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# Quarterly Report of the Program Administrators

## Fourth Quarter, 2014

### February 13, 2015

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**nationalgrid**



**Columbia Gas<sup>®</sup>  
of Massachusetts**

*A NiSource Company*



**Western Massachusetts  
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The Northeast Utilities System



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**QUARTERLY REPORT TO THE EEAC  
QUARTER FOUR, 2014**

**February 13, 2015**

**I. Introduction**

Pursuant to the requirements of the Green Communities Act (“GCA”), codified at G.L. c. 25, § 22(d), “The electric and natural gas distribution companies and municipal aggregators shall provide quarterly reports to the council on the implementation of their respective plans. The reports shall include a description of the program administrator’s progress in implementing the plan, a summary of the savings secured to date and such other information as the council shall determine.”

Building upon this legislative mandate, as well as the Order of the Department of Public Utilities (“Department”) in 2013-2015 Energy Efficiency Plans, D.P.U. 12-100 to D.P.U. 12-111 dated January 31, 2013, approving Three-Year Energy Efficiency Plans (the “Plans”) for each Program Administrator (“PA”), this document serves to report on PA activities throughout the Commonwealth during the fourth quarter of 2014.<sup>1</sup> This document presents narrative status updates regarding program implementation and specific areas of interest as requested by the Energy Efficiency Advisory Council (“EEAC” or “Council”), followed by quantitative data set forth at Attachment A.

The narrative portion of this Quarterly Report for the fourth quarter of 2014 is organized as follows:

I.	Introduction .....	1
II.	2014 Council Priorities Update .....	2
III.	Gas and Electric Program Highlights .....	4
IV.	Massachusetts Technology Assessment Committee .....	11
V.	Marketing, Education, Outreach Highlights.....	12
VI.	Evaluation, Measurement, and Verification Highlights .....	13
VII.	Regulatory Updates .....	19

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<sup>1</sup> The PAs are required to file these Quarterly Reports with the Department of Public Utilities for informational purposes. 2010-2012 Energy Efficiency Plans, D.P.U. 09-116 – D.P.U. 09-120 and D.P.U. 09-121 – D.P.U. 09-128 (January 28, 2010).

## II. 2014 Council Priorities Update

1. ***Design and Develop a Statewide Database:*** *The Council maintains that designing and developing a comprehensive, accessible, secure statewide database is a top priority in 2014. Ideally, the statewide database will be operational in 2014.*

**ACTION:** In Q4, the PAs maintained and improved six initial tabs on Mass Save Data (“MSD”), the PAs’ data reporting tool, which is live at <http://www.masssavedata.com>. These tabs include: home page, portfolio overview, sector overview, performance details, sales and savings, and cost to deliver. The PAs continued to work on developing two additional tabs: GHG Reduction and HES Activity. The website was populated in Q4 with 2013 quarterly data, 2013 Plan-Year Report data and data from the first three quarters of 2014. The Home page was improved and includes external links to MassSave.com, evaluations studies, and the websites for the EEAC and DPU. Links to Mass Save Data can be found on the MassSave.com website. The PAs continued to identify other needed improvements as they work with the data in MSD. Direct expenditures for development of MSD have been less than \$260,000 statewide. In Q4, the PAs developed a scope of work for the next phase of MSD (including geographic reporting, data going back to 2010 and data analytics), recognizing that the timing of some work may need to be coordinated with other efforts, such as digitizing the Technical Reference Manual (“TRM”) and ongoing evaluation work. The PAs decided to expand the scope of the TRM project in order to enhance the format to better address unique attribute values for different PAs. The PAs are developing a timeline and costs with the vendor.

2. ***Achieve C&I Savings and Benefits Goals:*** *C&I savings goals were largely not met in 2011, 2012, or 2013, which consequently caused the PAs to fall short of their portfolio goals in each of those years. The C&I electric shortfall in 2013 must be accounted for in 2014 and 2015, if the PAs are to meet their 2013- 2015 three-year plan targets. In addition, the Council is interested in investigating opportunities to smooth out the rate at which savings are finalized throughout the year (i.e., mitigating the “hockey stick” effect).*

**ACTION:** In Q4, all PAs continued their efforts to focus on the C&I sector and increase C&I savings. PAs initiated a special retro-commissioning effort in Q4 for hospitals. Based on the findings and recommendations of the Retro-Commissioning Best Practices research that was conducted earlier in 2014, a special initiative was developed that provides no-cost engineering resources to identify opportunities as well as enhanced incentives for achieved gas and electric energy savings. PAs also focused in Q4 on training opportunities, for both PA staff and trade allies. Training sessions allow PAs to stay up to date on the latest skills, and trade ally training allows the PAs to help create and maintain a capable energy efficiency workforce in Massachusetts. In Q4, a series of energy efficiency sales training workshops were developed with the objective of improving the overall commercial effectiveness of C&I program delivery in Massachusetts. The sessions will be conducted throughout

the state by expert Mark Jewell, who is very well known and highly regarded for his ability to provide sales training specifically in an energy efficiency context. Also in Q4, the gas subcommittee focused heavily on considering opportunities for future program improvements, including offering water heaters through an upstream approach. Finally, 2015 C&I program application forms were developed and finalized and distributed to all PAs and posted to Mass Save in Q4. For additional detailed information on the C&I efforts made by the PAs in Q4 toward achieving their savings goals, please see Sections III through V.

- 3. *Improve Customer Access to and Use of Energy Efficiency Programs:*** *Clearly define, standardize, measure, and benchmark participation, develop and implement strategies for improving customer access to existing energy efficiency programs, and encourage deeper savings with participants.*

**ACTION:** The PAs have continued to improve customer access to and use of the energy efficiency programs through program design, implementation strategies, and marketing efforts in Q4. In the residential sector, PAs have continued to offer specific initiative and rebates designed help improve customer access to energy efficiency programs, including increased LED penetration, pre-weatherization barrier offer, cross program promotions, 2-4 unit incentive through Renew Boston, early boiler, furnace, and air conditioning replacement rebates, and enhanced customer bonus initiatives. Additionally, PAs have been working through the year to develop a deeper energy savings offering, which was launched at the end of Q4. The PAs have decided on the eligible measures and implementation strategy and this offer will continue into 2015. In all sectors PAs continued in Q4 to look at deeper savings opportunities that are the right fit for a project, and to utilize multi-year agreements in C&I to encourage greater participation and deeper savings over time. PAs continue to improve standard offerings and strategies through participating in working groups and management committees, such as Residential Management Committee, C&I Management Committee, Evaluation Management Committee, Low-Income Best Practices, Massachusetts Technical Advisory Committee, and many other working groups and subcommittees. PAs have also worked with stakeholders such as LEAN to coordinate efforts and share ideas and best practices, and with vendors. In order to reach more customers, PAs continued their successful marketing campaign in Q4, with marketing efforts across all media. For additional detailed information on the efforts made by the PAs in Q3, please see Sections III through VI.

- 4. *Plan for the 2016-2018 Three-Year Plan:*** *Continue, in 2014, to evaluate and assess effective, sustainable energy efficiency program approaches to prepare for and inform the development of the next three-year plan.*

**ACTION:** The PAs continued to reflect on program delivery in Q4, including reviewing program successes and challenges, in order to support sustainable energy efficiency programs and to consistently seek greater savings. PAs began active preparations for the 2016-2018 Three-Year Plan in Q4, with program review

through management committees and evaluations. In particular, the C&IMC held a Three-Year Planning Retreat in Pittsfield, MA in Q4, with PAs and members of the Council’s consulting team, to brainstorm ideas for possible consideration in the 2016-2018 three-year plan. The range of ideas discussed included offerings and incentives, delivery models, marketing and outreach, and channel engagement, and focused on improving the volume, depth, and breadth of savings and participation, enhancing the customer experience, and increasing integration and coordination between gas and electric PAs. The PAs also worked on evaluation planning for the next three-year plan, including preparations for an Evaluation Summit in Q1 2015. For additional details on the PAs’ evaluation activities in Q4, please see Section VI below.

### III. Gas and Electric Program Highlights

Since the Department of Public Utilities (“Department”) approved the Gas and Electric Three-Year Energy Efficiency Plans on January 31, 2013, the Program Administrators have been proceeding with the implementation of their EEAC-endorsed 2013–2015 Plans.

In Attachment A, the PAs present quantitative cost and savings data, along with other data. The PAs will keep the EEAC apprised of significant cost and savings variances from Plan goals that become apparent as the PAs continue to implement programs over the three years of the Plan.

<b>RESIDENTIAL SECTOR</b>
<p><b>Residential New Construction</b></p> <p><i>Electric New Construction</i></p> <p>At the end of 2014, the PAs completed 4,942 units statewide. As a result the PAs exceeded the statewide unit goal. Recruitment plans continued through the closeout of the 2014 Program year. The statewide vendor also began to look forward to the 2015 program year by determining how many 2014 projects remain in the pipeline for 2015 completion and beyond. Additionally, during the last quarter of 2014, the PAs put a major focus on outreach and recruitment throughout the state by attending events and trainings with targeted stakeholders and allies. From October through December, program account managers attended 23 events throughout Massachusetts.</p> <p><i>Gas New Construction</i></p> <p>In the fourth quarter, the gas program continued the trend of high participation rates seen throughout 2014. At the end of December, the overall statewide gas program achieved 192% of the PAs’ unit goal.</p> <p>As of the end of October, there were 146 communities in Massachusetts that had adopted the Stretch Energy Code.</p>

## RESIDENTIAL HIGH-RISE NEW CONSTRUCTION

At the end of 2014, 36 projects with 1,134 residential units completed the Multi-Family High-Rise program path: 187 low-income units, and 927 non-low income units. Recruitment efforts among the most active multi-family developers continued throughout the last quarter where PA representatives attended an event in Washington DC called the Multifamily Annual Conference, hosted by BisNow. The event was focused around new technologies and energy efficiency measures for multi-family projects and the forecast of the market for 2015. Account managers also attended a number of events in the greater Boston area, networking and raising awareness of the benefits of the program. The Technical Resource Manual (TRM) review began to evaluate how savings are calculated for the program to be completed and implemented for the 2015 Program Year.

## C&I COORDINATION

Monthly project meetings were held with C&I and Residential Program Managers of Northeast Utilities and National Grid to review and qualify projects for participation in the Multi-family High-Rise Path. The meetings are focused on identifying all cost-effective energy saving opportunities and preventing the double counting of savings for projects that have submitted custom measures.

## **Home Energy Services and HEAT Loan**

Program Administrators have exceeded 2014 savings goals. The PAs continue to implement some of the new enhancements from last year while incorporating new opportunities.

### *Continuing Initiatives:*

- Increased LED Penetration
- Pre-Weatherization Barrier Offer
- Cross Program Promotions
- 2-4 Unit Incentive (Renew Boston)
- Early Boiler Replacement Rebate – Ended 10/1/14
- Early Furnace Replacement Rebate – Ended 10/1/14
- Early Air Conditioning Replacement – Ended 10/1/14
- Enhanced Customer Bonus Initiatives
- Rebates for Wireless Enabled Thermostats (some PAs)
- Efficient Neighborhoods+®
- Deeper Savings Initiative Launched (except National Grid)
- Wireless Enabled Thermostats offered during HEA (some PAs)

PAs continue to offer increased penetration of LEDs per home due to the lower pricing secured via the High Efficiency Lighting RFP awarded mid 2014. Additionally, PAs have realized significant savings increases due to this increase in LED Production and an increase in savings

as a result of an Hours of Use evaluation.

Eligibility to call to schedule a Home Energy Assessment as part of Efficient Neighborhoods+® came to an end at the end of the year. Customers who have had their HEA still have the opportunity to take advantage of the generous incentives through mid-March.

Most PAs have been working through the year to develop a Deeper Energy Savings Offering which was launched at the end of Q4. The PAs have decided on the eligible measures and implementation strategy and this offer will continue into 2015.

In 2014, some PAs continued to explore the possibility of incorporating wireless enabled thermostats as a direct install measure through the program. These PAs are on track to begin offering this measure in early 2015.

The newly elected members of the Contractors Best Practices Working Group (BPWG) continue to tackle programmatic topics to drive potential changes. The subcommittees continue to meet to work through performance standards, training, and new technologies.

Throughout 2014, the HEAT Loan demand was trending higher than 2013. Most PAs far exceeded planned HEAT Loan production. The PAs continue to see higher HEAT Loan authorizations per month as compared to 2013. Heating equipment and Central AC are the primary drivers of the HEAT Loan with Central AC having the largest dollar value financed.

### **Residential Lighting**

The PAs were informed that rebate processing vendor Parago had been acquired by Blackhawk Network Holdings, a distributor of gift cards, prepaid telecom products and financial service products.

Award applications were submitted to the Association of Energy Services Professionals (AESP) and ENERGY STAR®. These applications are for Outstanding Achievement in Residential Marketing, and Energy Efficiency Program Delivery. These award submissions help to keep Massachusetts in the forefront of energy efficiency.

The last three of five interviews associated with the Fox 25 Mission Renovation promotion were aired on Fox 25's morning program. National Grid participated in two, which covered general energy saving tips, as well as rebates available for products. NSTAR participated in the third interview which focused on efficient lighting.

The PAs partnered with manufacturer Philips on a Facebook campaign promoting the Slim Style LED. Customers were able to purchase three LEDs for a discounted price of \$9.00. It was another strong social media promotion that resulted in 2,253 packs sold, for a total of 6,759 LED bulbs sold. The promotion generated a lot of great engagement for the page as well. The top post was a promoted post that received 3,011 likes, 234 comments, 379 shares and reached 231,296 people.

A Twitter promotion was held, called Do the Bright Thing, in which customers were asked to upload a photo of a light or fixture they wanted updated. Customers were eligible to win one of ten CFL lighting prize packs.

The PAs released an RFP for the Rebate Processing contract for Lighting & Products. There were five responses and the PAs called in the top two for presentations. National Grid's procurement department is leading the RFP process and the selection process is still ongoing.

### **Residential Consumer Products**

The PAs decided to increase the refrigerator recycling incentive in January through mid February 2015 from \$50 to \$100. This was done last year and resulted in increased participation during a time when customer engagement is traditionally low.

After presentations from the top two respondents to Retail Outreach RFP, the contract for Lighting and Products was awarded to incumbent vendor Lockheed Martin. Northeast Utilities led that RFP and the contract was signed by the end of 2014.

Updated rebate forms for 2015 were sent to Parago for review.

In October, another successful Twitter promotion was implemented. It was a Honeywell Room Air Cleaner Sweepstakes, in which fans were encouraged to tweet their vote for the worst fall allergen including the hashtag #MassACHOOsetts, for a chance to win a Honeywell Bluetooth Smart Air Purifier. The 14 day sweeps generated 392 tweets for the contest, 107 of those were unique. Overall, the Sweeps tweets received 1,076 clicks – this number encompasses retweets, favorites, replies, hashtags and clicks to the contest link.

In Q4, the Mass Save Facebook page reached 100,000 fans.

PAs have held multiple meetings with the evaluation team to determine 2015 Product offerings. Freezers and room air conditioners no longer screen as cost-effective, so these products will not be offered in 2015. Clothes washers do not screen as cost-effective on their own, but may be offered as part of a high-efficiency package. PAs will continue to follow up on these items. ENERGY STAR refrigerators no longer screen as cost-effective due to new specifications, but PAs will be able to offer a \$50 rebate on Most Efficient models. This is a lower rebate than offered in the past for Most Efficient. There is now an ENERGY STAR specification for dryers, so PAs will be offering an incentive for ENERGY STAR models, in addition to the SEDI rebate. There are also ongoing discussions with PA evaluators about adding heat pump dryers to the mix.

### **Gas Residential Heating and Water Heating**

At the close of 2014, the residential GasNetworks PA's have processed over thirty six thousand incentives in Massachusetts. The total number of incentives is listed by category here:



High Efficiency Hot Water Heaters	7,516
High Efficiency Boilers	9,353
High Efficiency Furnaces	4,381
Programmable Thermostats	6,557
WiFi Thermostats	8,921
Total	36,728

During Q4 of 2014, the GasNetworks PA's awarded their Field Service contract to the existing vendor, Lockheed Martin. The contract was awarded for two years with an option to extend for one additional year, and the RFP was shared with Massachusetts Electric Products and Lighting working group. Lockheed Martin will build on its successful thermostat and water heating equipment outreach at existing retail sites such as Home Depot and Lowes, and continue to expand into Sears, Target, etc.

The GasNetworks vendor for supply house outreach conducted over 1,700 supply house visits which include counter days, sales training, and replenishing of program rebate forms and marketing paraphernalia.

Additionally, Pixel Media has been contracted to redesign the GasNetworks website; the project is on track to be completed early in Q2 of 2015.

### **Electric Residential Cooling and Heating**

All PAs have far exceeded annual savings goals for the COOL SMART program. They have also exceeded annual production goals, reaching more than 400% of digital checkup and QIV goals, more than 200% of equipment rebate goals, more than 300% of early replacement goals, and about 100% of duct sealing goals.

COOL SMART's first upstream incentive, ECM circulator pumps, was off to a great start in late 2014, with 38 distributors participating and more than 5,500 pump incentives processed. The PAs continue to work with manufacturers, distributors, and other industry partners to increase awareness of this new program.

This fall, the PAs coordinated with MassCEC to help launch its Clean Heating and Cooling Programs, which provide incentives for air source heat pumps.

COOL SMART incentives for heat pumps and central AC were revised for 2015 in response to increasing federal standards as of January. The EER rating requirement was removed for heat pumps, as it is less appropriate a standard in the Northeast than in warmer climates, and the three previous incentive tiers were simplified to two higher tiers, reflecting a combination of Energy Star Most Efficient and NEEP cold climate specifications.

## **LOW-INCOME SECTOR**

### **Low-Income Retrofit**

#### ***Low-Income Single Family***

Preliminary budgets and savings for the Low Income Single Family initiative at the end of quarter four 2014 vary by PA. Some PAs have exceeded savings goals while others were under as some PAs reallocated funding toward Low-Income Multi-Family based upon customer demand.

The Community Action Program agencies relied heavily on PA funding in 2014, which resulted in much higher production levels for weatherization than planned.

In 2014, the PAs successfully transitioned to the distributor selected to fulfill High Efficiency Lighting Products statewide for all residential and low-income direct install programs. The PAs have already been able to offer many more LEDs to customers and will continue to monitor the market and hope to transition primarily to LEDs across all bulb categories as pricing continues to decline.

Additionally, the PAs continue to participate in the Low-Income Best Practices Working Group to coordinate statewide on all aspects of the Low-Income Retrofit Programs and review any new measures for possible inclusion within the program.

#### ***Low-Income Multi-Family***

The Low-Income Multi-Family budgets and savings vary by PA. As of quarter four 2014, preliminary results indicate that the majority of PAs have exceeded savings goals while reaching or exceeding budgets. The demand in some PA territories for multi-family programming was higher in comparison to the funding that was available; therefore, some PAs reallocated Low-Income Single Family funding to the Low-Income Multi-Family initiative in order to serve more customers. Landlord demand remains very strong and the program is expected to be highly subscribed in future years.

The PAs completed the transition to the distributor selected to fulfill High Efficiency Lighting Products statewide for all residential and low-income direct install programs. With the significant cost savings achieved through this effort, the PAs have been able to transition to primarily offering LEDs and will continue to monitor the market and hope to continue to increase LED penetration as pricing continues to decline.

Even though the Multi-Family Benchmarking Metric was finalized in 2013, the PAs continue to utilize the WEGOWise Multi-Family Benchmarking tool to help to identify the least-efficient buildings among all those eligible for funding and aid in the prioritization of energy efficiency projects to make the most of the budgets.

The Low-Income Multi-Family Impact Assessment Evaluation planning began in the fourth

quarter of 2014. The focus of the study will be to estimate Low-Income Multi-Family program savings, explore opportunities for standardization where they exist (where appropriate) and assess whether all data is available to conduct a robust impact evaluation. The evaluation plan was developed in conjunction with the participating PAs and Cadmus. The evaluation will review data from the fourth quarter of 2013 through the first of 2015. Completion of the study is expected in 2015.

### **Low-Income New Construction**

Throughout the fourth quarter of 2014, the low-income new construction market continued to be less active than in recent years. The program continues to perform targeted recruitment to the low-income market across the state. The PAs continued to recruit and network throughout the fourth quarter and will be working with HERS Raters to solidify the low-income project forecast for 2015 in order to maintain a strong capture rate in a less active low-income new construction market.

## **COMMERCIAL AND INDUSTRIAL SECTOR**

In Q4, the Program Administrators continued to work diligently toward achieving the 2014 savings goals while actively exploring opportunities to expand offerings, enhance strategies and to encourage participation throughout the year.

### **Highlights**

***2015 Program Application Forms:*** The 2015 C&I program application forms were developed and finalized and distributed to all PAs and posted to Mass Save. The C&I Subcommittees – gas, lighting, non-lighting electric – all worked diligently to determine what additions, deletions, and changes should be made to the measures being offered, and their associated incentive levels, for 2015.

***Three-Year Planning Retreat:*** The C&I Management Committee members, along with select members of the C&I Subcommittees, the Evaluation Management Committee and the Council’s consulting team convened in early October in Pittsfield, MA to brainstorm ideas for possible consideration in the 2016-2018 three-year plan. The range of ideas discussed spanned offerings and incentives, delivery models, marketing and outreach, and channel engagement, and focused on improving the volume, depth, and breadth of savings and participation, enhancing the customer experience, increasing integration and coordination between gas and electric PAs. The results of this retreat are forming much of the basis of the PAs’ on-going development of the three-year plan for serving the nearly 500,000 C&I customers in Massachusetts in 2016-2018.

***Retro-commissioning for Hospitals:*** Based on the findings and recommendations of the Retro-commissioning Best Practices research that was conducted earlier in 2014, a special initiative was developed targeting retro-commissioning for hospitals. The initiative provides no-cost engineering resources to identify opportunities as well as enhanced incentives for achieved gas and electric energy savings. The results of this initiative will be assessed in mid-2015 and,

depending on the outcome, could be used to inform similar efforts targeting additional customer segments.

***Statewide Sales Training:*** An important element of the current three-year plan is providing training, both for PA staff as well as trade allies. In keeping with that commitment, a series of energy efficiency sales training workshops were developed with the objective of improving the overall commercial effectiveness with which the C&I programs are delivered in Massachusetts. The sessions are scheduled for early February in three locations spanning the entire state and will be conducted by Mark Jewell, who is very well known and highly regarded for his ability to provide sales training specifically in an energy efficiency context. Attendance is expected to be between 200 and 300 individuals.

### **Subcommittee Activities**

The various C&I Subcommittees discussed a number of issues and areas for possible improvement during Q4. Details for each Subcommittee are as follows:

***Electric Non-Lighting:*** 2015 applications were finalized with increased incentives for pay-for-performance, EMS points, and select chillers. Retro-commissioning Best Practice study results were used to develop a National Grid and Northeast Utilities pilot program for early 2015 at Healthcare facilities. The subcommittee began investigating possible program changes for the 2016-2018 three-year plan.

***Natural Gas:*** The gas subcommittee focused heavily in Q4 on considering opportunities for future program improvements, including offering water heaters through an upstream approach, possibly augmenting the Small Business initiative with gas-specific vendors, and opportunities that may arise from Wi-Fi thermostat and Boiler tune-up campaigns currently being tested.

***Upstream:*** A presentation was provided to the C&IMC regarding the benefit of moving gas water heaters off the existing GasNetworks application and taking the incentive delivery Upstream. The C&IMC and gas PAs approved the analysis to move from a discovery/informational analysis phase into a project plan and implementation phase, wherein gas water heaters would be moved upstream in the second half of 2015.

## **IV. Massachusetts Technology Assessment Committee**

The Statewide Massachusetts Technology Assessment Committee (“MTAC”) evaluates new technologies for inclusion in the energy efficiency programs. MTAC provides a consistent statewide venue for evaluation of new energy efficiency technologies. The committee approved two new technologies/products during Q4. These technologies/products include Xeros Laundry and Pump Controller.

- Xeros Laundry system uses polymer beads with ambient water to clean commercial laundry material. The technology has been approved as a custom measure and a custom express tool will be used to calculate savings.

- Pump Controllers involve air operated double diaphragm pump control resulting in electric energy savings. The technology has been approved as a custom measure.
- The MTAC members conducted a thorough review and determined that the “Greening of the Gateway Cities” initiative, led by Massachusetts Office of Energy and Environmental Affairs, does not meet the criteria used to evaluate and provide incentives. The subcommittee suggested they instead engage with the Massachusetts Clean Energy Center to explore partnership options.

MTAC has a few residential technologies on the horizon, including high efficiency baseboards and a domestic hot water recirculation pump, both of which are currently being reviewed. MTAC is also in the process of updating its charter and eligibility criteria based on direction from the C&I Management Committee.

## **V. Marketing, Education, Outreach Highlights**

### **Media Overview**

In 4th Quarter, the Mass Save Awareness Campaign continued with the following media:

- Radio (Ran for weeks of October 5, 12 & 26)
  - Residential in English, Spanish and Portuguese languages, plus C&I in English
  - A mix of :30 and :60 ads run on 26 top rated stations across the state
- Digital Display Banners (Ran October 1 - 31)
  - Geo-targeted flash banners for residential, C&I and multicultural audiences
- Pre-roll Video Ads (Ran October 1 - 31)
  - Geo-targeted pre-roll video ads for residential
- Mobile Banners (Ran October 1 - 31)
  - Smartphone and tablet ads for residential and C&I audiences
- Facebook Ads for residential (Ran from October 1 to November 22)
- Paid Search (Ran from October 1 to November 22)
  - Geo-targeted search ads for both residential and C&I ran on the top two search networks
- Business & Chamber Publication Print (Ran October 1 through the end of December)
  - Ads targeting C&I ran 11 key business and chamber publications across the state
- Out-of- Home (Ran October 1 – 25)
  - Residential, C&I and low-income targets
  - Billboards were placed on strategic high traffic roadways

KSV reported great success with the campaign. In 2014, 227,789,977 impressions were served for the Mass Save digital campaign. Impressions were served via Flash Banners, Pre-roll and You Tube Video, Mobile Smartphone and Tablet banners, Mobile Geo-fence Banners, Facebook and Paid search. Mobile advertising drove 40% of clicks. For the residential campaign, Weather.com delivered the highest pages per session and highest average session duration. Xaxis Business Ad Network was the top performer for the Commercial & Industrial campaign.

The Mass Save website also showed great year-over-year results. 2014 statistics from PixelMedia include:

- MassSave.com had 1,061,158 website visits from January 1-November 30 2014. This is a 27% increase over full year 2013, and a 59% increase over 2012
- Masssave.com had 4 million page view – a 33% increase from 2013
- 48% increase in visits from Social Media
- 58% increase in traffic from Organic Search
- 130% increase in visits from Paid Search

Opinion Dynamics conducted the Post Campaign survey for both residential and small commercial customers in December. Preliminary results are expected in January 2015.

## **VI. Evaluation, Measurement, and Verification Highlights**

During the fourth quarter of 2014, the evaluation team continued to work with ongoing studies in all three research areas - Residential, Commercial & Industrial, and Special and Cross Sector. To help share best practices and streamline the evaluation process, the Program Administrators and the EEAC Consultants continued monthly meetings of the Evaluation Management Committee and coordination with the Residential and Commercial & Industrial Management Committees.

The following includes only studies that have reached at least the detailed scoping phase. There are other studies in the early scoping phase that are not included.

### **Residential Research Area**

Work on the following studies continued:

**Lighting Market Assessment.** The objective of this effort is to provide ongoing monitoring of the evolving Massachusetts lighting market. This study will use a multi-task approach that includes consumer surveys, on-site saturation visits in Massachusetts, on-site saturation visits in two comparison areas, shelf-stocking surveys, supplier interviews and a Market adoption model update. Final results were worked on in the fourth quarter of 2014.

**Lighting Saturation Stagnation Assessment.** The objective of this study is to explore reasons for the recent slow growth in CFL saturation, as well as to determine ways to accelerate LED adoption. Research is complete and draft results were completed in the fourth quarter of 2014.

**HEHE Impact Evaluation.** The objective of this study is to determine gross savings for the HEHE programs and provide refined estimates of hours of use and coincidence factor for a variety of space heating measures. Metering equipment has been installed in more than 100 homes. The meters will remain in place throughout the 2014 heating season. Draft results are expected in the in 2015.

**Ductless Mini-Split Heat Pump Impact Evaluation.** The objective of this study is to measure the energy usage of ductless mini-split heat pumps (DMSHPs) through the COOL SMART program. Initial results of heating savings from this study will be available in the second quarter of 2015.

**HES Program Delivery Assessment.** The objective of this study is to determine accurate conversion rates (installed measures: recommended measures) and other key performance metrics for HES overall, as well as for Lead Vendors (LVs) and Home Performance Contractors (HPCs) specifically. The study will also explore the effectiveness of linkages between HES and other PA programs (most notably HEHE and CoolSmart) and attempt to identify opportunities for greater and deeper savings for each program, as well as the overall residential portfolio. Research is underway and draft results are expected in the fourth quarter of 2014.

**HEAT Loan Assessment.** The objective of this study is to understand the extent to which the Mass Save HEAT Loan influences customer decision-making relative to the other factors that influence participation (PA incentives, tax credits, pre-program intentions, etc.), and to explore whether the availability of the HEAT Loan has an impact on contractor pricing. Research is underway and draft results are expected in the second quarter of 2015.

**Multifamily Process Evaluation.** The objective of this study is to assess and monitor the current state of the evolution of the Multifamily Program as a stand-alone or integrated offering with the commercial side and provide an ongoing examination of barriers, program operations, and customer experience. Focus groups were expected to be completed in the first quarter of 2014. Draft results were received in the fourth quarter of 2014.

**Residential Customer Profile Study.** The objective of this study is to compile PA customer and participation data on residential customers to provide insights into levels of participation, energy consumption, and energy savings relative to consumption. The study will inform several of the other ongoing evaluation efforts. A half-day meeting was scheduled in the first quarter of 2014 to discuss possible study outputs in greater detail. Draft results are expected in the second quarter of 2015.

**Lighting Multi-Stage Net-to-Gross.** The objective of this study is to estimate net-to-gross (NTG) ratios for key product types for which incentives were offered in the ENERGY STAR® Lighting initiative and to assess the associated strategic implications. Scoping focused on supplier interviews, point-of-sale data analysis, and self-reported purchase analysis is nearly final. This will also include a comparison of the Massachusetts area to the New York area since New York has ended their lighting program. Draft results are expected in the first quarter of 2015.

**Multifamily High-Rise New Construction Baseline Assessment.** The objective of this study is to develop a baseline for construction building practices in four-story and higher multifamily buildings. The PAs, EEAC and evaluation contractor are participating in meetings to discuss the study's scope and the best methodologies for moving forward. Draft results are expected second quarter 2015.

**Low-Income Multifamily Impact Assessment.** The objective of this study is to provide an inventory of the methods currently used to estimate LIMF savings, explore opportunities for standardization where appropriate, assess whether all data required for evaluation are available, and develop PA-specific realization rates for appropriate measures. Draft results are expected in quarter three of 2015.

**Residential Market Effects Study.** The overall objective of this study is to capture the net effects over time of Massachusetts' programs to promote a technology to be determined by the PAs. The development of this market effects study and selection of the targeted technology will be coordinated with the Cross-Cutting Research Area's Market Effects Planning work.

**Appliance Recycling Evaluation.** The overall objective of this study will be to review the savings assumed from the Refrigerator recycling efforts of the appliance program. The study is currently being scoped in the first quarter of 2015.

**Cool Smart Incremental Cost.** The overall objective of this study will be to understand the changing value of the component incremental cost of central cooling equipment for both energy and demand savings. The study is currently being scoped in the first quarter of 2015.

### **Commercial & Industrial Research Area**

Work on the following studies continued:

**Existing Building Market Characterization.** This study will provide information on equipment market share and saturation, baseline information, market conditions, program penetration, savings potential and market barriers by conducting telephone surveys with customers and on-site visits. The report was finalized in the third quarter of 2014.

**Lighting Controls Scoping Study.** The purpose of the Lighting Control study is to inform the PAs of the current state of the Lighting Control market and make recommendations as to whether an impact study should be conducted and if so, what type. The study consists of secondary research and interviews with PA staff, Project Expeditors, and lighting distributors. The report was finalized in the third quarter of 2014.

**New Construction Data Mining – Codes & Standards Research.** This study will leverage onsite data collected in support of the 2011 Code Compliance Baseline Study to learn about the baseline for potential code compliance program measures. The final report is expected in the second quarter of 2015.



**LED Market Effects Study (Residential & Commercial).** The first round of this study will examine baseline conditions of the market for LEDs in MA. The final report is expected in the first quarter of 2015.

**Impact Evaluation of 2012 Custom HVAC Measures.** This study will provide updated realization rates based on in-field metering of a robust sample of projects completed in 2012. Results are expected in the second quarter of 2015.

**Impact Evaluation of 2012 Prescriptive Non-Lighting Measures.** This study will provide updated savings estimates for a pre-selected group of non-lighting measures. The measures will be determined during the scoping process which will include an assessment of the percent of program savings achieved by each measure as well as the precision and confidence associated with the current measure savings estimates. Results are expected in the second quarter of 2015.

**C&I 2012 Customer Profile.** This is the second study in an annual series and will use existing program tracking and customer billing data to create a profile of C&I customers in the state based on market and participant characteristics such as size, business type and program participation rates. The report was finalized in the third quarter of 2014.

**Learning From Successful Projects.** The intent of this study is to assess the characteristics of successful projects and recommend best practices that could reasonably be duplicated elsewhere. The study is currently underway and work began in the first quarter of 2014. The final report is expected in the first quarter of 2015.

**PA Differences Assessment.** This intent of this study is to analyze and document the different factors that affect PA performance. These factors may include the percent of customers participating, the depth at which customers participate, the cost to deliver savings and the demographics and key characteristics of each PA's territory. The final report is expected in the first quarter of 2015.

**Commercial Real Estate Market Assessment.** The intent of this study is to provide a comprehensive understanding of the complex relationship between building owners, property managers and tenants and identify specific program offerings and points in the leasing process that offer opportunities to capture energy savings. The final report is expected in the first quarter of 2015.

**Supply Side Population Assessment.** The intent of this study is to characterize the population of market actors that serve the Massachusetts PAs' C&I customers and potentially recruit market actors for participation in future EM&V efforts. The final report is expected in the first quarter of 2015.

**Process Evaluation of the Direct Install Program.** This study will focus on research objectives identified by PA implementation staff and other key stakeholders including EEAC consultants and could include options for deeper savings, targeting of micro-businesses, establishing savings estimates for behavioral measures, etc. The final report is expected in the first quarter of 2015.

**Boiler Market Assessment.** This study will provide an in-depth understanding of the current baseline in the C&I boiler market, including historical trends regarding equipment efficiencies and size. The report was finalized in the third quarter of 2014.

**Impact Evaluation of 2012 Prescriptive Gas Measures.** This study will provide updated savings estimates for a pre-selected group of gas measures. The measures will be determined during the scoping process which will include an assessment of the percent of program savings achieved by each measure as well as the precision and confidence associated with the current measure savings estimates. The report was finalized in the fourth quarter of 2014.

**EISA T-12 Phase out Research.** This study seeks to determine if lighting manufactures are still producing T12 lamps despite the phase-out initiated by the EPCRA and EISA legislation and, if so, how these manufacturers are producing T12 lamps that meet the new efficacy requirements and how big a market these continuing T12 sales represent. The study is underway and work will be complete in the first quarter of 2015.

**C&I Customer On-Site Assessments.** This study is to build upon the data collected in the C&I customer telephone surveys and gather the data that will help the energy efficiency programs continue to grow and expand current offerings by providing a clearer understanding of the existing C&I building market in Massachusetts. This study is underway and the final report is expected in the fourth quarter 2015.

**Impact Evaluation of 2013 Custom Gas Measures.** This study will provide updated realization rates based on in-field metering of a robust sample of projects completed in 2013. Research began in the third quarter of 2014.

**C&I 2013 Customer Profile.** This is the third study in an annual series and will use existing program tracking and customer billing data to create a profile of C&I customers in the state based on market and participant characteristics such as size, business type and program participation rates. The final report is expected in the first quarter of 2015.

**Impact Evaluation of 2013 Prescriptive Gas Measures.** This study will provide updated savings estimates for a pre-selected group of gas measures. The measures will be determined during the scoping process which will include an assessment of the percent of program savings achieved by each measure as well as the precision and confidence associated with the current measure savings estimates. Research began in the fourth quarter of 2014.

**Boiler Market Assessment Phase II.** Phase I of the study focused on the boiler manufacturers in Massachusetts including the estimation of market size. Phase II of the study will focus on narrowing the market size estimates from Phase I, assessing the boiler program and market in Massachusetts relative to other states, characterizing the pace of change in the market, and reviewing proposed federal regulations. The study began in the fourth quarter of 2014.

**Upstream Lighting Program “In-Storage” Lamps Follow Up.** As part of the previous impact evaluation a significant number of program bulbs were found to be “in-storage” and were

counted as zero in the installation rate calculation. This study proposes revisiting sites that were found to have any “in-storage” bulbs to learn more about when and whether these bulbs were eventually installed and to calculate savings from bulbs moving from storage to sockets. The study began in the fourth quarter of 2014.

### **Special and Cross-Sector Research Area**

The following specific high priority studies are currently underway:

**Massachusetts Cross-Cutting Behavior Program Impact and Process Evaluation:** The goal of the study is to conduct an impact evaluation and follow-up process evaluation to measure the following:

Impact: (1) update of cohort-specific savings and realization rates, (2) assess appropriateness of existing experimental design, with a particular emphasis on overlapping PA programs (e.g., customers simultaneously assigned to treatment and control groups depending on PA), and (3) measure the cross-fuel savings that have not been measured to date.

Process: (1) actions customers are taking that are driving on-going savings, (2) assess the value of the reports in generating persistent savings through survey and in-depth interviews, and (3) determine whether or not customers are interested in additional program offerings or improvements based on surveys and in-depth interviews.

**Net-to-Gross – Gas C&I NTG:** The study seeks to help the PAs and the EEAC update natural gas net-to-gross (NTG) factors in the C&I sector. The last natural gas NTG study was completed in 2012, and the last electric NTG study was just completed in 2014.

**Codes & Standards Coordination/Planning:** The goal of this effort is to provide overall coordination with implementation to ensure that as implementation plans develop in this area, they are designed in such a way that the necessary data is being collected in order to evaluate the impact of such efforts along with appropriate attribution to the PAs. Recent research highlights in this area include an evaluation of Code Compliance Rates for Single Family Homes, and memos on code compliance trainings.

**Market Effects:** The goal of this study is to develop a framework for the evaluation of market effects for programs targeting reductions in residential and commercial energy use and demand. The study will help the PAs, the EEAC, and residential and commercial EM&V contractor teams to 1) understand and agree to working definitions of what market effects are, their relation to other concepts like spillover and market transformation, and what conditions could lead to them, 2) identify and prioritize specific markets that stand to be sufficiently influenced by existing or planned programs that the resulting effects could affect program value and planning, 3) develop suggested methodologically consistent approaches for assessing market effects within these markets; and 4) Identify how program administrators can improve the evaluability of market effects for the programs or parts of programs targeting these markets.

**Net-to-Gross – Top-Down NTG Methods:** This is a two phased study to provide guidance to determine the role of top-down modeling of net energy impacts. Phase I will take place during

the 2014 evaluation period. Phase II will follow the Phase I research. The Phase I study will review existing Top-Down modeling techniques and recommend specific methods to be used in MA, obtain the necessary data for employing one or more agreed approaches, implement multiple agreed-upon approaches in parallel to provide an initial demonstration of the contribution that Top-Down modeling may make to on-going evaluation efforts, and make recommendations for data that should be tracked to facilitate better Top-Down modeling in the future.

**Non-Energy Impacts – Quantifying C&I New Construction NEIs:** The goal of this study is to quantify participant non-energy impacts (“NEIs”) associated with commercial and industrial new construction projects.

**Comprehensive Review of Training and Education Programs:** The goal of the study is to identify opportunities for increased BOC rebate conversion, as well as to better understand and quantify the BOC’s O&M and equipment savings as reported by other studies.

**Comprehensive Review of Behavior and Education Programs:** The goal of the study is to provide the PAs with an understanding of the landscape of behavior and education programs, focusing on innovative programs that result in quantifiable savings that can be claimed.

**Umbrella Marketing - Mass Save Statewide Campaign Post Campaign Study:** The goal of this study is to field a post-campaign survey to gauge the immediate impact of the 2014 statewide marketing campaign among residential and C&I customers.

**Non-Energy Impacts – Low Income Health NEIs:** The proposed research is aimed at identifying and quantifying NEIs of energy efficiency measures on the health and well-being of low-income energy efficiency program participants, estimating their costs, and projecting those costs to the year 2050.

**Retro Electric DRIPE:** The PAs will research whether estimates of electric DRIPE developed as a part of recent Avoided Cost studies were accurate.

**Efficient Neighborhoods+ Initiative –Incremental Cost Assessment:** The overall goal of this research is to understand incremental costs associated with administering the Efficient Neighborhoods+ initiative.

Please also see the EM&V Gantt chart and a related evaluation table at Attachment B.

## **VII. Regulatory Updates**

In Q4, proceedings continued in D.P.U. 14-86, in which DOER and DEP jointly submitted a petition and testimony requesting adoption of the avoided costs of complying with the Global Warming Solutions Act in energy efficiency programs using a marginal abatement cost curve methodology. In Q4, Northeast Utilities filed testimony in opposition to the petition and responded to discovery. Evidentiary hearings were held on December 8 and 10, 2014. Intervenor, including a number of the PAs, filed initial briefs on December 31, 2014.

On December 1, 2014, the DPU issued an order entitled “Response of the Department of Public Utilities to Data Privacy and Data Security Issues Related to the Statewide Energy Efficiency Database” in D.P.U. 14-141. Like the PAs, the Department has concerns “related to customer privacy and data security, as well as the potential costs to the Program Administrators regarding changing their own data systems and processes.” The Department sought to propose aggregation standards and limitations to required reporting in order to support these considerations. The Department also directed the PAs to provide more granular data than is currently reported. On December 22, 2014, the PAs filed a motion for reconsideration, on the grounds that feasibility, cost, and privacy considerations had not been adequately considered in the Department’s directive or that, alternatively, the Department may have been unaware of the technical challenges in complying with the directive, which will be costly and resource-intensive to overcome, assuming they can be addressed at all.

In Q4, the EEAC approved the Mid-Term Modification (“MTMs”) of National Grid Electric, Cape Light Compact, and Unitil Gas, each of which submitted materials to the EEAC in support of mid-term modifications for increased residential budgets. Pursuant to § 3.8.1 of the Revised Energy Efficiency Guidelines set forth in D.P.U. 11-120-A, Phase II (January 31, 2013), an energy efficiency Program Administrator that seeks to make certain significant modifications to its Energy Efficiency Plan is required to submit its proposed modifications to the Council for review. A Council resolution that included all three PAs was passed at the October EEAC meeting. After working with the PAs, the consulting team fully supported the MTMs and the PAs publicly thanked the consulting team for their MTM efforts/support. With these MTMs, the modifying PAs did not revise their approved Three-Year Plan goals, and all future reporting on the Three-Year Plan will report and compare actual results to the Department-approved budgets and goals.

**ATTACHMENT A**  
**QUANTITATIVE REPORT**

**Q4 2014 Statewide Electric Budgets (January 1, 2014 through December 31, 2014 )**

Row Labels	Total Sum of Program Planning and Administration	Total Sum of Marketing and Advertising	Total Sum of Participant Incentive	Total Sum of Sales, Technical Assistance & Training	Total Sum of Evaluation and Market Research	Total Sum of Total Spend
<b>Electric</b>						
<b>Planned</b>	\$ 28,100,084	\$ 18,080,307	\$ 362,618,125	\$ 71,318,572	\$ 15,901,188	\$ 496,018,277
<b>Residential</b>	\$ 6,404,675	\$ 11,037,957	\$ 109,802,725	\$ 30,258,759	\$ 5,348,284	\$ 162,852,400
Residential Whole House	\$ 3,368,975	\$ 3,759,570	\$ 73,023,795	\$ 21,601,933	\$ 3,777,873	\$ 105,532,147
Residential Products	\$ 1,567,833	\$ 4,315,142	\$ 28,065,128	\$ 6,192,181	\$ 1,425,820	\$ 41,566,105
Residential Hard-to-Measure	\$ 1,467,867	\$ 2,963,245	\$ 8,713,802	\$ 2,464,644	\$ 144,590	\$ 15,754,148
<b>Low-Income</b>	\$ 3,234,052	\$ 666,259	\$ 39,695,582	\$ 9,497,982	\$ 1,829,828	\$ 54,923,703
Low-Income Whole House	\$ 1,864,141	\$ 407,060	\$ 39,695,582	\$ 9,483,582	\$ 1,790,111	\$ 53,240,476
Low-Income Hard-to-Measure	\$ 1,369,912	\$ 259,199	\$ -	\$ 14,400	\$ 39,716	\$ 1,683,227
<b>Commercial &amp; Industrial</b>	\$ 18,461,358	\$ 6,376,091	\$ 213,119,818	\$ 31,561,831	\$ 8,723,076	\$ 278,242,174
C&I New Construction	\$ 3,797,438	\$ 1,468,440	\$ 38,456,766	\$ 8,185,850	\$ 2,053,311	\$ 53,961,806
C&I Retrofit	\$ 11,908,986	\$ 3,768,845	\$ 174,663,051	\$ 23,375,981	\$ 6,458,581	\$ 220,175,443
C&I Hard-to-Measure	\$ 2,754,933	\$ 1,138,807	\$ -	\$ -	\$ 211,185	\$ 4,104,924
<b>Q4</b>	\$ 24,794,295	\$ 12,880,791	\$ 381,070,265	\$ 72,952,856	\$ 12,055,690	\$ 503,753,897
Residential	\$ 6,463,779	\$ 9,745,782	\$ 152,902,817	\$ 32,615,846	\$ 5,023,101	\$ 206,751,326
Residential Whole House	\$ 3,488,160	\$ 2,740,911	\$ 95,960,524	\$ 23,447,038	\$ 2,565,192	\$ 128,201,825
Residential Products	\$ 1,569,419	\$ 4,291,632	\$ 41,482,587	\$ 5,872,927	\$ 2,344,596	\$ 55,561,160
Residential Hard-to-Measure	\$ 1,406,200	\$ 2,713,239	\$ 15,459,707	\$ 3,295,881	\$ 113,314	\$ 22,988,341
Low-Income	\$ 2,483,548	\$ 387,505	\$ 46,004,104	\$ 8,560,875	\$ 922,385	\$ 58,358,417
Low-Income Whole House	\$ 1,848,012	\$ 154,978	\$ 46,004,104	\$ 8,560,875	\$ 913,146	\$ 57,481,114
Low-Income Hard-to-Measure	\$ 635,536	\$ 232,527	\$ -	\$ -	\$ 9,239	\$ 877,303
Commercial & Industrial	\$ 15,846,968	\$ 2,747,505	\$ 182,163,344	\$ 31,776,134	\$ 6,110,203	\$ 238,644,154
C&I New Construction	\$ 3,053,988	\$ 376,553	\$ 52,390,134	\$ 13,255,411	\$ 1,720,904	\$ 70,796,989
C&I Retrofit	\$ 9,520,259	\$ 1,394,933	\$ 129,773,210	\$ 18,520,947	\$ 4,293,363	\$ 163,502,713
C&I Hard-to-Measure	\$ 3,272,721	\$ 976,018	\$ -	\$ (224)	\$ 95,936	\$ 4,344,452

YTD as Percentage to Planned	Program Planning and Administration	Marketing and Advertising	Participant Incentive	Sales, Technical Assistance & Training	Evaluation and Market Research	Total Spend
<b>Electric</b>	<b>88%</b>	<b>71%</b>	<b>105%</b>	<b>102%</b>	<b>76%</b>	<b>102%</b>
<b>Residential</b>	<b>101%</b>	<b>88%</b>	<b>139%</b>	<b>108%</b>	<b>94%</b>	<b>127%</b>
1. Residential Whole House	104%	73%	131%	109%	68%	121%
2. Residential Products	100%	99%	148%	95%	164%	134%
3. Residential Hard-to-Measure	96%	92%	177%	134%	78%	146%
<b>Low-Income</b>	<b>77%</b>	<b>58%</b>	<b>116%</b>	<b>90%</b>	<b>50%</b>	<b>106%</b>
4. Low-Income Whole House	99%	38%	116%	90%	51%	108%
5. Low-Income Hard-to-Measure	46%	90%	0%	0%	23%	52%
<b>Commercial &amp; Industrial</b>	<b>86%</b>	<b>43%</b>	<b>85%</b>	<b>101%</b>	<b>70%</b>	<b>86%</b>
6. C&I New Construction	80%	26%	136%	162%	84%	131%
7. C&I Retrofit	80%	37%	74%	79%	66%	74%
8. C&I Hard-to-Measure	119%	86%	0%	0%	45%	106%

**Q4 2014 Statewide Electric Savings (January 1, 2014 through December 31, 2014 )**

Row Labels	Total Sum of Participants	Total Sum of Capacity (kW)	Total Sum of Energy (annual MWh)	Total Sum of Energy (Lifetime MWh)
<b>Electric</b>				
<b>Planned</b>	2,303,685	177,696	1,236,598	13,268,628
Residential	2,259,817	45,584	364,571	1,952,344
Residential Whole House	929,641	24,344	193,722	665,982
Residential New Construction	4,295	841	4,697	50,714
Residential Multi-Family Retrofit	25,817	954	16,748	181,172
Residential Home Energy Services	49,830	4,229	32,634	294,453
Residential Behavior/Feedback	849,698	18,319	139,644	139,644
Residential Products	1,330,176	21,239	170,849	1,286,362
Residential Cooling & Heating Equipment	12,228	3,231	6,035	82,438
Residential Lighting	1,215,714	15,783	148,167	1,073,875
Residential Consumer Products	102,234	2,226	16,647	130,048
Low-Income	27,488	3,246	27,759	260,056
Low-Income Whole House	27,488	3,246	27,759	260,056
Low-Income New Construction	1,358	116	1,033	10,646
Low-Income Single Family Retrofit	10,541	1,500	12,250	114,470
Low-Income Multi-Family Retrofit	15,589	1,630	14,476	134,940
Commercial & Industrial	16,380	128,866	844,268	11,056,228
C&I New Construction	4,061	32,756	177,958	2,409,045
C&I New Construction	4,061	32,756	177,958	2,409,045
C&I Retrofit	12,319	96,110	666,310	8,647,183
C&I Retrofit	4,003	71,088	535,105	7,210,612
C&I Direct Install	8,316	25,022	131,205	1,436,571
<b>Q4</b>	3,816,421	171,976	1,306,806	13,339,707
Residential	3,740,877	67,682	511,376	3,796,846
Residential Whole House	1,041,314	30,480	238,613	1,219,423
Residential New Construction	4,634	2,621	8,845	101,898
Residential Multi-Family Retrofit	32,586	1,220	26,528	282,752
Residential Home Energy Services	47,964	11,823	85,434	716,967
Residential Behavior/Feedback	956,130	14,816	117,805	117,805
Residential Products	2,699,563	37,202	272,763	2,577,423
Residential Cooling & Heating Equipment	17,584	1,940	11,477	168,171
Residential Lighting	2,460,355	32,806	247,458	2,296,437
Residential Consumer Products	221,624	2,456	13,828	112,815
Low-Income	40,811	4,594	44,686	431,181
Low-Income Whole House	40,811	4,594	44,686	431,181
Low-Income New Construction	470	91	389	3,962
Low-Income Single Family Retrofit	12,567	2,563	14,709	135,374
Low-Income Multi-Family Retrofit	27,774	1,941	29,588	291,846
Commercial & Industrial	34,733	99,700	750,744	9,111,679
C&I New Construction	25,787	52,371	317,103	3,667,949
C&I New Construction	25,787	52,371	317,103	3,667,949
C&I Retrofit	8,946	47,329	433,641	5,443,730
C&I Retrofit	3,386	33,922	347,294	4,414,016
C&I Direct Install	5,560	13,407	86,347	1,029,713

YTD as Percentage to Planned	Participants	Capacity (kW)	Energy (annual MWh)	Energy (Lifetime MWh)
<b>Electric</b>	<b>166%</b>	<b>97%</b>	<b>106%</b>	<b>101%</b>
<b>Residential</b>	<b>166%</b>	<b>148%</b>	<b>140%</b>	<b>194%</b>
<b>Residential Whole House</b>	<b>112%</b>	<b>125%</b>	<b>123%</b>	<b>183%</b>
Residential New Construction	108%	311%	188%	201%
Residential Multi-Family Retrofit	126%	128%	158%	156%
Residential Home Energy Services	96%	280%	262%	243%
Residential Behavior/Feedback	113%	81%	84%	84%
<b>Residential Products</b>	<b>203%</b>	<b>175%</b>	<b>160%</b>	<b>200%</b>
Residential Cooling & Heating Equipment	144%	60%	190%	204%
Residential Lighting	202%	208%	167%	214%
Residential Consumer Products	217%	110%	83%	87%
Low-Income	148%	142%	161%	166%
<b>Low-Income Whole House</b>	<b>148%</b>	<b>142%</b>	<b>161%</b>	<b>166%</b>
Low-Income New Construction	35%	79%	38%	37%
Low-Income Single Family Retrofit	119%	171%	120%	118%
Low-Income Multi-Family Retrofit	178%	119%	204%	216%
Commercial & Industrial	212%	77%	89%	82%
<b>C&amp;I New Construction</b>	<b>635%</b>	<b>160%</b>	<b>178%</b>	<b>152%</b>
C&I New Construction	635%	160%	178%	152%
<b>C&amp;I Retrofit</b>	<b>73%</b>	<b>49%</b>	<b>65%</b>	<b>63%</b>
C&I Retrofit	85%	48%	65%	61%
C&I Direct Install	67%	54%	66%	72%



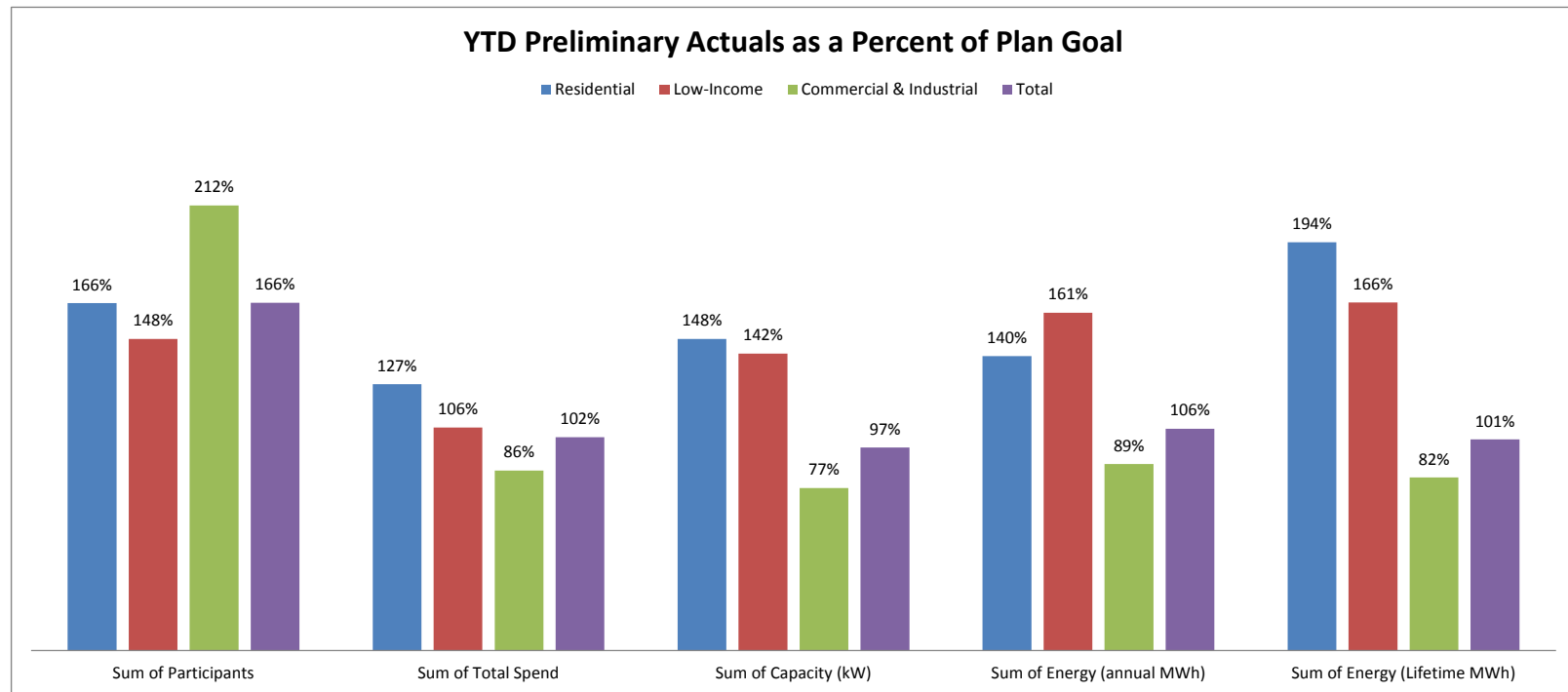
**Q4 2014 Statewide Electric Benefits (January 1, 2014 through December 31, 2014 )**

Row Labels	Total Sum of Total Electric Benefits	Total Sum of Total Other Resource Benefits	Total Sum of Total Gas Benefits	Total Sum of Total Non Resource Benefits	Total Sum of Total Benefits
<b>Electric</b>					
<b>Planned</b>	1,783,717,458	228,969,690	(150,915,401)	441,236,284	2,303,008,031
Residential	252,992,929	208,183,433	4,682,078	216,083,977	681,942,417
Residential Whole House	87,976,361	208,183,433	5,155,720	204,794,949	506,110,462
Residential New Construction	8,482,923	4,353,558	1,294,713	8,199,740	22,330,932
Residential Multi-Family Retrofit	19,938,669	1,644,124	20,533	32,492,773	54,096,099
Residential Home Energy Services	45,999,185	202,185,751	3,840,474	164,102,436	416,127,846
Residential Behavior/Feedback	13,555,584	-	-	-	13,555,584
Residential Products	165,016,569	-	(473,641)	11,289,028	175,831,955
Residential Cooling & Heating Equipment	17,045,899	-	(473,641)	1,599,611	18,171,868
Residential Lighting	131,251,129	-	-	9,689,417	140,940,547
Residential Consumer Products	16,719,540	-	-	-	16,719,540
Low-Income	33,588,153	40,716,415	1,298,684	40,698,668	116,301,920
Low-Income Whole House	33,588,153	40,716,415	1,298,684	40,698,668	116,301,920
Low-Income New Construction	1,404,401	503,018	1,280,628	6,708,052	9,896,098
Low-Income Single Family Retrofit	15,297,234	39,328,801	18,057	14,226,594	68,870,685
Low-Income Multi-Family Retrofit	16,886,518	884,596	-	19,764,023	37,535,137
Commercial & Industrial	1,497,136,376	(19,930,158)	(156,896,163)	184,453,639	1,504,763,693
C&I New Construction	345,128,402	(7,420,628)	(3,639,231)	484,557	334,553,100
C&I New Construction	345,128,402	(7,420,628)	(3,639,231)	484,557	334,553,100
C&I Retrofit	1,152,007,974	(12,509,530)	(153,256,932)	183,969,082	1,170,210,593
C&I Retrofit	938,610,549	(14,170,406)	(138,422,562)	154,237,342	940,254,923
C&I Direct Install	213,397,425	1,660,876	(14,834,370)	29,731,739	229,955,670
<b>Q4</b>	1,769,918,245	301,792,582	(32,748,684)	503,717,477	2,542,679,620
Residential	511,280,683	284,924,391	8,015,962	242,853,818	1,047,074,854
Residential Whole House	165,268,801	282,678,594	8,191,311	226,900,565	683,039,271
Residential New Construction	22,408,169	15,345,656	220,616	3,284,834	41,259,275
Residential Multi-Family Retrofit	31,134,494	3,058,575	24,336	16,035,928	50,253,333
Residential Home Energy Services	100,041,178	264,274,364	7,946,359	207,579,803	579,841,703
Residential Behavior/Feedback	11,684,960	-	0	-	11,684,960
Residential Products	346,011,882	2,245,797	(175,349)	15,953,253	364,035,583
Residential Cooling & Heating Equipment	23,318,700	(1,092)	(535,779)	1,076,703	23,858,532
Residential Lighting	306,487,757	-	-	14,876,549	321,364,306
Residential Consumer Products	16,205,426	2,246,889	360,430	-	18,812,745
Low-Income	53,722,631	40,982,245	1,159,465	33,778,841	129,643,182
Low-Income Whole House	53,722,631	40,982,245	1,159,465	33,778,841	129,643,182
Low-Income New Construction	799,938	115,686	1,155,386	625,890	2,696,899
Low-Income Single Family Retrofit	19,955,722	40,667,947	3,977	15,076,630	75,704,277
Low-Income Multi-Family Retrofit	32,966,970	198,612	102	18,076,322	51,242,007
Commercial & Industrial	1,204,914,932	(24,114,055)	(41,924,111)	227,084,818	1,365,961,584
C&I New Construction	523,515,845	(15,904,418)	(16,291,436)	45,604,725	536,924,716
C&I New Construction	523,515,845	(15,904,418)	(16,291,436)	45,604,725	536,924,716
C&I Retrofit	681,399,086	(8,209,637)	(25,632,675)	181,480,093	829,036,869
C&I Retrofit	541,701,274	(8,402,731)	(16,784,726)	151,737,804	668,251,620
C&I Direct Install	139,697,813	193,095	(8,847,948)	29,742,290	160,785,249

YTD as Percentage to Planned					
	Electric Benefits	Other Resource Benefits	Gas Benefits	Non Resource Benefits	Sum of Total Benefits
<b>Electric</b>	<b>99%</b>	<b>132%</b>	<b>22%</b>	<b>114%</b>	<b>110%</b>
Residential	202%	137%	171%	112%	154%
Residential Whole House	188%	136%	159%	111%	135%
Residential New Construction	264%	352%	17%	40%	185%
Residential Multi-Family Retrofit	156%	186%	119%	49%	93%
Residential Home Energy Services	217%	131%	207%	126%	139%
Residential Behavior/Feedback	86%	0%	0%	0%	86%
Residential Products	210%	0%	37%	141%	207%
Residential Cooling & Heating Equipment	137%	0%	113%	67%	131%
Residential Lighting	234%	0%	0%	154%	228%
Residential Consumer Products	97%	0%	0%	0%	113%
Low-Income	160%	101%	89%	83%	111%
Low-Income Whole House	160%	101%	89%	83%	111%
Low-Income New Construction	57%	23%	90%	9%	27%
Low-Income Single Family Retrofit	130%	103%	22%	106%	110%
Low-Income Multi-Family Retrofit	195%	22%	0%	91%	137%
Commercial & Industrial	80%	121%	27%	123%	91%
C&I New Construction	152%	214%	448%	9412%	160%
C&I New Construction	152%	214%	448%	9412%	160%
C&I Retrofit	59%	66%	17%	99%	71%
C&I Retrofit	58%	59%	12%	98%	71%
C&I Direct Install	65%	12%	60%	100%	70%

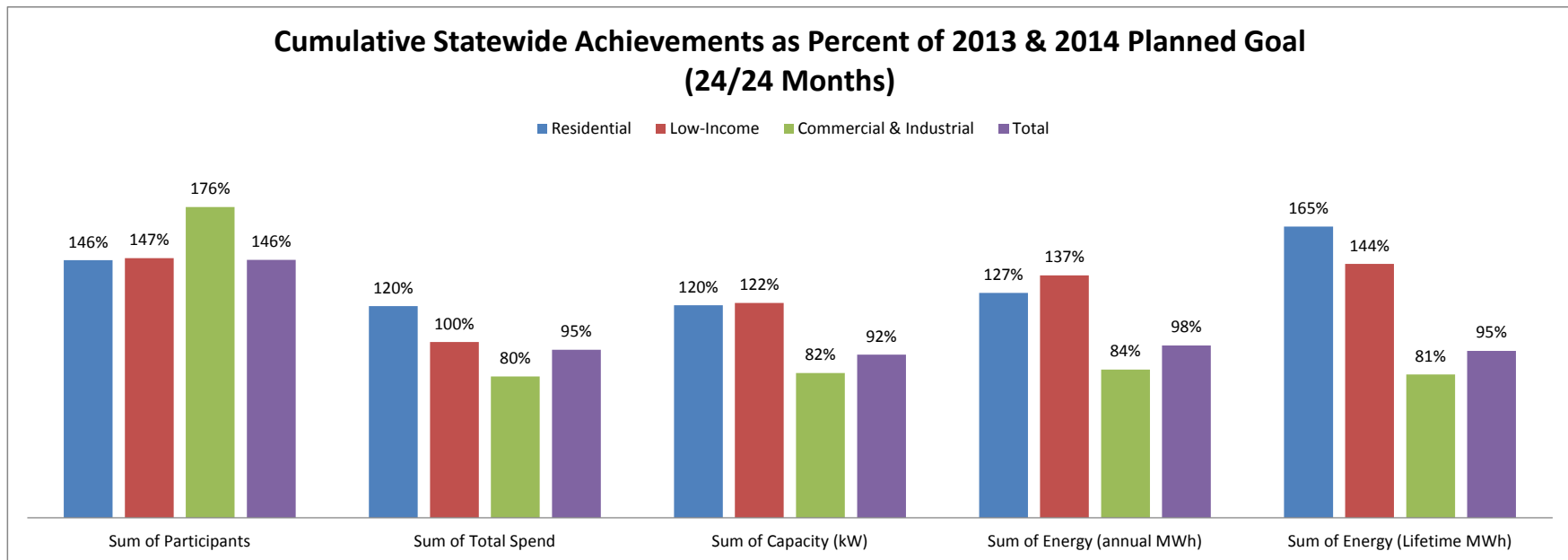
## Q4 2014 Statewide Electric Summary (January 1, 2014 through December 31, 2014 )

Values					
Row Labels	Sum of Participants	Sum of Total Spend	Sum of Capacity (kW)	Sum of Energy (annual MWh)	Sum of Energy (Lifetime MWh)
<b>Electric</b>					
<b>Planned</b>	2,303,685	496,018,277	177,696	1,236,598	13,268,628
Residential	2,259,817	162,852,400	45,584	364,571	1,952,344
Low-Income	27,488	54,923,703	3,246	27,759	260,056
Commercial & Industrial	16,380	278,242,174	128,866	844,268	11,056,228
<b>Q4</b>	3,816,421	503,753,897	171,976	1,306,806	13,339,707
Residential	3,740,877	206,751,326	67,682	511,376	3,796,846
Low-Income	40,811	58,358,417	4,594	44,686	431,181
Commercial & Industrial	34,733	238,644,154	99,700	750,744	9,111,679
<b>YTD as % of Planned</b>	<b>166%</b>	<b>102%</b>	<b>97%</b>	<b>106%</b>	<b>101%</b>
Residential	166%	127%	148%	140%	194%
Low-Income	148%	106%	142%	161%	166%
Commercial & Industrial	212%	86%	77%	89%	82%



## Cumulative Statewide Electric Summary (January 1, 2013 through December 31, 2014 )

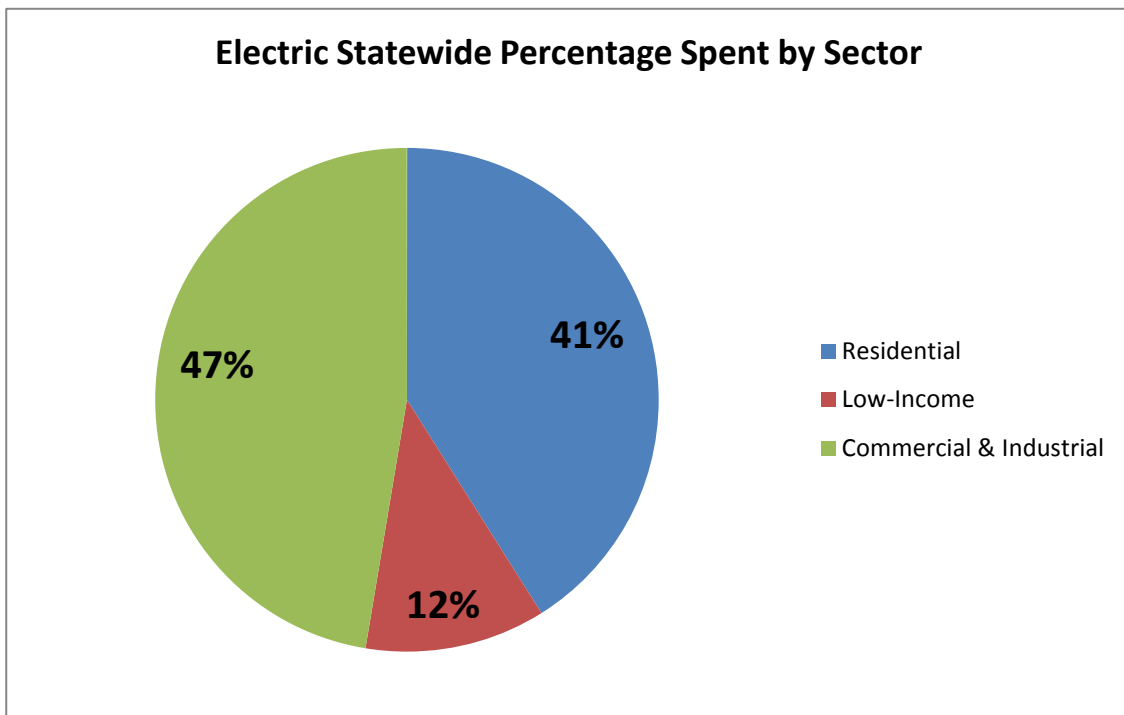
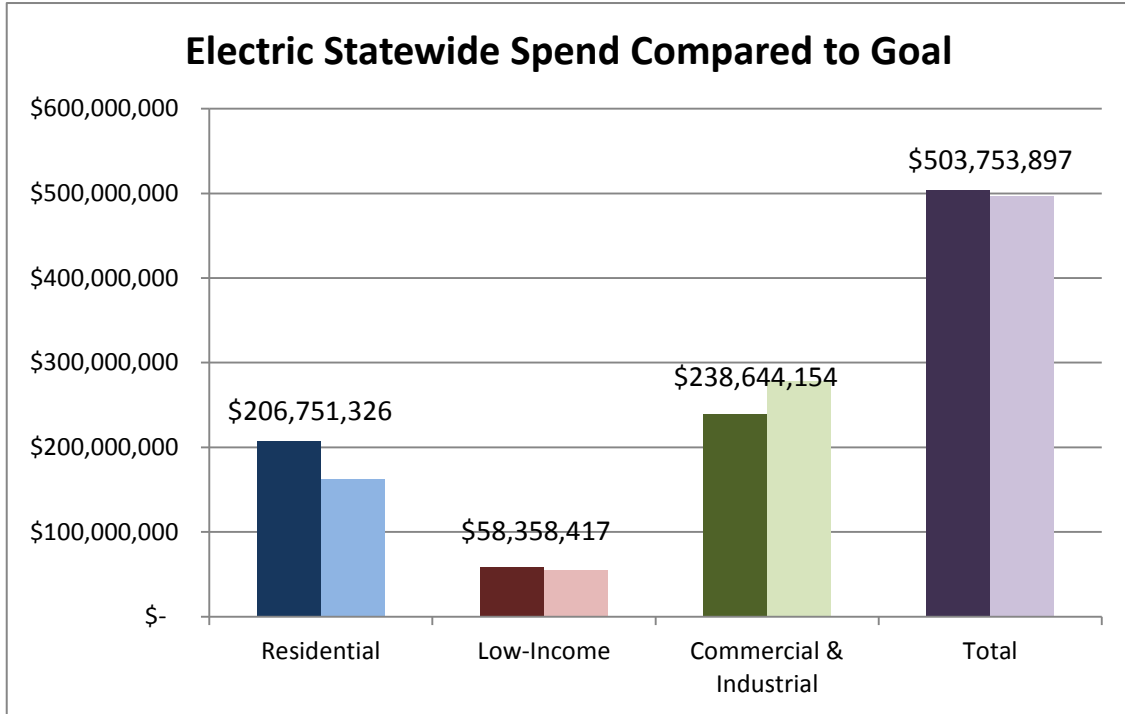
Values					
Row Labels	Sum of Participants	Sum of Total Spend	Sum of Capacity (kW)	Sum of Energy (annual MWh)	Sum of Energy (Lifetime MWh)
<b>Electric</b>					
<b>Planned</b>	4,508,565	977,881,110	351,048	2,431,785	26,415,256
Residential	4,420,341	316,634,891	88,557	694,362	3,844,724
Low-Income	55,367	109,060,537	6,579	56,596	525,072
Commercial & Industrial	32,857	552,185,683	255,912	1,680,826	22,045,460
<b>Q4</b>	6,592,693	930,858,677	324,550	2,375,777	25,012,770
Residential	6,453,284	379,859,474	106,676	885,262	6,344,829
Low-Income	81,535	108,692,281	8,010	77,761	755,397
Commercial & Industrial	57,874	442,306,923	209,864	1,412,754	17,912,543
<b>YTD as % of Planned</b>	<b>146%</b>	<b>95%</b>	<b>92%</b>	<b>98%</b>	<b>95%</b>
Residential	146%	120%	120%	127%	165%
Low-Income	147%	100%	122%	137%	144%
Commercial & Industrial	176%	80%	82%	84%	81%



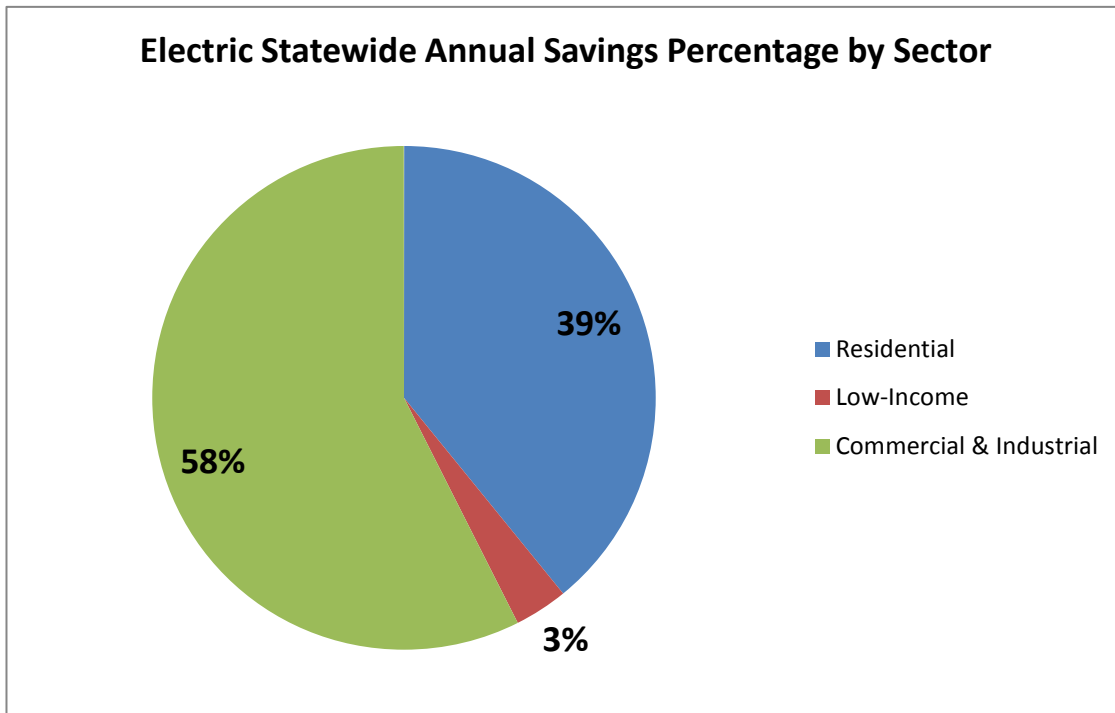
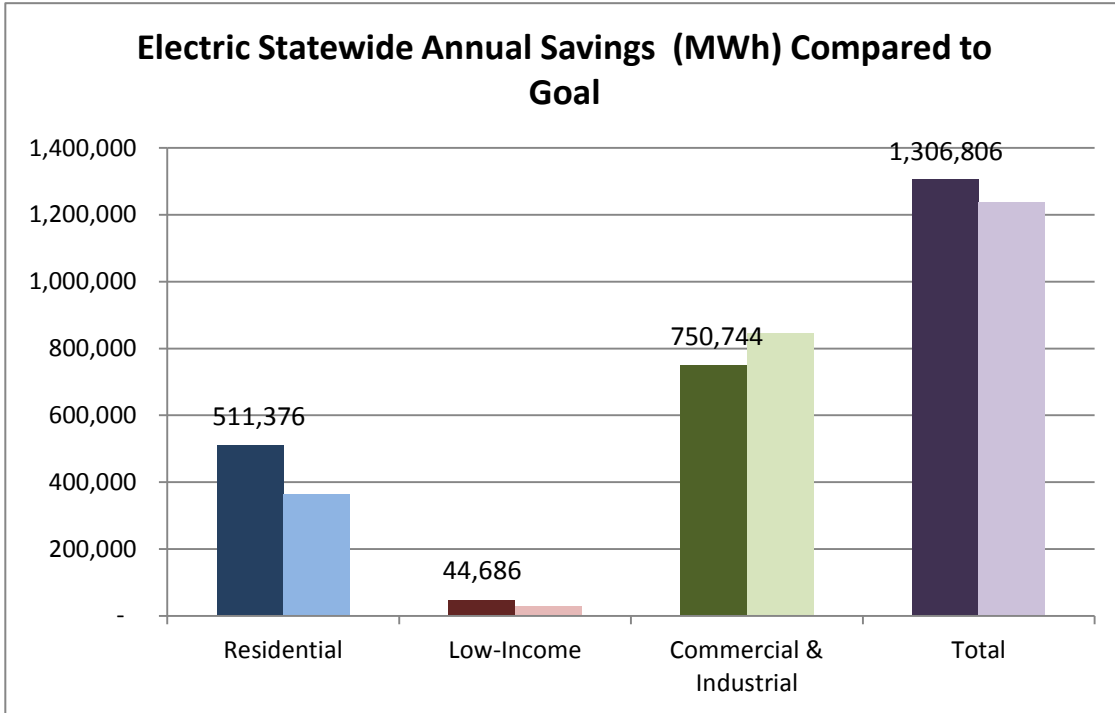
Sum of Energy (Lifetime MWh)	Column Labels						
Row Labels	National Grid	NU (NSTAR)	NU (WMECo)	UNITIL	CLC		Grand Total
<b>Electric</b>							
<b>Planned</b>	5,817,093	5,997,794	971,290		98,526	383,925	13,268,628
Residential	925,789	674,578	191,456		9,412	151,108	1,952,344
Residential Whole House	332,517	203,773	58,430		1,481	69,782	665,982
Residential New Construction	26,664	17,899	2,147		496	3,508	50,714
Residential Multi-Family Retrofit	95,822	59,509	4,364		366	21,111	181,172
Residential Home Energy Services	109,675	98,636	40,805		619	44,718	294,453
Residential Behavior/Feedback	100,356	27,729	11,115		-	444	139,644
Residential Products	593,272	470,806	133,026		7,931	81,327	1,286,362
Residential Cooling & Heating Equipment	30,090	33,885	6,876		455	11,133	82,438
Residential Lighting	505,257	387,702	118,667		6,272	55,977	1,073,875
Residential Consumer Products	57,925	49,219	7,484		1,204	14,216	130,048
Residential Hard-to-Measure	-	-	-		-	-	-
Low-income	116,194	90,369	37,874		3,317	12,302	260,056
Low-income Whole House	116,194	90,369	37,874		3,317	12,302	260,056
Low-income New Construction	4,725	4,082	1,252		233	354	10,646
Low-income Single Family Retrofit	54,581	36,091	13,279		877	9,642	114,470
Low-income Multi-Family Retrofit	56,888	50,196	23,342		2,207	2,307	134,940
Low-income Hard-to-Measure	-	-	-		-	-	-
Commercial & Industrial	4,775,110	5,232,847	741,960		85,796	220,514	11,056,228
C&I New Construction	1,129,844	1,067,257	123,358		11,167	77,419	2,409,045
C&I New Construction	1,129,844	1,067,257	123,358		11,167	77,419	2,409,045
C&I Retrofit	3,645,266	4,165,591	618,602		74,629	143,096	8,647,183
C&I Retrofit	3,270,198	3,544,402	277,987		50,698	67,326	7,210,612
C&I Direct Install	375,067	621,189	340,615		23,930	75,770	1,436,571
C&I Hard-to-Measure	-	-	-		-	-	-
<b>Q4</b>	5,581,754	6,041,037	1,108,174		93,012	515,731	13,339,707
Residential	1,996,935	1,227,837	400,372		17,021	154,680	3,796,846
Residential Whole House	689,550	370,863	87,603		2,600	68,807	1,219,423
Residential New Construction	44,459	43,181	3,362		2,341	8,556	101,898
Residential Multi-Family Retrofit	186,352	80,576	8,579		-	7,244	282,752
Residential Home Energy Services	373,464	219,981	70,256		259	53,007	716,967
Residential Behavior/Feedback	85,275	27,124	5,406		-	-	117,805
Residential Products	1,307,385	856,974	312,770		14,421	85,873	2,577,423
Residential Cooling & Heating Equipment	78,540	53,507	16,455		1,487	18,182	168,171
Residential Lighting	1,169,979	767,530	285,465		11,860	61,603	2,296,437
Residential Consumer Products	58,866	35,938	10,850		1,074	6,087	112,815
Residential Hard-to-Measure	-	-	-		-	-	-
Low-income	218,413	149,002	45,697		2,752	15,317	431,181
Low-income Whole House	218,413	149,002	45,697		2,752	15,317	431,181
Low-income New Construction	1,183	1,065	627		-	488	3,362
Low-income Single Family Retrofit	69,937	38,184	15,308		635	11,309	135,374
Low-income Multi-Family Retrofit	147,293	109,153	29,763		2,117	3,521	291,846
Low-income Hard-to-Measure	-	-	-		-	-	-
Commercial & Industrial	3,366,406	4,664,197	662,104		73,238	345,733	9,111,679
C&I New Construction	1,609,746	1,596,519	291,805		29,368	140,511	3,667,949
C&I New Construction	1,609,746	1,596,519	291,805		29,368	140,511	3,667,949
C&I Retrofit	1,756,660	3,067,678	370,299		43,870	205,222	5,443,730
C&I Retrofit	1,504,200	2,515,054	244,488		24,102	126,173	4,414,016
C&I Direct Install	252,461	552,624	125,811		19,768	79,049	1,029,713
C&I Hard-to-Measure	-	-	-		-	-	-

Year	Column Labels						
YTD as Percentage to Planned	National Grid	NU (NSTAR)	NU (WMECo)	UNITIL	CLC		Grand Total
<b>Electric</b>	<b>96%</b>	<b>101%</b>	<b>114%</b>		<b>94%</b>	<b>134%</b>	<b>101%</b>
Residential	216%	182%	209%		181%	102%	194%
1. Residential Whole House	207%	182%	150%		176%	99%	183%
1a. Residential New Construction	167%	241%	157%		472%	244%	201%
1b. Residential Multi-Family Retrofit	194%	135%	197%		0%	34%	156%
1c. Residential Home Energy Services	341%	223%	172%		42%	119%	243%
1d. Residential Behavior/Feedback	85%	98%	49%		0%	0%	84%
2. Residential Products	220%	182%	235%		182%	106%	200%
2a. Residential Cooling & Heating Equipmen	261%	158%	239%		327%	163%	204%
2b. Residential Lighting	232%	196%	241%		189%	110%	214%
2c. Residential Consumer Products	102%	73%	145%		89%	43%	87%
3. Residential Hard to Measure	0%	0%	0%		0%	0%	0%
Low-income	188%	165%	121%		83%	125%	166%
4. Low-income Whole House	188%	165%	121%		83%	125%	166%
4a. Low-income New Construction	25%	41%	50%		0%	138%	37%
4b. Low-income Single Family Retrofit	128%	106%	115%		72%	117%	118%
4c. Low-income Multi-Family Retrofit	259%	217%	128%		96%	153%	216%
5. Low Income Hard to Measure	0%	0%	0%		0%	0%	0%
Commercial & Industrial	70%	89%	89%		85%	157%	82%
6. C&I New Construction	142%	150%	237%		263%	181%	152%
6a. C&I New Construction	142%	150%	237%		263%	181%	152%
7. C&I Retrofit	48%	74%	60%		59%	143%	63%
7a. C&I Retrofit	46%	71%	88%		48%	187%	61%
7b. C&I Direct Install	67%	89%	37%		83%	104%	72%
8. C&I Hard to Measure	0%	0%	0%		0%	0%	0%

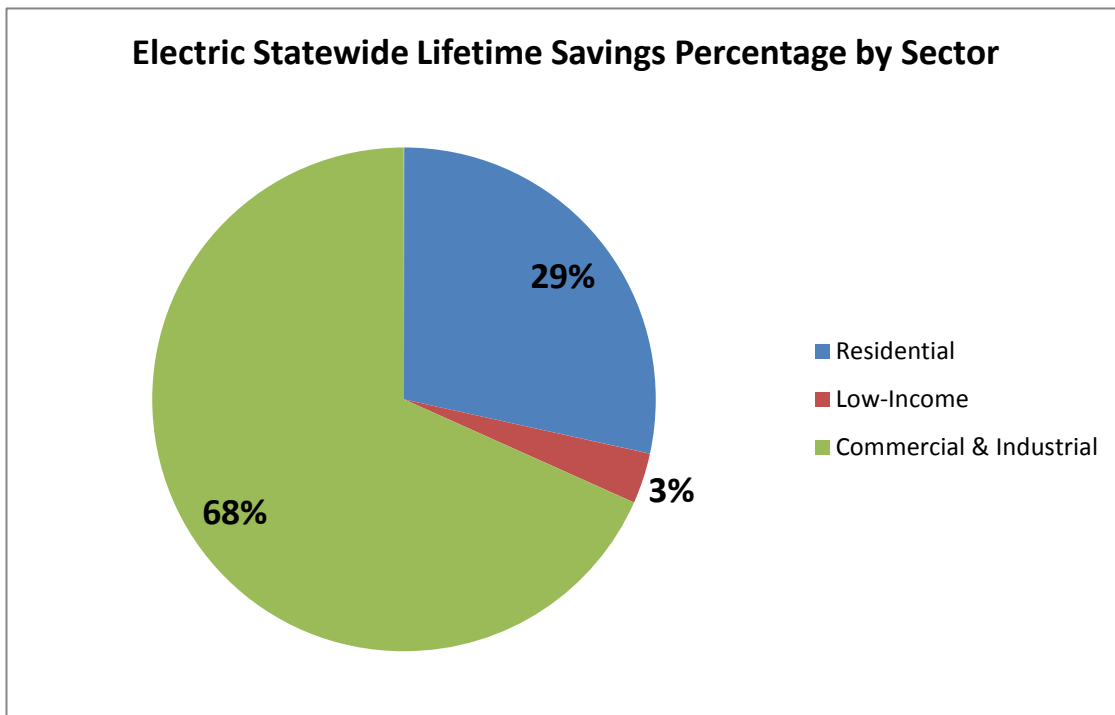
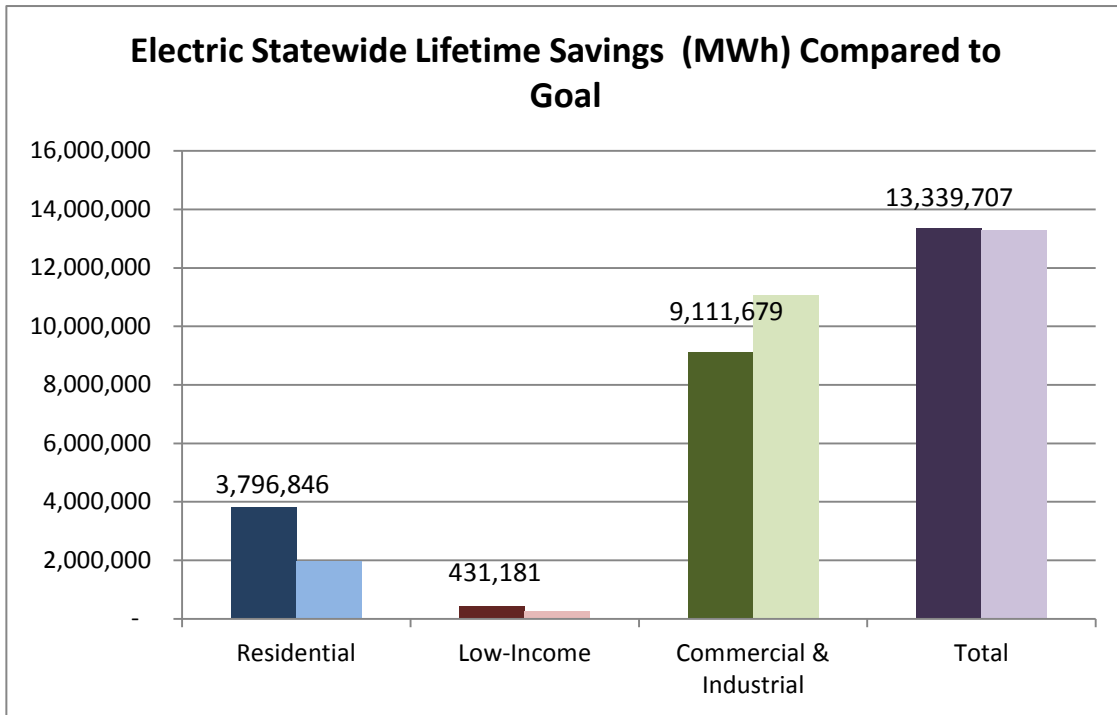
# ELECTRIC STATEWIDE BUDGETS, Q4 2014



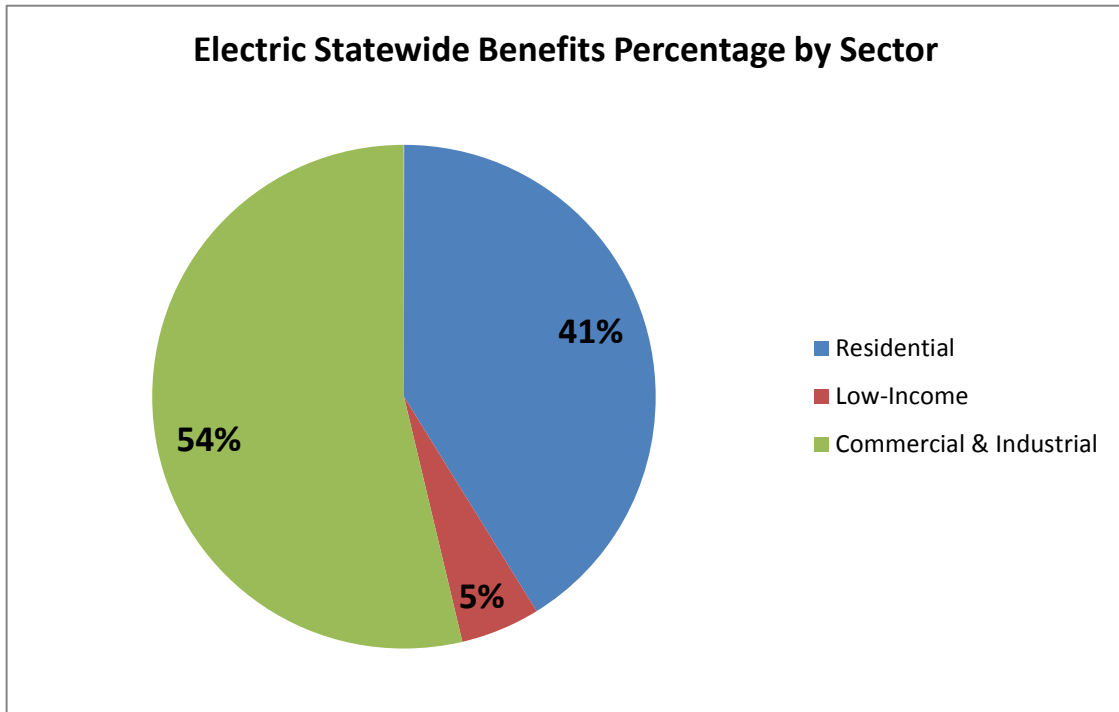
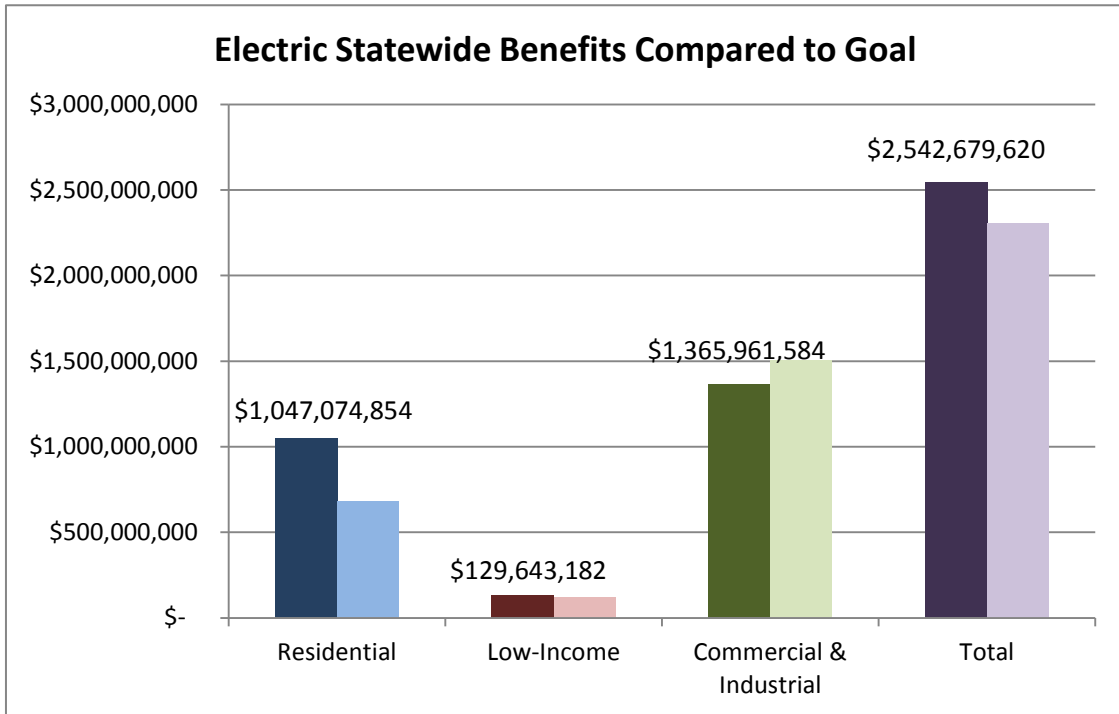
# ANNUAL ELECTRIC STATEWIDE SAVINGS, Q4 2014



# LIFETIME ELECTRIC STATEWIDE SAVINGS, Q4 2014



# ELECTRIC STATEWIDE BENEFITS, Q4 2014





**Q4 2014 Statewide Gas Budgets (January 1, 2014 through December 31, 2014 )**

Row Labels	Total Sum of Program Planning and Administration	Total Sum of Marketing and Advertising	Total Sum of Participant Incentive	Total Sum of Sales, Technical Assistance & Training	Total Sum of Evaluation and Market Research	Total Sum of Total Spend
<b>Gas</b>						
<b>Planned</b>	\$ 9,005,073	\$ 8,695,386	\$ 122,216,437	\$ 27,469,623	\$ 7,248,953	\$ 174,635,473
Residential	\$ 4,301,814	\$ 4,612,595	\$ 59,287,082	\$ 15,107,397	\$ 3,593,781	\$ 86,902,669
Residential Whole House	\$ 2,417,192	\$ 1,607,933	\$ 38,771,296	\$ 12,767,901	\$ 2,400,734	\$ 57,965,055
Residential Products	\$ 1,030,984	\$ 2,095,199	\$ 19,384,415	\$ 2,014,832	\$ 1,075,163	\$ 25,600,593
Residential Hard-to-Measure	\$ 853,638	\$ 909,463	\$ 1,131,371	\$ 324,663	\$ 117,884	\$ 3,337,020
Low-Income	\$ 2,223,449	\$ 1,575,031	\$ 24,559,473	\$ 6,089,880	\$ 1,480,506	\$ 35,928,339
Low-Income Whole House	\$ 1,422,891	\$ 1,403,849	\$ 24,559,473	\$ 6,089,880	\$ 1,444,978	\$ 34,921,072
Low-Income Hard-to-Measure	\$ 800,557	\$ 171,182	\$ -	\$ -	\$ 35,528	\$ 1,007,267
Commercial & Industrial	\$ 2,479,810	\$ 2,507,761	\$ 38,369,882	\$ 6,272,346	\$ 2,174,666	\$ 51,804,465
C&I New Construction	\$ 804,253	\$ 942,394	\$ 15,139,664	\$ 1,827,748	\$ 779,817	\$ 19,493,876
C&I Retrofit	\$ 1,289,619	\$ 1,077,525	\$ 23,230,218	\$ 4,401,912	\$ 1,336,139	\$ 31,335,413
C&I Hard-to-Measure	\$ 385,938	\$ 487,842	\$ -	\$ 42,686	\$ 58,710	\$ 975,177
<b>Q4</b>	\$ 8,594,948	\$ 6,785,818	\$ 123,251,073	\$ 27,984,839	\$ 4,701,374	\$ 165,896,501
Residential	\$ 3,921,076	\$ 3,949,618	\$ 71,202,664	\$ 17,654,162	\$ 2,065,013	\$ 93,370,981
Residential Whole House	\$ 2,323,956	\$ 1,255,770	\$ 51,312,540	\$ 16,327,890	\$ 1,004,775	\$ 66,803,379
Residential Products	\$ 848,668	\$ 1,710,861	\$ 19,018,456	\$ 1,141,044	\$ 967,138	\$ 23,686,166
Residential Hard-to-Measure	\$ 748,452	\$ 982,987	\$ 871,668	\$ 185,228	\$ 93,100	\$ 2,881,436
Low-Income	\$ 1,738,321	\$ 413,900	\$ 29,600,411	\$ 6,099,825	\$ 445,437	\$ 38,297,894
Low-Income Whole House	\$ 1,388,372	\$ 262,321	\$ 29,600,411	\$ 6,096,342	\$ 437,560	\$ 37,785,006
Low-Income Hard-to-Measure	\$ 349,949	\$ 151,579	\$ -	\$ 3,483	\$ 7,877	\$ 512,887
Commercial & Industrial	\$ 2,935,551	\$ 2,422,301	\$ 22,447,998	\$ 4,230,852	\$ 2,190,924	\$ 34,227,626
C&I New Construction	\$ 815,733	\$ 1,012,269	\$ 7,126,410	\$ 1,400,392	\$ 764,747	\$ 11,119,551
C&I Retrofit	\$ 1,376,424	\$ 984,612	\$ 15,321,588	\$ 2,808,439	\$ 1,369,775	\$ 21,860,837
C&I Hard-to-Measure	\$ 743,395	\$ 425,420	\$ -	\$ 22,022	\$ 56,402	\$ 1,247,239

YTD AS PERCENTAGE OF Planned	Program Planning and Administration	Marketing and Advertising	Participant Incentive	Sales, Technical Assistance & Training	Evaluation and Market Research	Total Spend
<b>Gas</b>	<b>95%</b>	<b>78%</b>	<b>101%</b>	<b>102%</b>	<b>65%</b>	<b>95%</b>
<b>Residential</b>	<b>91%</b>	<b>86%</b>	<b>120%</b>	<b>117%</b>	<b>57%</b>	<b>107%</b>
1. Residential Whole House	96%	78%	132%	128%	42%	115%
2. Residential Products	82%	82%	98%	57%	90%	93%
3. Residential Hard-to-Measure	88%	108%	77%	57%	79%	86%
<b>Low-Income</b>	<b>78%</b>	<b>26%</b>	<b>121%</b>	<b>100%</b>	<b>30%</b>	<b>107%</b>
4. Low-Income Whole House	98%	19%	121%	100%	30%	108%
5. Low-Income Hard-to-Measure	44%	89%	0%	0%	22%	51%
<b>Commercial &amp; Industrial</b>	<b>118%</b>	<b>97%</b>	<b>59%</b>	<b>67%</b>	<b>101%</b>	<b>66%</b>
6. C&I New Construction	101%	107%	47%	77%	98%	57%
7. C&I Retrofit	107%	91%	66%	64%	103%	70%
8. C&I Hard-to-Measure	193%	87%	0%	52%	96%	128%

**Q4 2014 Statewide Gas Savings (January 1, 2014 through December 31, 2014 )**

	Total Sum of Participants	Total Sum of Annual Therms	Total Sum of Lifetime Therms
<b>Gas</b>			
<b>Planned</b>	560,883	24,402,858	312,695,505
Residential	549,029	11,607,811	119,006,292
Residential Whole House	520,561	9,438,886	78,143,626
Residential New Construction	1,781	372,139	8,723,534
Residential Multi-Family Retrofit	8,688	546,385	9,406,167
Residential Home Energy Services	34,409	2,825,512	54,319,076
Residential Behavior/Feedback	475,683	5,694,849	5,694,849
Residential Products	28,468	2,168,925	40,862,666
Residential Heating & Water Heating	28,468	2,168,925	40,862,666
Low-Income	6,840	1,439,072	28,354,751
Low-Income Whole House	6,840	1,439,072	28,354,751
Low-Income Single Family Retrofit	2,484	827,356	16,852,525
Low-Income Multi-Family Retrofit	4,356	611,716	11,502,225
Commercial & Industrial	5,015	11,355,976	165,334,462
C&I New Construction	1,715	3,892,978	74,127,477
C&I New Construction	1,715	3,892,978	74,127,477
C&I Retrofit	3,300	7,462,997	91,206,986
C&I Retrofit	2,173	7,143,505	88,120,031
C&I Direct Install	1,127	319,492	3,086,955
<b>Q4</b>	549,415	28,246,665	380,270,187
Residential	535,034	15,132,803	174,604,370
Residential Whole House	503,814	11,962,284	121,179,051
Residential New Construction	3,700	1,149,767	26,839,838
Residential Multi-Family Retrofit	14,266	607,867	9,990,587
Residential Home Energy Services	27,635	4,414,498	78,558,475
Residential Behavior/Feedback	458,213	5,790,152	5,790,152
Residential Products	31,220	3,170,520	53,425,319
Residential Heating & Water Heating	31,220	3,170,520	53,425,319
Low-Income	10,733	2,631,446	51,089,698
Low-Income Whole House	10,733	2,631,446	51,089,698
Low-Income Single Family Retrofit	2,711	669,950	13,886,695
Low-Income Multi-Family Retrofit	8,022	1,961,497	37,203,003
Commercial & Industrial	3,648	10,482,415	154,576,119
C&I New Construction	988	2,614,206	52,228,932
C&I New Construction	988	2,614,206	52,228,932
C&I Retrofit	2,660	7,868,209	102,347,187
C&I Retrofit	1,939	7,679,475	100,187,739
C&I Direct Install	721	188,734	2,159,448

YTD AS PERCENTAGE OF Planned	Participants	Annual Therms	Lifetime Therms
<b>Gas</b>	<b>98%</b>	<b>116%</b>	<b>122%</b>
<b>Residential</b>	97%	130%	147%
<b>Residential Whole House</b>	<b>97%</b>	<b>127%</b>	<b>155%</b>
Residential New Construction	208%	309%	308%
Residential Multi-Family Retrofit	164%	111%	106%
Residential Home Energy Services	80%	156%	145%
Residential Behavior/Feedback	96%	102%	102%
<b>Residential Products</b>	<b>110%</b>	<b>146%</b>	<b>131%</b>
Residential Heating & Water Heating	110%	146%	131%
Low-Income	157%	183%	180%
<b>Low-Income Whole House</b>	<b>157%</b>	<b>183%</b>	<b>180%</b>
Low-Income Single Family Retrofit	109%	81%	82%
Low-Income Multi-Family Retrofit	184%	321%	323%
Commercial & Industrial	73%	92%	93%
<b>C&amp;I New Construction</b>	<b>58%</b>	<b>67%</b>	<b>70%</b>
C&I New Construction	58%	67%	70%
<b>C&amp;I Retrofit</b>	<b>81%</b>	<b>105%</b>	<b>112%</b>
C&I Retrofit	89%	108%	114%
C&I Direct Install	64%	59%	70%

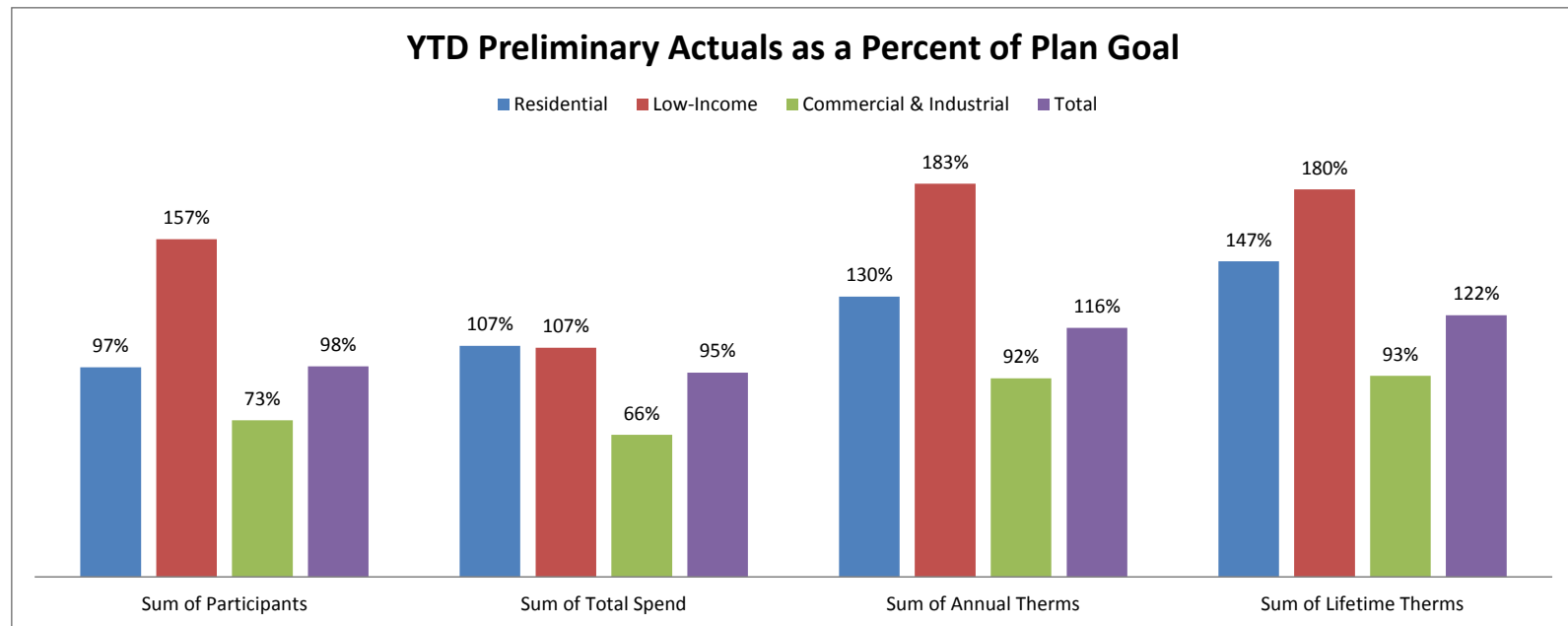
**Q4 2014 Statewide Gas Benefits (January 1, 2014 through December 31, 2014 )**

	Total Sum of Total Gas Benefits	Total Sum of Total Electric Benefits	Total Sum of Total Other Resource Benefits	Total Sum of Total Non Resource Benefits	Total Sum of Total Benefits
<b>Gas</b>					
<b>Planned</b>	\$ 329,549,938	\$ 24,157,816	\$ 11,634,116	\$ 130,229,710	\$ 495,571,580
Residential	\$ 129,570,415	\$ 20,264,213	\$ 4,190,446	\$ 83,149,493	\$ 237,174,567
Residential Whole House	\$ 86,587,045	\$ 18,662,528	\$ 4,190,446	\$ 43,254,930	\$ 152,694,949
Residential New Construction	\$ 9,222,070	\$ 1,816,238	\$ 64,136	\$ 8,040,788	\$ 19,143,231
Residential Multi-Family Retrofit	\$ 10,467,860	\$ 296	\$ 2,182,565	\$ 9,398,560	\$ 22,049,280
Residential Home Energy Services	\$ 59,834,521	\$ 16,845,994	\$ 1,943,745	\$ 25,815,583	\$ 104,439,843
Residential Behavior/Feedback	\$ 7,062,595	\$ -	\$ -	\$ -	\$ 7,062,595
Residential Products	\$ 42,983,370	\$ 1,601,685	\$ -	\$ 39,894,562	\$ 84,479,617
Residential Heating & Water Heating	\$ 42,983,370	\$ 1,601,685	\$ -	\$ 39,894,562	\$ 84,479,617
Low-Income	\$ 30,738,753	\$ 3,777,656	\$ 532,207	\$ 25,120,368	\$ 60,168,984
Low-Income Whole House	\$ 30,738,753	\$ 3,777,656	\$ 532,207	\$ 25,120,368	\$ 60,168,984
Low-Income Single Family Retrofit	\$ 18,218,725	\$ 3,776,785	\$ 723	\$ 12,839,926	\$ 34,836,159
Low-Income Multi-Family Retrofit	\$ 12,520,028	\$ 871	\$ 531,485	\$ 12,280,441	\$ 25,332,825
Commercial & Industrial	\$ 169,240,770	\$ 115,947	\$ 6,911,463	\$ 21,959,849	\$ 198,228,029
C&I New Construction	\$ 73,519,211	\$ 113,334	\$ 446,136	\$ -	\$ 74,078,682
C&I New Construction	\$ 73,519,211	\$ 113,334	\$ 446,136	\$ -	\$ 74,078,682
C&I Retrofit	\$ 95,721,559	\$ 2,613	\$ 6,465,326	\$ 21,959,849	\$ 124,149,348
C&I Retrofit	\$ 92,435,482	\$ 2,613	\$ 4,286,366	\$ 20,366,930	\$ 117,094,391
C&I Direct Install	\$ 3,286,077	\$ -	\$ 2,178,960	\$ 1,589,920	\$ 7,054,957
<b>Q4</b>	\$ 403,445,417	\$ 31,008,225	\$ 24,356,098	\$ 140,039,390	\$ 598,849,129
Residential	\$ 194,294,709	\$ 27,330,274	\$ 6,712,381	\$ 79,815,239	\$ 308,152,603
Residential Whole House	\$ 135,438,649	\$ 25,034,455	\$ 6,211,469	\$ 66,969,263	\$ 233,653,837
Residential New Construction	\$ 28,858,099	\$ 3,786,970	\$ 127,338	\$ 15,996,796	\$ 48,769,204
Residential Multi-Family Retrofit	\$ 11,373,460	\$ 2,318,046	\$ 1,314,047	\$ 9,074,104	\$ 24,079,657
Residential Home Energy Services	\$ 87,872,681	\$ 18,929,439	\$ 4,770,084	\$ 41,898,364	\$ 153,470,567
Residential Behavior/Feedback	\$ 7,334,409	\$ -	\$ -	\$ -	\$ 7,334,409
Residential Products	\$ 58,856,059	\$ 2,295,819	\$ 500,911	\$ 12,845,976	\$ 74,498,765
Residential Heating & Water Heating	\$ 58,856,059	\$ 2,295,819	\$ 500,911	\$ 12,845,976	\$ 74,498,765
Low-Income	\$ 54,867,854	\$ 3,658,649	\$ 2,639,393	\$ 32,130,455	\$ 93,296,351
Low-Income Whole House	\$ 54,867,854	\$ 3,658,649	\$ 2,639,393	\$ 32,130,455	\$ 93,296,351
Low-Income Single Family Retrofit	\$ 14,963,075	\$ 3,658,649	\$ 326,134	\$ 10,920,359	\$ 29,868,218
Low-Income Multi-Family Retrofit	\$ 39,904,779	\$ -	\$ 2,313,259	\$ 21,210,096	\$ 63,428,133
Commercial & Industrial	\$ 154,282,855	\$ 19,301	\$ 15,004,324	\$ 28,093,696	\$ 197,400,175
C&I New Construction	\$ 51,405,132	\$ 19,301	\$ 1,873,184	\$ -	\$ 53,297,616
C&I New Construction	\$ 51,405,132	\$ 19,301	\$ 1,873,184	\$ -	\$ 53,297,616
C&I Retrofit	\$ 102,877,723	\$ -	\$ 13,131,140	\$ 28,093,696	\$ 144,102,559
C&I Retrofit	\$ 100,946,021	\$ -	\$ 10,882,755	\$ 27,424,958	\$ 139,253,734
C&I Direct Install	\$ 1,931,702	\$ -	\$ 2,248,385	\$ 668,738	\$ 4,848,825

YTD AS PERCENTAGE OF Planned	Total Sum of Total Gas Benefits	Total Sum of Total Electric Benefits	Total Sum of Total Other Resource Benefits	Total Sum of Total Non Resource Benefits	Total Sum of Total Benefits
<b>Gas</b>	<b>122%</b>	<b>128%</b>	<b>209%</b>	<b>108%</b>	<b>121%</b>
<b>Residential</b>	<b>150%</b>	<b>135%</b>	<b>160%</b>	<b>96%</b>	<b>130%</b>
<b>Residential Whole House</b>	<b>156%</b>	<b>134%</b>	<b>148%</b>	<b>155%</b>	<b>153%</b>
Residential New Construction	313%	209%	199%	199%	255%
Residential Multi-Family Retrofit	109%	783124%	60%	97%	109%
Residential Home Energy Services	147%	112%	245%	162%	147%
Residential Behavior/Feedback	104%	0%	0%	0%	104%
<b>Residential Products</b>	<b>137%</b>	<b>143%</b>	<b>0%</b>	<b>32%</b>	<b>88%</b>
Residential Heating & Water Heating	137%	143%	0%	32%	88%
Low-Income	178%	97%	496%	128%	155%
<b>Low-Income Whole House</b>	<b>178%</b>	<b>97%</b>	<b>496%</b>	<b>128%</b>	<b>155%</b>
Low-Income Single Family Retrofit	82%	97%	45139%	85%	86%
Low-Income Multi-Family Retrofit	319%	0%	435%	173%	250%
Commercial & Industrial	91%	17%	217%	128%	100%
<b>C&amp;I New Construction</b>	<b>70%</b>	<b>17%</b>	<b>420%</b>	<b>0%</b>	<b>72%</b>
C&I New Construction	70%	17%	420%	0%	72%
<b>C&amp;I Retrofit</b>	<b>107%</b>	<b>0%</b>	<b>203%</b>	<b>128%</b>	<b>116%</b>
C&I Retrofit	109%	0%	254%	135%	119%
C&I Direct Install	59%	0%	103%	42%	69%

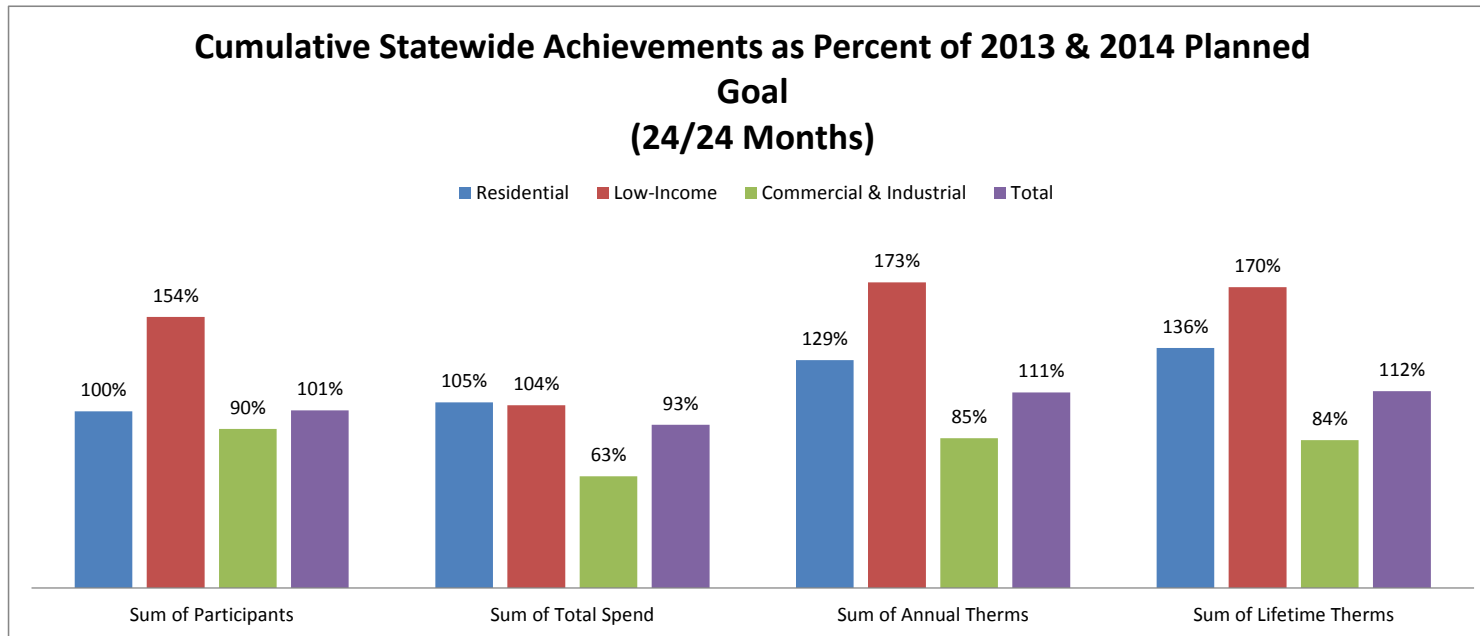
## Q4 2014 Statewide Gas Summary (January 1, 2014 through December 31, 2014 )

Row Labels	Values			
	Sum of Participants	Sum of Total Spend	Sum of Annual Therms	Sum of Lifetime Therms
<b>Gas</b>				
<b>Planned</b>	560,883	\$ 174,635,473	24,402,858	312,695,505
Residential	549,029	\$ 86,902,669	11,607,811	119,006,292
Low-Income	6,840	\$ 35,928,339	1,439,072	28,354,751
Commercial & Industrial	5,015	\$ 51,804,465	11,355,976	165,334,462
<b>Q4</b>	549,415	165,896,501	28,246,665	380,270,187
Residential	535,034	93,370,981	15,132,803	174,604,370
Low-Income	10,733	38,297,894	2,631,446	51,089,698
Commercial & Industrial	3,648	34,227,626	10,482,415	154,576,119
<b>YTD as % of Planned</b>	<b>98%</b>	<b>95%</b>	<b>116%</b>	<b>122%</b>
Residential	97%	107%	130%	147%
Low-Income	157%	107%	183%	180%
Commercial & Industrial	73%	66%	92%	93%



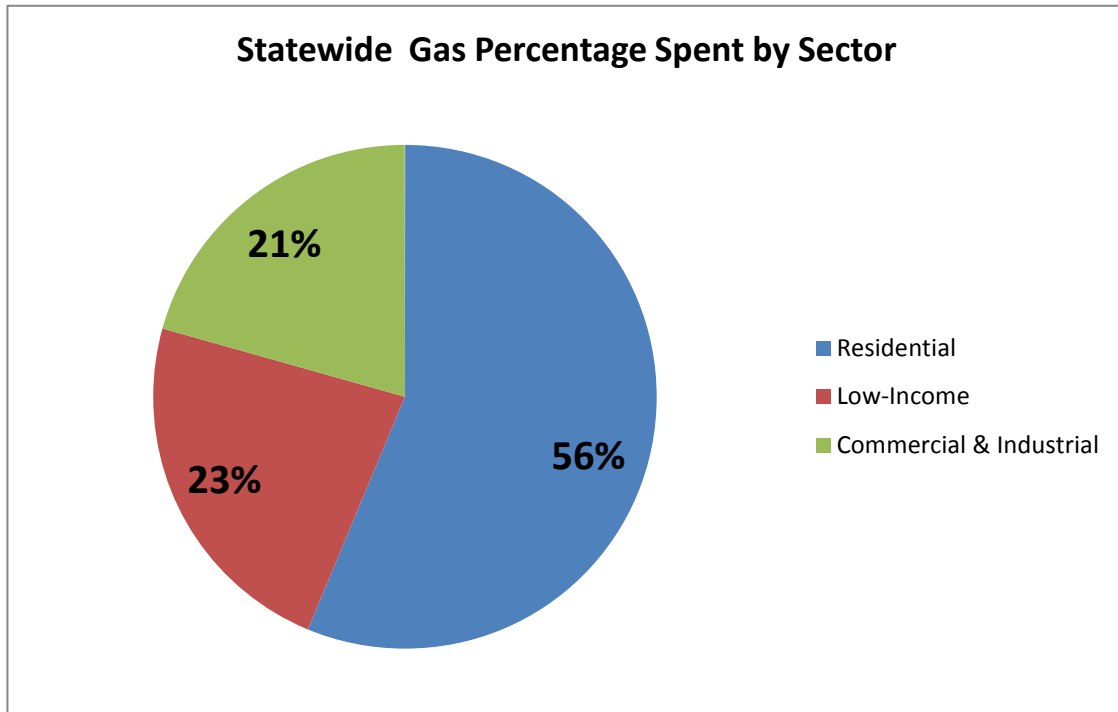
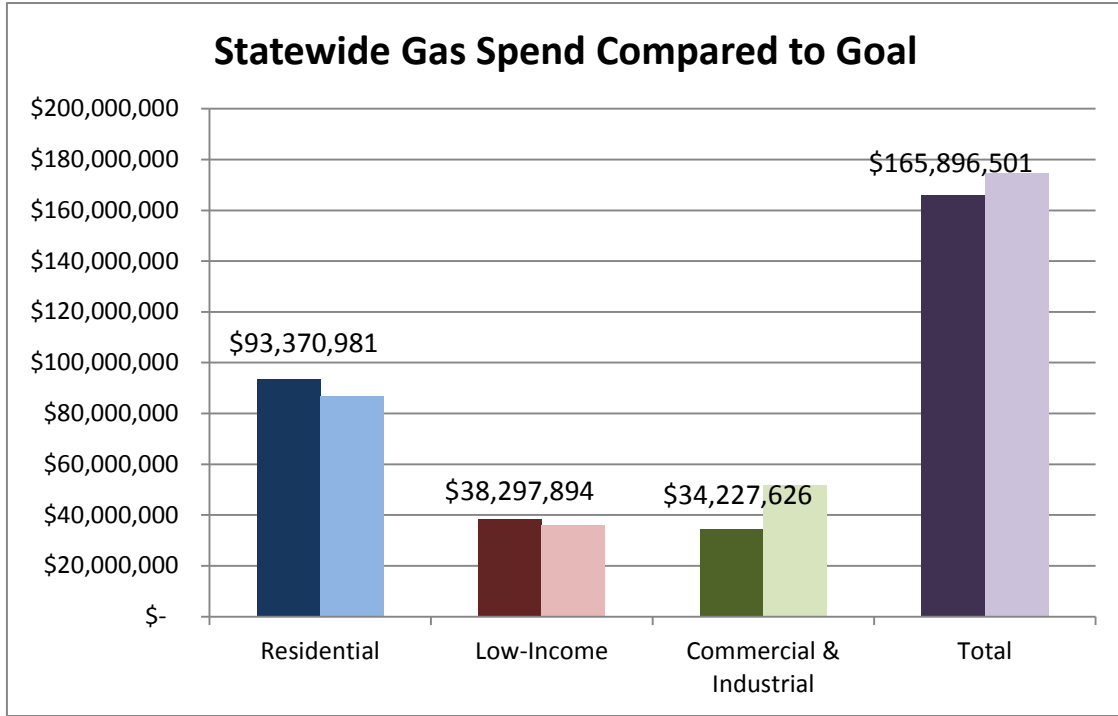
## Cumulative Statewide Gas Summary (January 1, 2013 through December 31, 2014 )

Row Labels	Values			
	Sum of Participants	Sum of Total Spend	Sum of Annual Therms	Sum of Lifetime Therms
<b>Gas</b>				
<b>Planned</b>	1,110,071	343,115,888	47,065,357	616,220,468
Residential	1,086,719	171,688,550	21,898,593	235,619,596
Low-Income	13,484	70,337,314	2,836,815	55,869,680
Commercial & Industrial	9,868	101,090,025	22,329,949	324,731,193
<b>Q4</b>	1,117,446	317,701,854	52,170,738	687,906,509
Residential	1,087,816	180,759,621	28,305,865	320,510,789
Low-Income	20,726	72,881,462	4,916,995	95,223,536
Commercial & Industrial	8,904	64,060,771	18,947,878	272,172,184
<b>YTD as % of Planned</b>	<b>101%</b>	<b>93%</b>	<b>111%</b>	<b>112%</b>
Residential	100%	105%	129%	136%
Low-Income	154%	104%	173%	170%
Commercial & Industrial	90%	63%	85%	84%

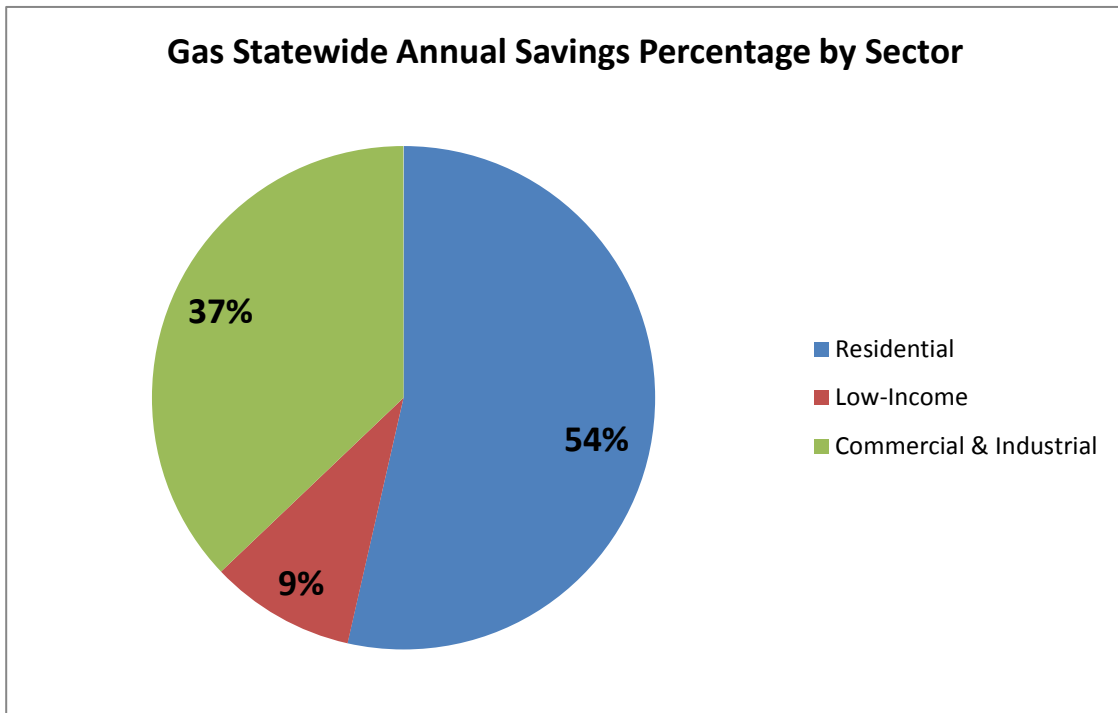
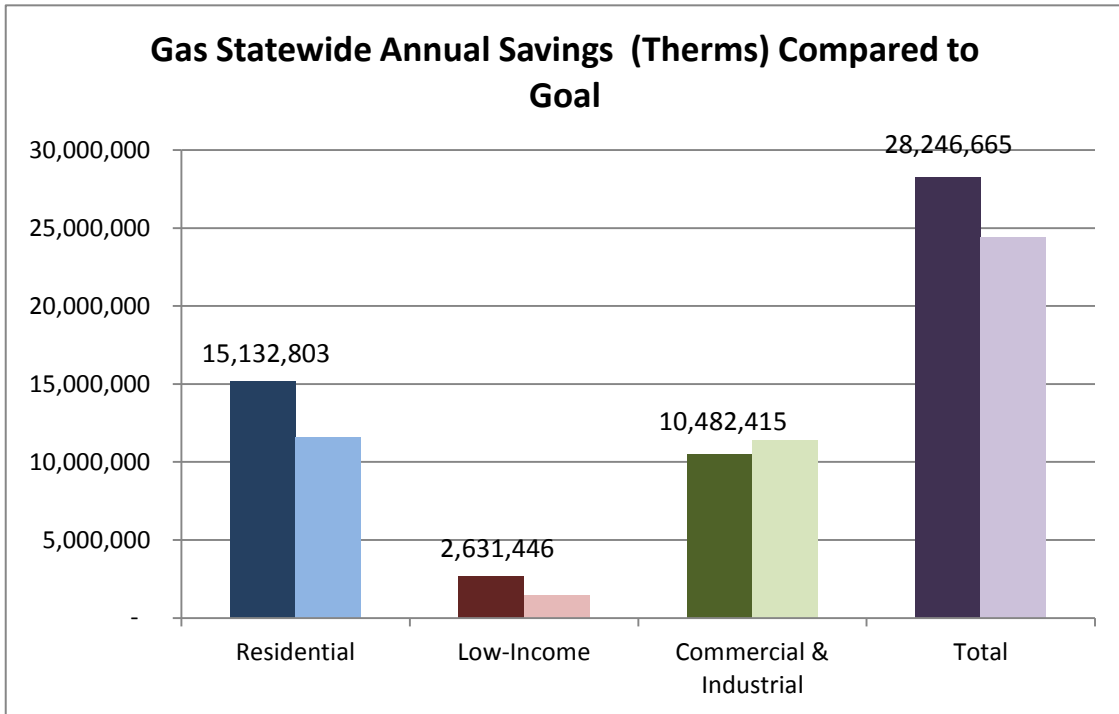




# GAS STATEWIDE BUDGETS, Q4 2014

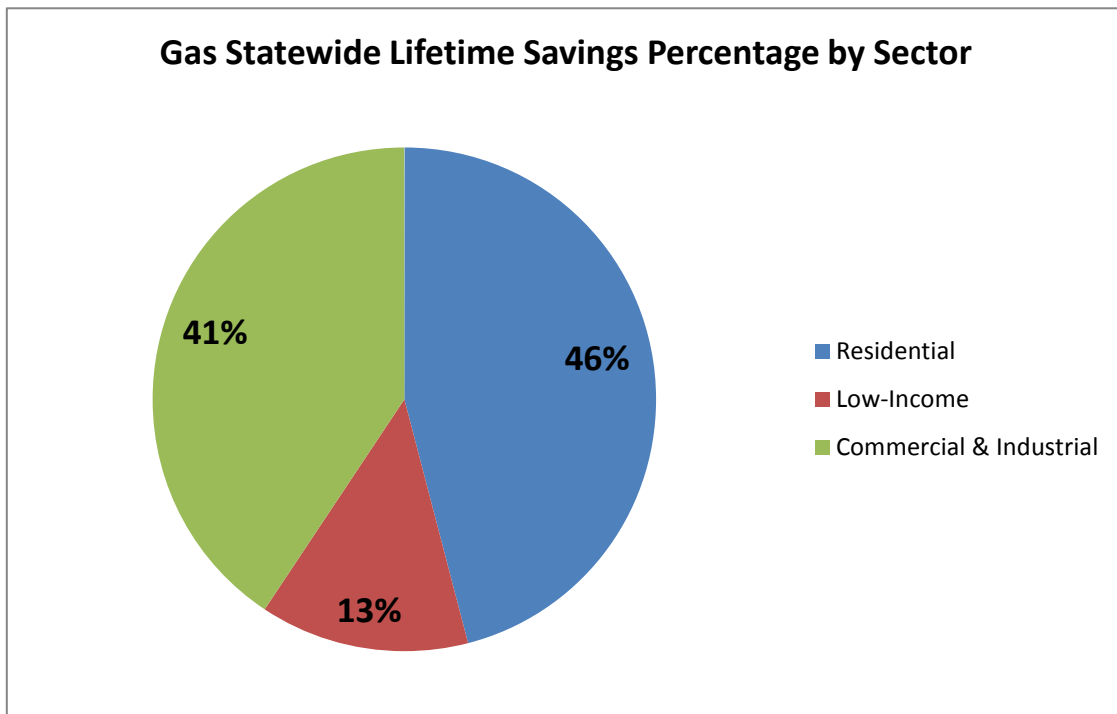
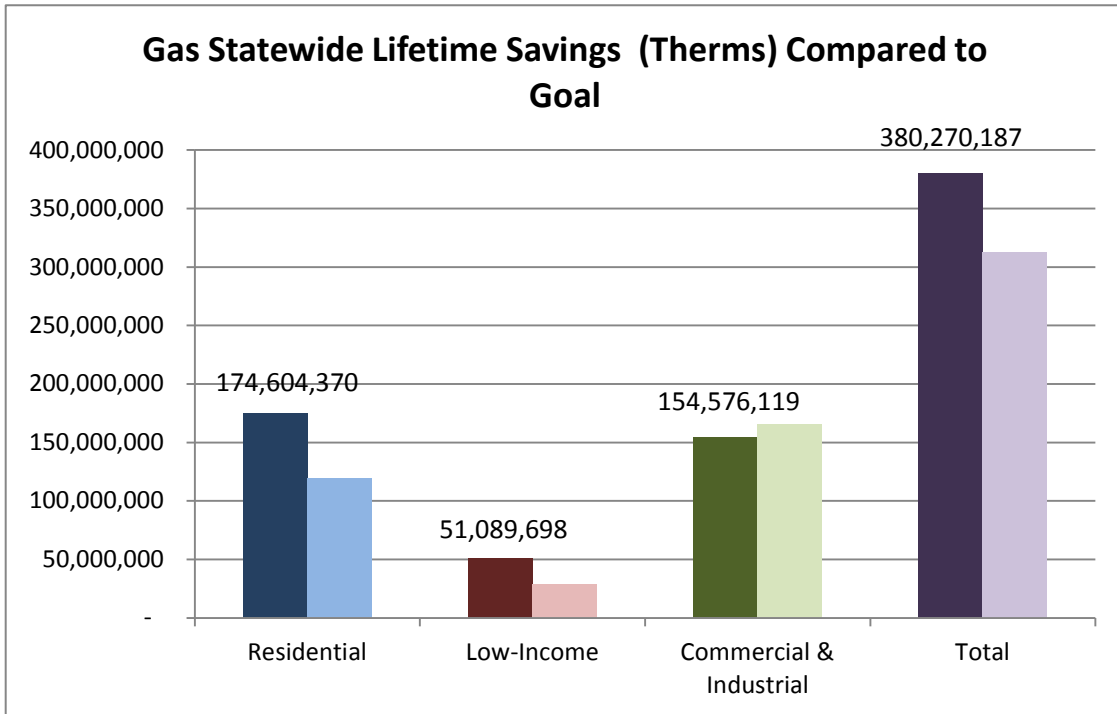


# ANNUAL GAS STATEWIDE SAVINGS, Q4 2014

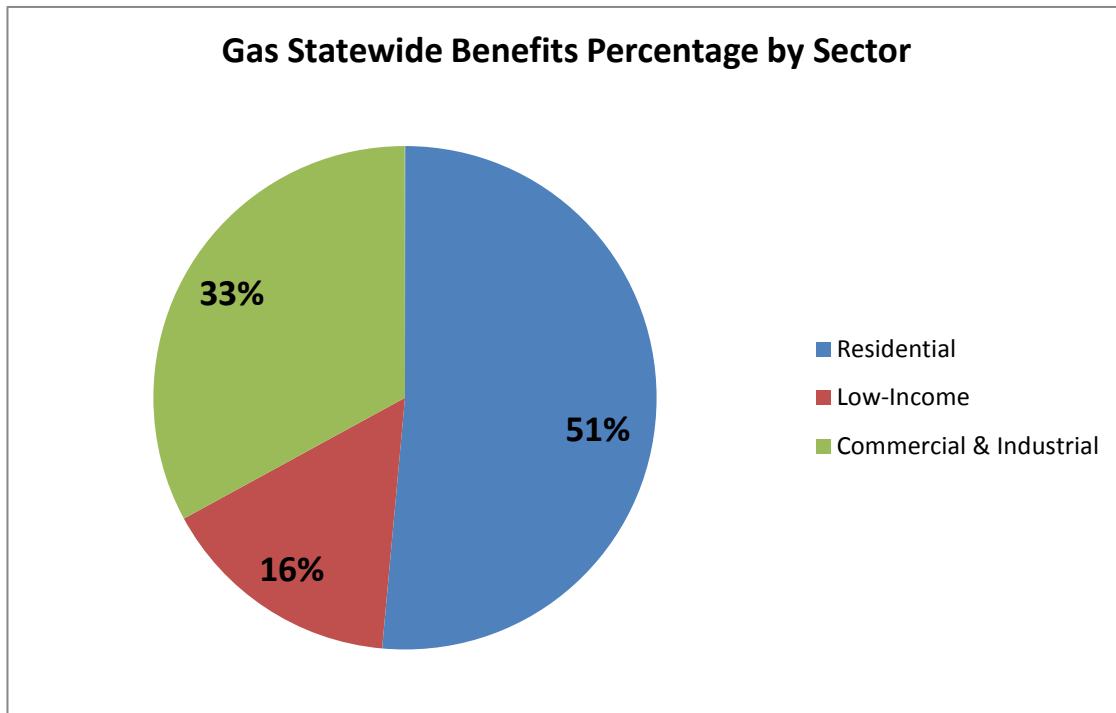
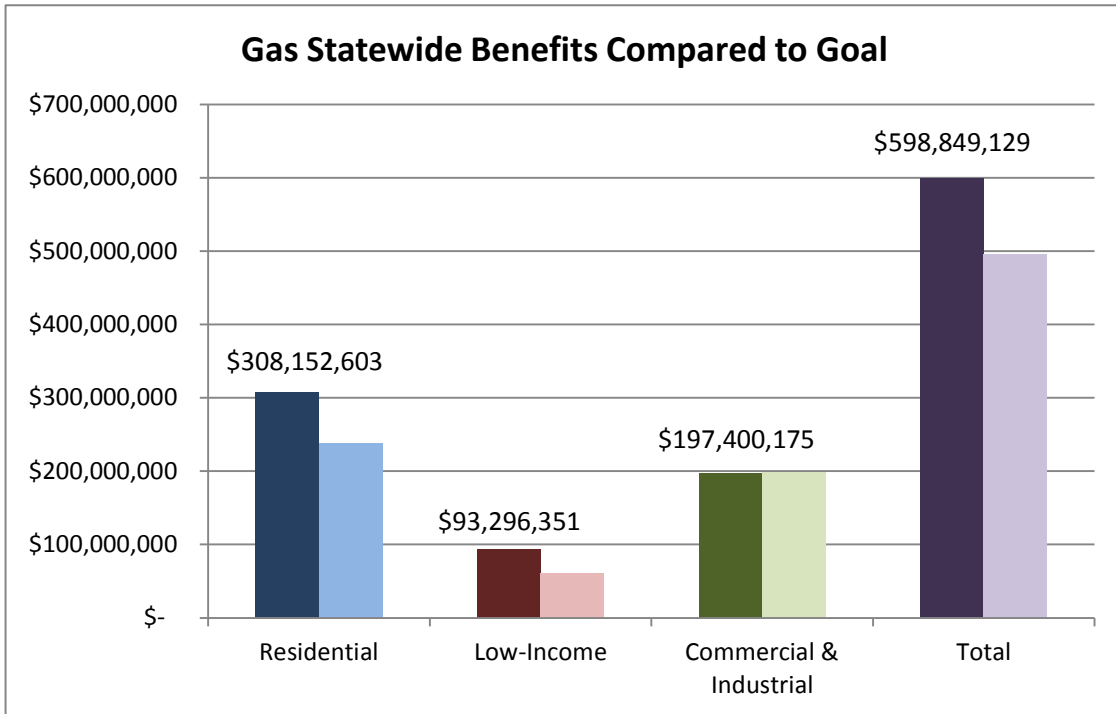




# LIFETIME GAS STATEWIDE SAVINGS, Q4 2014

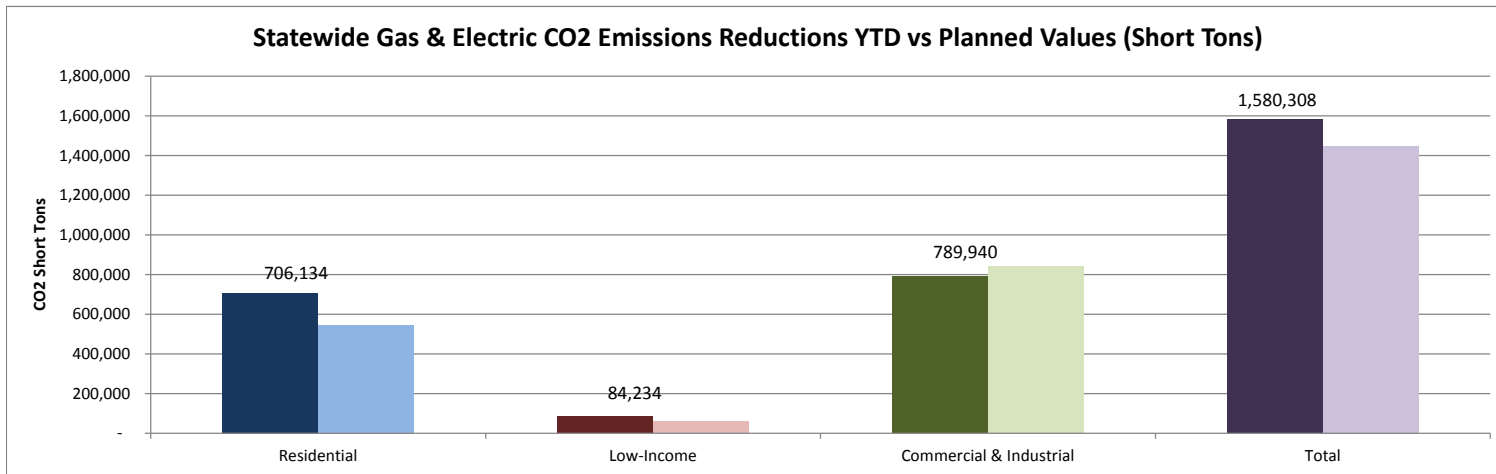


# GAS STATEWIDE BENEFITS, Q4 2014



## Cumulative Statewide Gas & Elec CO2 Emissions Reductions Summary (January 1, 2013 through December 31, 2014 )

Row Labels	Sum of Energy (annual MWh)	Sum of Annual Therms	Sum of Annual Oil (MMBTU)	Sum of NOX	Sum of SO2	Sum of CO2
<b>Planned</b>	<b>2,439,214</b>	<b>22,959,534</b>	<b>695,862</b>	<b>586</b>	<b>1,539</b>	<b>1,446,660</b>
Residential	700,361	22,268,430	680,427	168	442	545,862
Low-Income	57,895	2,956,863	149,619	14	37	59,187
Commercial & Industrial	1,680,958	(2,265,760)	(134,184)	404	1,060	841,611
<b>Q4</b>	<b>2,384,995</b>	<b>46,665,151</b>	<b>979,571</b>	<b>573</b>	<b>1,505</b>	<b>1,580,308</b>
Residential	893,121	29,372,748	921,342	214	563	706,134
Low-Income	79,085	5,000,729	176,611	19	50	84,234
Commercial & Industrial	1,412,789	12,291,674	(118,381)	339	891	789,940



Please note that the PAs are working with DEP to try to determine the best method for properly and precisely capturing the full impact of energy efficiency measures on GHG emissions. As part of this process, the PAs have included this table on Emissions Reductions, based on continuing discussions with the DEP, and using new factors proposed by DEP, which are based on annual gas, oil, and electric savings. The PAs look forward to discussing these proposed factors with DEP and are committed to ensuring that the full impact of energy efficiency measures on GHG emissions are captured.

**ATTACHMENT B**

**ADDITIONAL EM&V UPDATE CHARTS**



Study Name	Research Area	Study Type	Study Manager	Overall Evaluation Goal (Project Summary/Purpose)	Expected Outcomes	Current Notes
Impact Evaluation of the Upstream Lighting Program (P17)	C&I	Impact	Bill Blake	Impact evaluation of the 2012 Bright Opportunities program	The study will provide updated assumptions based on MA-specific research for the following: Application of purchased lamps by facility/space type; Hours of use; baseline replaced lamp; and gross savings realization rates.	
Mid-Sized Customer Assessment (P19)	C&I	Other	Wendy Todd	Assess whether current program delivery methods are adequately serving the needs of "mid-sized" customers	This study will produce a profile of mid-sized customers across the PAs as well as assess current levels of EE activity/awareness among the mid-sized population and determine if there are specific needs of the population that are not being met by current	This study, along with several others, is leveraging a single C&I customer general population survey effort.
Impact Evaluation of 2011-2012 CHP Installations (P20)	C&I	Impact	Erik Mellen	An impact evaluation of 2011-12 CHP installations	The study will provide realization rates for electricity (kWh); net energy (therms) and coincident peak demand.	Builds on impact evaluation of 2010 CHP installations and will examine a census of all CHP systems finalized in 2010-2012.
Existing Buildings Market Characterization (P21)	C&I	Other	Erik Mellen	Assess the current market for EE in existing buildings	This study will provide a comprehensive characterization of the C&I market including physical characteristics of buildings, building owner/tenant relationships, inventory of the type of energy equipment by end use, business practices that affect energy us	Final report and market profiles for office, health care and food stores submitted
Lighting Controls Impact Evaluation (P22)	C&I	Impact	Bill Blake	Determine why program savings for retrofit lighting controls dropped off significantly in 2010 and 2011	The study will provide an assessment of the type of impact evaluation to apply for the lighting controls program; will make recommendations for changes to future lighting controls programs in light of any new market conditions; and will make recommendatio	Final
LED Market Effects Study (P27)	C&I	Other	Bill Blake	Baseline Market Effects Study of LEDs	This study will establish the baseline penetration of LEDs in both the Residential and Commercial markets.	
Boiler Market Characterization (P38)	C&I	Other	Mark Sevier	Market Characterization of the gas boiler market	This study will characterize the current boiler market including total size and EE share as well as determine the market share currently influenced by PA programs.	
Impact Evaluation of 2012 Custom HVAC Installations (P29)	C&I	Impact	Erik Mellen	Impact evaluation of 2012 Custom HVAC Installations	This study will provide realization rates for custom HVAC installations.	67 sites complete; 16 site reports submitted

Study Name	Research Area	Study Type	Study Manager	Overall Evaluation Goal (Project Summary/Purpose)	Expected Outcomes	Current Notes
C&I Code Compliance Follow-up (P24)	C&I	Other	Bill Blake	Mine the data collected for the 2012 Baseline Code Compliance Study to determine if there is anything to learn about the baseline for program measures	Where possible, this study will verify levels of energy code compliance rates in current construction projects and will support program development efforts for targeted new construction efforts.	Phase 2: Site recruitment
Impact Evaluation of 2012 Prescriptive Non-Lighting Installations (P30)	C&I	Impact	Whitney Brougher	Impact evaluation of 2012 Prescriptive Non-Lighting Measures	This study will provide revised savings estimates for prescriptive non-lighting measures.	Completed 29 of 30 Chiller sites, 35 CAIR sites
2012 C&I Customer Profile (P31)	C&I	Other	Whitney Brougher/Kim Crossman	Characterization of the C&I market using PA billing and project tracking data	This study will provide a profile of the C&I market in MA for the second year in a row.	Report complete; working on task 5 Database scoping
Learning From Successful Projects (P32)	C&I	Other	Erik Mellen	This study will examine the practices and/or characteristics that make a project successful.	Identify and report on common factors or project characteristics that have contributed to project success – or lack of it	
How PA Differences Affect Program Outcomes (P33)	C&I	Other	Marie Abdou	The goal of this research is to identify the factors that lead to differences in the depth and cost of savings among the PAs.	Identify the factors that lead to differences in the depth and cost of savings among the PAs. Intended to provide information and insights that will be useful for the PAs and contractors to identify best practices.	
Commercial Real Estate Market Assessment (P34)	C&I	Other	Bill Blake	To gain an understanding of the complex relationship between building owners, property managers and tenants and identify specific program offerings and points in the leasing process that offer opportunities to capture energy efficiency savings.	The study will identify the key building features and services that tenants consider when selecting a property; will identify how building owners and property managers market their properties; will determine the type and role of financial limitations and	
Supply Side Population Characterization (P36)	C&I	Other	Erik Mellen	Market Characterization of supply side populations	This study will provide an understanding of participation trends and develop improved sample frames for specific supply side populations (e.g. Commercial HVAC).	
Direct Install Process Evaluation (P37)	C&I	Process	Dave Weber	Process Evaluation of the Direct Install program	Provide recommendations for how to increase program savings through wider participation and greater comprehensiveness	
Impact Evaluation of 2012 Prescriptive Gas Installations (P39)	C&I	Impact	Tony Larson	Impact evaluation of 2012 Prescriptive Gas Measures	This study will provide revised savings estimates for prescriptive gas measures.	

Study Name	Research Area	Study Type	Study Manager	Overall Evaluation Goal (Project Summary/Purpose)	Expected Outcomes	Current Notes
EISA T-12 Phase Out Research (P40)	C&I	Other	Erik Mellen	The overall objective of this study is to research whether or not lighting manufacturers are still producing T-12 lamps despite the phase-out initiated by the EPACT and EISA legislation.	TBD	The analysis of the Project 41 T12 data will be a supplementary memo that will appear in February 2015
Impact Evaluation of 2013 Custom Gas Installations (P43)	C&I	Impact	TBD	In 2014, the evaluation team plans to begin scoping an impact evaluation of 2013 measures, which will include all PAs. This impact evaluation will also include a desk review task to further test this approach for helping to decide when to evaluate these	This study will provide realization rates for custom gas installations	
Existing Buildings Market Characterization – C&I Customer On-site Assessments (P41)	C&I	Market Characterization	Bill Blake	The principal objective of the C&I Customer On-site Assessments is to build upon the C&I customer telephone surveys and provide a complete quantitative characterization of Massachusetts C&I customers.	The data will be used to characterize buildings of different types and sizes, as well as examine differences in customer practices	
2013 C&I Customer Profile (P44)	C&I	Other	Whitney Brougher	Characterization of the C&I market using PA billing and project tracking data	This study will provide a profile of the C&I market in MA for the third year in a row.	
Lighting Market Assessment	Resi	Market Characterization	Matt Nelson	Provide ongoing monitoring of the MA lighting market.	This study will provide an understanding of the current and developing state of the residential lighting market especially as it relates to EISA, including CFL/LED saturation and sales/market share, availability and pricing of efficient lighting, and supp	
Lighting Saturation Stagnation Assessment	Resi	Market Characterization	Melanie Coen	Assess possible reasons for the current plateau in CFL saturation as well as to determine ways to accelerate LED adoption.	This study will provide a better understanding of and find ways to overcome stagnation in efficient lighting saturation.	
Multi-Stage Lighting Net-to-Gross Study	Resi	Impact Evaluation	Matt Nelson	Estimate net-to-gross (NTG) ratios for key product types incented in the Residential Lighting Program and to assess the associated strategic implications.	NTG Estimates	



Study Name	Research Area	Study Type	Study Manager	Overall Evaluation Goal (Project Summary/Purpose)	Expected Outcomes	Current Notes
Appliance Program Evaluation	Resi	Impact Evaluation	Melanie Coen	This study will explore changes to the way the Appliance initiative is currently delivered, including new marketing strategies or retail partnerships, updated incentives, and other cost-effective options.	TBD	
Incremental Cost Research	Resi	Impact	Gail Azulay	Provide updated incremental cost data for use in cost-effectiveness screening and setting of incentive levels.	The study will provide up-to-date incremental cost data for lighting, appliance and HVAC measures.	
Upstream Lighting Cross-Sector Sales Lit Review	Resi	Impact	Matt Nelson	Provide a review of the work done in evaluation to determine what percent of residential lighting sales are being made by C&I customers	Expect to apply appropriate hours of use to bulbs found going to C&I customers.	
HEHE Impact Evaluation	Resi	Impact	Riley Hastings	Determine gross savings for the HEHE program for a variety of space heating measures.	Gross savings from high efficiency natural gas furnaces and boilers in the HEHE program.	
Ductless Mini-Split Heat Pump Impact Evaluation	Resi	Impact	Matt Nelson	Determine gross energy savings for ductless mini-split heat pumps (DMSHPs)	Gross savings for DMSHPs	
Cool Smart Incremental Cost	Resi	Impact	Matt Nelson	Determine the incremental cost for Cooling Equipment supported through the program	Incremental cost for central cooling systems	
HES Program Delivery Assessment	Resi	Impact and Process Evaluation	Mike Goldman	The study will focus on determining accurate conversion rates and other key performance metrics for HES overall, as well as for LVs and HPCs specifically. The study will also explore opportunities for greater and deeper savings for each program.	Conversion rates and other key performance metrics for HES overall, as well as for LVs and HPCs specifically and recommendations for achieving greater and deeper savings.	

Study Name	Research Area	Study Type	Study Manager	Overall Evaluation Goal (Project Summary/Purpose)	Expected Outcomes	Current Notes
HEAT Loan Process Analysis	Resi	Impact	Mike Goldman	The goal of this study is to understand the extent to which the HEAT Loan influences customer decision-making, relative to the other factors that influence participation and to explore whether the availability of the HEAT Loan impacts contractor pricing.	TBD	
Low Income Multifamily Process and Impact Evaluation	Resi	Process/ Impact	Riley Hastings	Inventory of the methods currently used to estimate LIMF savings, explore opportunities for standardization where appropriate, assess whether all data required for evaluation are available, and develop PA-specific realization rates for appropriate measure	Statewide methodology for calculating savings and PA-specific realization rates for appropriate measures.	
Multifamily Process and Impact	Resi	Process/Impact	Kim Crossman	Assess and monitor the current state of the evolution of the Multifamily Program as a standalone or integrated offering with the commercial side and provide an ongoing examination of barriers, program operations, and customer experience.	Recommendations for improving program delivery	
Multifamily High Rise New Construction Baseline Assessment	Resi	Process	Mark Sevier	Provide a baseline study of new construction building practices in four-story and higher multifamily buildings	Provide a baseline study of new construction building practices in four-story and higher multifamily buildings that can be used to calculate savings	
Residential Customer Profile Study	Resi	Market Characterization	Mike Goldman	Compile utility and participant data on residential customers	Provide insights into levels of participation, energy consumption, and energy savings relative to consumption	
Trade Ally Panels	Resi	Market Evaluation	Melanie Coen	Explore if data quality, response rates, and data collection costs can be improved by a more systematic data collection approach across programs, markets, and evaluations	Development of trade ally/ market actor panels	
Residential Market Effects Study	Resi	Process	TBD	The overall goal of this study is to document and quantify the net effects over time of Massachusetts' programs to promote a technology to be determined by the PAs.	TBD	Next step involves reviewing program materials and interviewing program managers
Lighting Consumer Survey	Resi	Market Assessment	Matt Nelson	Understand consumer behavior with the changing lighting market	TBD	
NY Comparison Area Study	Resi	Impact	Matt Nelson	Study the change in the New York Area when lighting program support is discontinued.	Recommendations for lighting support for 2016-2018	

Study Name	Research Area	Study Type	Study Manager	Overall Evaluation Goal (Project Summary/Purpose)	Expected Outcomes	Current Notes
Codes & Standards Coordination/Planning	S/CC	Other	Bill Blake	Track implementation efforts to coordinate future codes & standards evaluation across research areas.	Evaluation plan for Codes & Standards work	
Market Effects Strategic Planning	S/CC	Other	Kim Crossman	Facilitate the development of a process to evaluate market effects and ensure methodological consistency across research areas/programs.	Clear plan and direction for market effects evaluation efforts; documentation of preferred methodology.	workshops completed
Net-To-Gross Top-Down NTG Methods	S/CC	Other	Monica Cohen	This study will assess and employ alternative techniques for using top-down modeling to measure net energy impacts.	The long term goal is to develop and apply a top-down method for MA, and to understand the strengths and limitations of that method.	
Net-To-Gross Electric C&I NTG	S/CC	Other	Kim Crossman	Quantify NTGR for electric C&I programs	Updated NTGR ratio for electric C&I programs using current methodology	
Non Energy Impacts - Low Income Health NEIs	S/CC	Other	Chris Chan	Quantify health related NEIs for LI participants	TBD	Needs review of scope
Non Energy Impacts - Using C&I NEIs for Project Recruitment	S/CC	Other	Marie Abdou	Use data from C&I Retrofit NEI study to inform marketing strategies for implementation	Data to inform implementation market strategies	
Non Energy Impacts - Quantifying C&I New Construction NEIs	S/CC	Other	Marie Abdou	Quantify participant non-energy impacts associated with commercial and industrial new construction projects	NEI values for C&I New Construction projects.	
Retrospective Electric DRIPE	S/CC	Other	Chris Chan	Assess the level and accuracy of DRIPE as set forth in the 2011 Avoided Energy Supply Cost Study.		
Efficient Neighborhoods+ (EN+) Initiative –Incremental Cost Assessment	S/CC	Other	Melanie Coen	Initiative Evaluation as it relates to cost	Assess the performance of the initiative against defined success indicators, and explore opportunities for improvement around cost.	

The above includes only studies that have reached at least the detailed scoping phase. There are other studies in the early scoping phase that aren't included.