

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) | | | Summer Peak (MW) | | | GWh Energy | | |
|------|------------------|--------------------------|------------|------------------|--------------------------|------------|----------------|--------------------------|------------|
| | Reduction | | | Reduction | | | 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) | | | Summer Peak (MW) | | | GWh Energy | | |
|------|------------------|--------------------------|------------|------------------|--------------------------|------------|----------------|--------------------------|------------|
| | Reduction | | | Reduction | | | 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 |
| 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 FPU's energy conservation programs and help achieve program goals.