	47.00	0	0	0
2018	0	84,477	34.80	47.00	0	0	0
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 Partcipants	Total Penetration Level
2015	13,600	13,600	0	0	0.00%
2016	13,600	13,600	17	17	0.13%
2017	13,600	13,600	0	17	0.13%
2018	13,600	13,600	43	60	0.44%
2019	13,600	13,600	20	80	0.59%
2020	13,600	13,600	25	105	0.77%
2021	13,600	13,600	25	130	0.96%
2022	13,600	13,600	25	155	1.14%
2023	13,600	13,600	25	180	1.32%
2024	13,600	13,600	25	205	1.51%

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	17	2,450	0.00	0.91	41,650	0	15
2017	0	2,450	0.00	0.91	0	0	0
2018	43	2,450	0.00	0.91	105,350	0	39
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	17	2,526	0.00	0.99	42,938	0	17
2017	0	2,526	0.00	0.99	0	0	0
2018	43	2,526	0.00	0.99	108,607	0	43
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

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. Taken together, the programs achieved close to twice the level of projected participation. The high participation rate was responsible for significantly exceeding the program goals and residential goals. As shown in Tables 3-3 and 3-4, the commercial heating & cooling upgrade and chiller programs did not have any participants. As shown in Table 3-5, the commercial reflective roof program attracted strong participation and exceeded its goals. Overall, FPUC achieved its winter peak demand, summer peak demand, and energy reduction goals across all programs and classes.

3.1 PROGRAM COSTS

The per installation cost and total program cost for FPUC for each program for 2018 are presented in Table 3-6 for each program. The total program costs are based on the actual 2018 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.

Table 3-6 Program Costs

Program	2018 Per Installation Cost	2018 Total Program Cost
Commercial Chiller	-	$3,993
Commercial Demonstration and Development	-	$34,782
Commercial Energy Consultation	$226	$7,452
Commercial Heating & Cooling	-	$8,597
Commercial Reflective Roofing	$557	$23,947
Low Income	-	$4,200
Residential Energy Survey	$478	$70,799
Residential Heating & Cooling	$409	$81,077

3.2 NET BENEFITS

The annual net benefits for each program are shown in Table 3-7 based on the 2018 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 FPL 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 FPL and Gulf were weighted averaged using the actual 2018 Net Energy for Load for the Northeast and Northwest Divisions respectively. The avoided transmission and distribution costs are based on FPUC's operation and maintenance costs from 2009-2013, escalated to 2018 dollars.

Table 3-7 Annual Net Benefits

Program	Annual Net Benefits
Commercial Chiller	($3,993)
Commercial Demonstration and Development	($34,782)
Commercial Energy Consultation	($7,452)
Commercial Heating & Cooling	($8,597)
Commercial Reflective Roofing	$65,408
Low Income	($4,200)
Residential Energy Survey	($43,676)
Residential Heating & Cooling	$865,394

3.3 OTHER CONSERVATION ACTIVITIES

Since the implementation of a new 2015 DSM plan, FPU has focused on providing its customers and contractors with information about its new programs. Given the small size of FPU's Commercial/Industrial customer base, program goals have been historically difficult to meet. FPU seeks to replicate the successes of 2016 when the Company significantly exceeded goals due to one commercial/industrial participant who qualified for several rebates as allowed in FPU's DSM program. For the Commercial Heating and Cooling and Commercial Reflective Roof programs, FPU will continue to work with industry partners and contractors in its service territories to promote these programs to its customers. For the Commercial Chiller program, FPU will work closely with its large commercial and industrial customers for whom this program would be beneficial. For all programs, FPU will continue its participation in education and advertising opportunities that promote each program to its target audience.

FPU continues to emphasize activities where it can reach many of its customers at one time with its energy conservation message. Proportionate resources to its small customer base necessitate this approach to obtain cost-effective coverage in its service area. FPU was effective with this approach and held or attended 36 energy conservation-related events (ranging in size) focused on connecting with customers at the community level. The purpose of participating in these events is to educate FPU's customers about energy efficiency and to offer energy conservation surveys and measures to combat high electrical usage and the rising costs of energy. Conservation kits have been replaced with energy savings tips and LED lightbulbs which are received by customers during energy audits. Energy conservation brochures are distributed during events that stress the importance of using energy efficiency to reduce high energy bills and energy consumption.

FPU has also continued to serve its customers through its Energy Expert program which provides resources such as energy-related tips and advice, articles, videos, blog content and other downloadable materials. This energy conservation resource features an "Ask the Energy Expert" tool which allows customers to submit energy-related questions and receive a response from FPU

personnel. These questions and answers are also made available on the FPUC website so that other customers may benefit from the information. We are actively working to promote this useful tool to give customers a chance to interact with FPU's highly trained conservation professionals. As part of the Energy Expert program, FPU 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 tools 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 FPU. All of these customer touch points are used to promote FPU's energy conservation programs and help achieve program goals. In 2018, FPU developed an outreach campaign (customer bill insert, eblast and landing page) to educate customers on the importance of understanding how their energy costs are impacted by colder weather and provided energy-saving tips to help reduce winter energy costs.

Grassroots events remain the primary vehicle for reaching low-income customers and for promoting energy conservation awareness and programs. In 2018, FPU hosted a luncheon at the Senior Citizen Center in Northwest Florida, with over 50 in attendance who reside in low-income housing. Conservation representatives provided cold weather energy-saving tips, energy conservation marketing collateral, lunch and a blanket to each participant. FPU is actively looking to grow the low-income program by searching for opportunities to reach low-income housing residents.

Hurricane Michael severely impacted FPUC's Northwest Territory in October of 2018 and thus, impacted overall participation levels for the remainder of the year. All of FPU's customers within the Northwest Florida territory were affected by the storm with many of them experiencing devastating losses. Consequently, FPU's conservation efforts were impacted for late 2018, and will likely be impacted significantly in 2019, although in what way and to what degree remains to be seen.