

8 March 2012

Stephen Garl
Florida Public Service Commission
2540 Schumard Oak Blvd.
Tallahassee, Florida 32399-0688

Subject: FPUC 2012 Annual Conservation Report

Dear Steve:

Black & Veatch on behalf of Florida Public Utilities Company (FPUC) electronically files FPUC's 2012 Annual Conservation Report as required by 25-17.0021(5) F.A.C. In addition, five bound paper copies are being sent via Federal Express to your attention. If you have any questions, please give us a call.

Very truly yours,
BLACK & VEATCH CORPORATION



Myron Rollins
Director

mrr
Enclosure[s]

cc: Aleida Socarras - FPUC
Cheryl Martin -FPUC
Kira Lake - FPUC
Curtis Young - FPUC
Beth Keating - Gunster

2012 ANNUAL CONSERVATION REPORT

B&V PROJECT NO. 163826

PREPARED FOR

Florida Public Utilities Company

1 MARCH 2013

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1.0 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 2012 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 2012 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 2012 report represents the second full year in which FPUC utilized its new programs set forth in its 2010 Demand-Side Management Plan.

2.0 Comparison to 2009 Goals

Tables 2-1 through 2-6 present FPUC's 2012 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%	0.77	0.20	285%	1.65	0.51	224%
2012	0.34	0.13	159%	0.54	0.20	167%	1.16	0.51	127%

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%	0.12	0.23	-47%	0.41	0.78	-47%
2012	0.05	0.06	-23%	0.07	0.23	-70%	0.20	0.78	-74%

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	194%	0.89	0.43	108%	2.07	1.29	60%
2012	0.38	0.19	102%	0.61	0.43	41%	1.36	1.29	6%

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%	0.74	0.20	268%	1.58	0.48	228%
2012	0.32	0.11	193%	0.51	0.20	155%	1.11	0.48	131%

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%	0.12	0.20	-42%	0.39	0.75	-47%
2012	0.04	0.05	-12%	0.25	0.20	-66%	0.19	0.75	-74%

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	238%	0.85	0.41	106%	1.97	1.23	61%
2012	0.37	0.16	129%	0.58	0.41	41%	1.30	1.23	6%

In 2012, FPUC significantly exceeded the residential winter peak, summer peak, and energy reduction goals by 159 percent, 167 percent, and 127 percent, respectively. The main reason for this level of exceedence is due to higher than projected participation in the Residential Heating and Cooling Upgrade Program.

In 2012, FPUC missed the commercial/industrial winter peak demand goal, the summer peak demand goal, and energy goal by 23, 69 and 74 percent, respectively. FPUC was able to demonstrate larger than projected participation in the commercial energy survey program and meet the projected participation in the Solar Photovoltaic Program . FPUC did not meet its projected participation goals in its Commercial Indoor Efficient Lighting, Heating and Cooling, Window Film, Commercial Chiller, or Solar Water Heater programs.

FPUC exceeded all three of its overall goals for 2012. FPUC exceeded the total winter peak demand goal by 102 percent, the total summer peak demand by 41 percent, and energy reduction goal by 6 percent.

3.0 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 had 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 had 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. FPUC continues to evaluate the programs to determine if adjustments to the programs should be made.

Table 3-1 Residential Energy Survey Historical Participation and Savings

YEAR	NUMBER OF CUSTOMERS	NUMBER OF ELIGIBLE CUSTOMERS	ANNUAL PROGRAM PARTICIPANTS	CUMULATIVE PROGRAM PARTICIPANTS	TOTAL PENETRATION LEVEL
2011	24,285	24,285	272	272	1.12%
2012	24,485	24,485	231	503	2.05%
2013	24,685	24,685	250	753	3.05%
2014	24,888	24,888	250	1003	4.03%
2015	25,092	25,092	250	1253	4.99%
2016	25,298	25,298	250	1503	5.94%
2017	25,505	25,505	250	1753	6.87%
2018	25,714	25,714	250	2003	7.79%
2019	25,925	25,925	250	2253	8.69%

AT THE METER							
YEAR	ACTUAL/ PROJECTED ANNUAL PARTICIPANTS	REDUCTION PER INSTALLATION			TOTAL ANNUAL REDUCTION		
		kWh	Winter kW	Summer kW	kWh	Winter kW	Summer kW
2011	272	1,229	0.45	0.451	334,288	123	123
2012	231	1,229	0.45	0.451	283,899	104	104
2013	250	1,229	0.45	0.451	307,250	113	113
2014	250	1,229	0.45	0.451	307,250	113	113
2015	250	1,229	0.45	0.451	307,250	113	113
2016	250	1,229	0.45	0.451	307,250	113	113
2017	250	1,229	0.45	0.451	307,250	113	113
2018	250	1,229	0.45	0.451	307,250	113	113
2019	250	1,229	0.45	0.451	307,250	113	113

AT THE GENERATOR							
Year	Actual/ Projected Annual Participants	Reduction Per Installation			Total Annual Reduction		
		kWh	Winter kW	Summer kW	kWh	Winter kW	Summer kW
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	250	1,287	0.472	0.472	321,816	118	118
2014	250	1,287	0.472	0.472	321,816	118	118
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	24,285	23,962	323	323	1.35%
2012	24,485	24,012	213	536	2.24%
2013	24,685	24,062	150	686	2.86%
2014	24,888	24,115	150	836	3.48%
2015	25,092	24,169	150	986	4.09%
2016	25,298	24,225	150	1136	4.70%
2017	25,505	24,282	150	1286	5.31%
2018	25,714	24,341	150	1436	5.91%
2019	25,925	24,402	150	1586	6.52%

AT THE METER							
Year	Actual/ Projected Annual Participants	Reduction Per Installation			Total Annual Reduction		
		kWh	Winter kW	Summer kW	kWh	Winter kW	Summer kW
2011	323	3,778	1.02	1.860	1,220,294	329	601
2012	213	3,778	1.02	1.860	804,714	217	396
2013	150	3,778	1.02	1.860	566,700	153	279
2014	150	3,778	1.02	1.860	566,700	153	279
2015	150	3,778	1.02	1.860	566,700	153	279
2016	150	3,778	1.02	1.860	566,700	153	279
2017	150	3,778	1.02	1.860	566,700	153	279
2018	150	3,778	1.02	1.860	566,700	153	279
2019	150	3,778	1.02	1.860	566,700	153	279

AT THE GENERATOR							
Year	Actual/ Projected Annual Participants	Reduction Per Installation			Total Annual Reduction		
		kWh	Winter kW	Summer kW	kWh	Winter kW	Summer kW
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	150	3,957	1.068	1.948	593,566	160	292
2014	150	3,957	1.068	1.948	593,566	160	292
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	7,528	7,463	65	65	0.87%
2012	7,597	7,482	54	119	1.59%
2013	7,667	7,502	50	169	2.25%
2014	7,737	7,522	50	219	2.91%
2015	7,808	7,543	50	269	3.57%
2016	7,880	7,565	50	319	4.22%
2017	7,953	7,588	50	369	4.87%
2018	8,026	7,611	50	419	5.51%
2019	8,100	7,635	50	469	6.15%

AT THE METER							
Year	Actual/ Projected Annual Participants	Reduction Per Installation			Total Annual Reduction		
		kWh	Winter kW	Summer kW	kWh	Winter kW	Summer kW
2011	65	1,861	0.53	0.534	120,965	35	35
2012	54	1,861	0.53	0.534	100,494	29	29
2013	50	1,861	0.53	0.534	93,050	27	27
2014	50	1,861	0.53	0.534	93,050	27	27
2015	50	1,861	0.53	0.534	93,050	27	27
2016	50	1,861	0.53	0.534	93,050	27	27
2017	50	1,861	0.53	0.534	93,050	27	27
2018	50	1,861	0.53	0.534	93,050	27	27
2019	50	1,861	0.53	0.534	93,050	27	27

AT THE GENERATOR							
Year	Actual/ Projected Annual Participants	Reduction Per Installation			Total Annual Reduction		
		kWh	Winter kW	Summer kW	kWh	Winter kW	Summer kW
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	50	1,949	0.559	0.559	97,461	28	28
2014	50	1,949	0.559	0.559	97,461	28	28
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	7,528	7,526	2	2	0.03%
2012	7,597	7,583	1	3	0.04%
2013	7,667	7,641	12	15	0.20%
2014	7,737	7,699	12	27	0.35%
2015	7,808	7,758	12	39	0.50%
2016	7,880	7,818	12	51	0.65%
2017	7,953	7,879	12	63	0.80%
2018	8,026	7,940	12	75	0.94%
2019	8,100	8,002	12	87	1.09%

AT THE METER							
Year	Actual/ Projected Annual Participants	Reduction Per Installation			Total Annual Reduction		
		kWh	Winter kW	Summer kW	kWh	Winter kW	Summer kW
2011	2	16,259	2.08	3.200	32,518	4	6
2012	1	16,259	2.08	3.200	16,259	2	3
2013	12	16,259	2.08	3.200	195,108	25	38
2014	12	16,259	2.08	3.200	195,108	25	38
2015	12	16,259	2.08	3.200	195,108	25	38
2016	12	16,259	2.08	3.200	195,108	25	38
2017	12	16,259	2.08	3.200	195,108	25	38
2018	12	16,259	2.08	3.200	195,108	25	38
2019	12	16,259	2.08	3.200	195,108	25	38

AT THE GENERATOR							
Year	Actual/ Projected Annual Participants	Reduction Per Installation			Total Annual Reduction		
		kWh	Winter kW	Summer kW	kWh	Winter kW	Summer kW
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	12	17,030	2.179	3.352	204,358	26	40
2014	12	17,030	2.179	3.352	204,358	26	40
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	7,528	3,764	0	0	0.00%
2012	7,597	3,798	12	12	0.32%
2013	7,667	3,833	50	62	1.62%
2014	7,737	3,869	50	112	2.90%
2015	7,808	3,904	50	162	4.15%
2016	7,880	3,940	50	212	5.38%
2017	7,953	3,976	50	262	6.59%
2018	8,026	4,013	50	312	7.77%
2019	8,100	4,050	50	362	8.94%

AT THE METER							
Year	Actual/ Projected Annual Participants	Reduction Per Installation			Total Annual Reduction		
		kWh	Winter kW	Summer kW	kWh	Winter kW	Summer kW
2011	0	3,778	1.02	1.86	0	0	0
2012	12	3,778	1.02	1.86	45,336	12	22
2013	50	3,778	1.02	1.86	188,900	51	93
2014	50	3,778	1.02	1.86	188,900	51	93
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							
Year	Actual/ Projected Annual Participants	Reduction Per Installation			Total Annual Reduction		
		kWh	Winter kW	Summer kW	kWh	Winter kW	Summer kW
2011	0	3,957	1.068	1.948	0	0	0
2012	12	3,957	1.068	1.948	47,485	13	23
2013	50	3,957	1.068	1.948	197,855	53	97
2014	50	3,957	1.068	1.948	197,855	53	97
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	7,528	7,528	0	0	0.00%
2012	7,597	7,585	3	3	0.04%
2013	7,667	7,643	12	15	0.20%
2014	7,737	7,701	12	27	0.35%
2015	7,808	7,760	12	39	0.50%
2016	7,880	7,820	12	51	0.65%
2017	7,953	7,881	12	63	0.80%
2018	8,026	7,942	12	75	0.94%
2019	8,100	8,004	12	87	1.09%

AT THE METER							
Year	Actual/ Projected Annual Participants	Reduction Per Installation			Total Annual Reduction		
		kWh	Winter kW	Summer kW	kWh	Winter kW	Summer kW
2011	0	3,670	0.00	0.840	0	0	0
2012	3	3,670	0.00	0.840	11,010	0	3
2013	12	3,670	0.00	0.840	44,040	0	10
2014	12	3,670	0.00	0.840	44,040	0	10
2015	12	3,670	0.00	0.840	44,040	0	10
2016	12	3,670	0.00	0.840	44,040	0	10
2017	12	3,670	0.00	0.840	44,040	0	10
2018	12	3,670	0.00	0.840	44,040	0	10
2019	12	3,670	0.00	0.840	44,040	0	10

AT THE GENERATOR							
Year	Actual/ Projected Annual Participants	Reduction Per Installation			Total Annual Reduction		
		kWh	Winter kW	Summer kW	kWh	Winter kW	Summer kW
2011	0	3,844	0.000	0.880	0	0	0
2012	3	3,844	0.000	0.880	11,532	0	3
2013	12	3,844	0.000	0.880	46,128	0	11
2014	12	3,844	0.000	0.880	46,128	0	11
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	7,528	7,527	1	1	0.01%
2012	7,597	7,595	0	1	0.01%
2013	7,667	7,664	1	2	0.03%
2014	7,737	7,733	1	3	0.04%
2015	7,808	7,803	1	4	0.05%
2016	7,880	7,874	1	5	0.06%
2017	7,953	7,946	1	6	0.08%
2018	8,026	8,018	1	7	0.09%
2019	8,100	8,091	1	8	0.10%

AT THE METER							
Year	Actual/ Projected Annual Participants	Reduction Per Installation			Total Annual Reduction		
		kWh	Winter kW	Summer kW	kWh	Winter kW	Summer kW
2011	1	216,545	39.94	63.170	216,545	40	63
2012	0	216,545	39.94	63.170	0	0	0
2013	1	216,545	39.94	63.170	216,545	40	63
2014	1	216,545	39.94	63.170	216,545	40	63
2015	1	216,545	39.94	63.170	216,545	40	63
2016	1	216,545	39.94	63.170	216,545	40	63
2017	1	216,545	39.94	63.170	216,545	40	63
2018	1	216,545	39.94	63.170	216,545	40	63
2019	1	216,545	39.94	63.170	216,545	40	63

AT THE GENERATOR							
Year	Actual/ Projected Annual Participants	Reduction Per Installation			Total Annual Reduction		
		kWh	Winter kW	Summer kW	kWh	Winter kW	Summer kW
2011	1	226,811	41.833	66.165	226,811	42	66
2012	0	226,811	41.833	66.165	0	0	0
2013	1	226,811	41.833	66.165	226,811	42	66
2014	1	226,811	41.833	66.165	226,811	42	66
2015	1	226,811	41.833	66.165	226,811	42	66
2016	1	226,811	41.833	66.165	226,811	42	66
2017	1	226,811	41.833	66.165	226,811	42	66
2018	1	226,811	41.833	66.165	226,811	42	66
2019	1	226,811	41.833	66.165	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	24,285	24,275	10	10	0.04%
2012	24,485	24,467	8	18	0.07%
2013	24,685	24,659	8	26	0.11%
2014	24,888	24,854	8	34	0.14%
2015	25,092	25,050	8	42	0.17%
2016	25,298	25,248	8	50	0.20%
2017	25,505	25,447	8	58	0.23%
2018	25,714	25,648	8	66	0.26%
2019	25,925	25,851	8	74	0.29%

AT THE METER							
Year	Actual/ Projected Annual Participants	Reduction Per Installation			Total Annual Reduction		
		kWh	Winter kW	Summer kW	kWh	Winter kW	Summer kW
2011	10	4,380	0.07	2.50	43,800	0.7	25.0
2012	8	4,380	0.07	2.50	35,040	0.6	20.0
2013	8	4,380	0.07	2.50	35,040	0.6	20.0
2014	8	4,380	0.07	2.50	35,040	0.6	20.0
2015	8	4,380	0.07	2.50	35,040	0.6	20.0
2016	8	4,380	0.07	2.50	35,040	0.6	20.0
2017	8	4,380	0.07	2.50	35,040	0.6	20.0
2018	8	4,380	0.07	2.50	35,040	0.6	20.0
2019	8	4,380	0.07	2.50	35,040	0.6	20.0

AT THE GENERATOR							
Year	Actual/ Projected Annual Participants	Reduction Per Installation			Total Annual Reduction		
		kWh	Winter kW	Summer kW	kWh	Winter kW	Summer kW
2011	10	4,588	0.08	2.62	45,876	0.8	26.2
2012	8	4,588	0.08	2.62	36,701	0.6	20.9
2013	8	4,588	0.08	2.62	36,701	0.6	20.9
2014	8	4,588	0.08	2.62	36,701	0.6	20.9
2015	8	4,588	0.08	2.62	36,701	0.6	20.9
2016	8	4,588	0.08	2.62	36,701	0.6	20.9
2017	8	4,588	0.08	2.62	36,701	0.6	20.9
2018	8	4,588	0.08	2.62	36,701	0.6	20.9
2019	8	4,588	0.08	2.62	36,701	0.6	20.9

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	24,285	24,282	3	3	0.01%
2012	24,485	24,470	2	5	0.02%
2013	24,685	24,658	12	17	0.07%
2014	24,888	24,849	12	29	0.12%
2015	25,092	25,041	12	41	0.16%
2016	25,298	25,235	12	53	0.21%
2017	25,505	25,430	12	65	0.26%
2018	25,714	25,627	12	77	0.30%
2019	25,925	25,826	12	89	0.34%

AT THE METER							
Year	Actual/ Projected Annual Participants	Reduction Per Installation			Total Annual Reduction		
		kWh	Winter kW	Summer kW	kWh	Winter kW	Summer kW
2011	3	1,482	0.45	0.22	4,446	1.4	0.7
2012	2	1,482	0.45	0.22	2,964	0.9	0.4
2013	12	1,482	0.45	0.22	17,784	5.4	2.6
2014	12	1,482	0.45	0.22	17,784	5.4	2.6
2015	12	1,482	0.45	0.22	17,784	5.4	2.6
2016	12	1,482	0.45	0.22	17,784	5.4	2.6
2017	12	1,482	0.45	0.22	17,784	5.4	2.6
2018	12	1,482	0.45	0.22	17,784	5.4	2.6
2019	12	1,482	0.45	0.22	17,784	5.4	2.6

AT THE GENERATOR							
Year	Actual/ Projected Annual Participants	Reduction Per Installation			Total Annual Reduction		
		kWh	Winter kW	Summer kW	kWh	Winter kW	Summer kW
2011	3	1,552	0.47	0.23	4,657	1.4	0.7
2012	2	1,552	0.47	0.23	3,105	0.9	0.5
2013	12	1,552	0.47	0.23	18,627	5.7	2.8
2014	12	1,552	0.47	0.23	18,627	5.7	2.8
2015	12	1,552	0.47	0.23	18,627	5.7	2.8
2016	12	1,552	0.47	0.23	18,627	5.7	2.8
2017	12	1,552	0.47	0.23	18,627	5.7	2.8
2018	12	1,552	0.47	0.23	18,627	5.7	2.8
2019	12	1,552	0.47	0.23	18,627	5.7	2.8

As shown in Table 3-2 above, the number of participants in the heating and cooling upgrade program significantly exceeded projections. The significant savings associated with the heating and cooling upgrade program and the high participation were responsible for significantly exceeding the residential goals and for exceeding the overall goals.

As shown in Tables 3-3 through 3-7 above, the commercial programs varied in their success at achieving the projected participation goals. The commercial energy survey program exceeded its annual goal of 50 participants by 8 percent. The Commercial Heating & Cooling Efficiency Upgrade and the Commercial Window Film Installation programs both showed improvement from the 2011 penetration levels. Overall, however, commercial programs have not been achieving their projected penetration levels.

As shown in Tables 3-8 and 3-9, the number of participants in the solar photovoltaic pilot program met the goal of 8 participants, while the number of participations in the solar water heater program did not meet the goal of 12 participants. However, the direct cost of the solar pilot programs very nearly met the cap of \$47,233 with costs of \$44,302.

FPUC will continue to make adjustments to its marketing and other efforts in 2013 to achieve greater levels of participation in those programs where goals were not achieved. FPUC anticipates significantly revamping their commercial programs when new goals are set. FPUC anticipates that the Florida Public Service Commission (FPSC) will begin the process of setting new goals in 2013. Specifically, based on feedback from the program, FPUC will continue to target small commercial facilities for the Commercial Heating & Cooling Upgrade Program because they are more in character with the level of rebates offered. For larger commercial facilities, the rebates are not sufficient to impact customer behavior. However, FPUC's Commercial Chiller Upgrade Program is appropriate for larger commercial customers. Unfortunately there are not a significant number of customers in FPUC's service territory with chillers that meet the program requirements. FPUC will continue to search for potential participants for the Commercial Chiller Upgrade Program. FPUC will continue the greater emphasis on educating and reaching out to contractors for the Commercial Heating and Cooling Upgrade Program in 2013 that was initiated in 2012 with FPUC's Participating Contractor Program.

FPUC's modification of its Program Standards for the Commercial Window Film Installation program to relax the orientation requirements in 2012 resulted in greater participation than 2011.

FPUC will place additional marketing emphasis on the Indoor Efficient Lighting Program. The program requires out of pocket costs for commercial/industrial customers which has been problematic during the last several years of economic downturn. While the economy is improving, the lower natural gas prices have resulted in reduced purchase energy costs which reduces the incentives for commercial/industrial customers to invest to reduce electric costs. In an attempt to recover from the last few years of depressed economic activity, commercial/industrial customers are more focused on promoting their products and services than reducing energy costs with their limited funds. FPUC will place emphasis on the compact fluorescent portion of the program where the rebates cover essentially all of the cost of conversion; however, penetration of compact fluorescents is increasing which in turn reduces the opportunities for participation in the program. FPUC is also increasing their efforts to work with Energy Services Companies to provide performance contracts which can take advantage of the Efficient Lighting Program rebates in 2013. The Indoor Efficient Lighting Program will be one of the programs that will be revamped when the goals are revised.

Finally, FPUC is planning to revise its Program Standards to include internet audits for residential and commercial customers to enable savings from these audits to be quantified. The on-line audits offer much greater flexibility to customers which are not available during normal working hours. While currently not quantified, FPUC significant savings are derived from these audits.

3.1 PROGRAM COSTS

The per installation cost and total program cost for FPUC for each program are presented in Table 3-10 for each program. The per installation cost is based on cost information presented in the 2010 Demand-Side Management Plan. The total program costs are based on the actual 2012 costs and are a function of actual participation and actual administrative and general costs.

Table 3-10 Program Costs

PROGRAM	PER INSTALLATION COST	2012 TOTAL PROGRAM COST
Residential Energy Survey	470	117,090
Residential Heating and Cooling Upgrade	367	97,478
Commercial Energy Survey	389	43,806
Commercial Indoor Efficient Lighting Rebate	2,094	13,295 ⁽¹⁾
Commercial Heating and Cooling Upgrade	367	5,335
Commercial Window Film	410	2,601
Commercial Chiller	18,112	3,422 ⁽¹⁾
Solar Photovoltaic	4,505	39,877
Solar Water Heater	710	4,420

⁽¹⁾Rebates for the Commercial Indoor Efficient Lighting and Chiller Upgrade Programs from 2011 were not expensed until January of 2012.

3.2 NET BENEFITS

The annual net benefits for each program are shown in Table 3-11 based on the 2012 program cost and participation and costs and savings provided in the 2010 Demand-Side Management Plan for the emissions total resource test (E-TRC).

Table 3-11 Annual Net Benefits

PROGRAM	ANNUAL NET BENEFITS
Residential Energy Survey	\$ 52,432
Residential Heating and Cooling Upgrade	\$ 340,685
Commercial Energy Survey	\$ 11,675
Commercial Indoor Efficient Lighting Rebate	\$ 76,923 ⁽¹⁾
Commercial Heating and Cooling Upgrade	\$ 33,134
Commercial Window Film	\$ 9,835
Commercial Chiller	\$ 75,906
Solar Photovoltaic	NA
Solar Water Heater	NA
⁽¹⁾ The commercial Indoor Efficient Lighting Rebate Program had costs from 2011 posted to it, and therefore the cost per participant from the 2010 Demand-Side Management Plan was used to calculate the Annual Net Benefits.	

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 2012. FPUC held or attended 17 events in 2012 with total attendance of 6,745.

These events are generally “Big Tent Events”. The purpose of the Big Tent 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. Conservation kits (containing compact fluorescent light bulbs, weather stripping, etc.), energy saving tips, and conservation brochures are distributed to FPUC’s customers during the event. Big Tent Events contribute to conservation by stressing the importance of using energy efficiency as a means to reduce high energy bills. Big Tent Events provide FPUC a great opportunity to efficiently distribute FPUC’s conservation kits which have a direct impact on energy consumption. The Big Tent Events typically run from 9:00 a.m. to 4:00 p.m. and are typically held in conjunction with other local events to increase the number of customers attending.

One of FPUC's most exciting conservation projects is the Light Emitting Diode (LED) Street Lighting Research Program in partnership with the City of Fernandina Beach. The Program is a Conservation, Demonstration, and Development (CDD) program to research LED Street Lighting to evaluate the benefits regarding energy efficiency and conservation and further identify specific applications and types of lights. The CDD program will be conducted over a three year period which began in 2011 and will be completed in 2013.

The goal of the program is to determine if new LED Street Light technology can provide efficient, safe and aesthetically pleasing light that will reduce overall energy consumption while providing customers with a lighting option with cost that is equivalent or less than the currently available lights. An additional goal of the program is to establish a working relationship with the City of Fernandina that will allow FPUC and the City to jointly find additional ways to conserve energy and lower energy costs.

The program will be conducted using the following steps:

- Obtain LED lights for use in the study. The lights will have similar lighting levels (lumens) to the existing 100 watt and 200 watt High Pressure Sodium (HPS) street lights currently in service on the FPUC system. Lights used will be from separate manufacturers and should be readily available from separate sources.
- Determine suitable locations for the installation of LED Lights. The installations should be along highly traveled roads within the City and have locations that would reasonably adhere to typical design standards of the light. The locations should also allow for visual comparison of nearby HPS lighting installations.
- Install the LED lights at the designated locations. The LED lights will be installed and evaluated by installation personnel regarding ease of installation. Installation personnel will also be asked to provide initial opinions on the anticipated long term integrity of each light and the efficiency of future maintenance operations. Initial lumen level readings will be obtained by the engineering department.
- Obtain customer input regarding the new light installations and other conservation issues. Surveys will be mailed to customers in the area of light installations to solicit feedback regarding the lights and other similar topics. The surveys will contain different types of lighting and energy efficiency questions and will be easily completed by customers. Surveys will be returned by customers using the postage paid envelopes. Customer feedback will be used to gauge customers' reaction to LED lights and other energy conservation measures. Program modifications may be made based on customer input. Surveys will be conducted at the initiation of this program and after twelve months.
- Inform the community of this program through press releases and through City publications.
- Evaluate lumen level output of each of the lights. During the program, lumen level output will be measured every six months and will be compared to the initial readings at the time of installations. Standards measuring techniques and locations will be developed and used during each subsequent measurement.
- Evaluate energy consumption of lights. During the program, energy consumption of randomly selected lights will be determined and compared to manufacturer provided information. The intent is to confirm the typical energy consumption of lights and determine if these match manufacturer provided information and if the consumption changes during the term of the program.

- Determine the appropriate specifications for LED wattage and lumen level lights to be used on the FPUC system. Initially these lights will be used as an alternative or replacement for the 100 watt and 200 watt HPS lights currently in use on the FPUC system.
- Determine appropriate rates for the LED lights. Rates will be determined using a cost of service type methodology. This methodology will include, but not be limited to, initial cost, installation cost, overheads, cost of capital, energy consumption, maintenance cost, depreciation, taxes and rate of return.
- Provide new LED Street Lighting options to any City throughout the FPUC service territory. Specifics on how replacements will be conducted.