

Memo

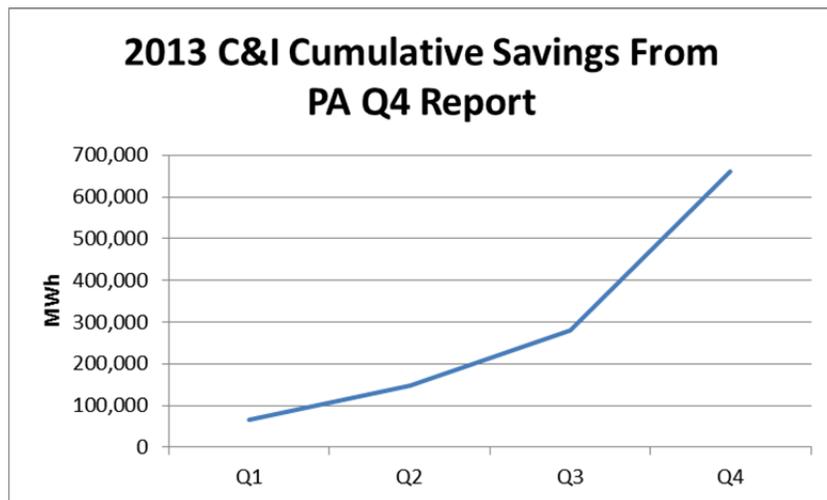
To: **MA Energy Efficiency Advisory Council**
CC: **Alex Pollard, Maggie McCarey**
From: **Jennifer Chiodo, Eric Belliveau**
Date: **1/13/15**
Subject: **Achieving Greater Savings Earlier in the Year**

Consistent with the Consultant Team 2014 Work Plan, this memo to the Massachusetts Energy Efficiency Advisory Council discusses the reasons for the MA Energy Efficiency Program Administrators (PAs) to address the fact that over 50% of the annual savings for commercial and industrial programs are routinely delivered in the fourth quarter¹ with over 30% completed in December and provides an overview of approaches that have been successful at achieving savings earlier in the year elsewhere.

WHY THE HOCKEY STICK MATTERS

In 2013 the PAs have achieved 57% of annual savings in Q4 and less than 6% in Q1, as shown in Figure 1². This end loading of projects is largely driven by the PAs and their goals. Many customers do not budget on a calendar year cycle; hospitals, program participants with the noteworthy participation and contributions to annual goals, typically budget in the fall for budget year beginning in the spring or summer.

Figure 1 - 2013 C&I Savings by Quarter



The variation in monthly completion rates over the course of the year is even more pronounced, as shown in

¹ The delivery of savings late in the year has been dubbed “the hockey stick” because of the shape of monthly cumulative savings graphs due to this phenomenon.

² The source of these data is the 2013 quarterly reports. http://ma-eeac.org/wordpress/wp-content/uploads/4th-Quarter-Program-Administrators-PA-Data_2013.xlsx

Figure 2 for electric and Figure 3 for gas.

Figure 2 - Monthly Savings Percentages Electric

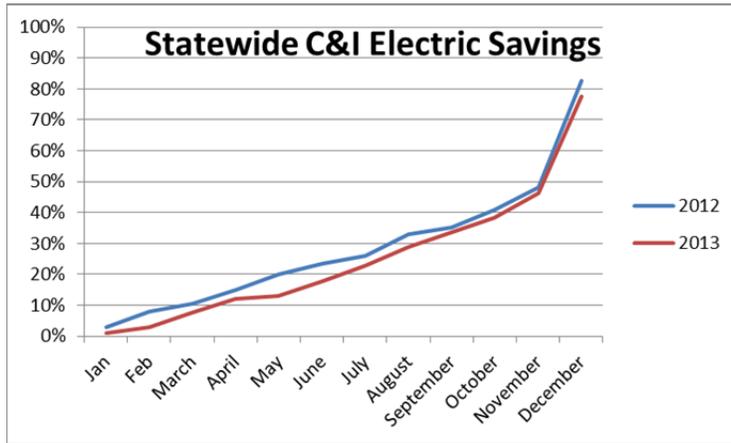
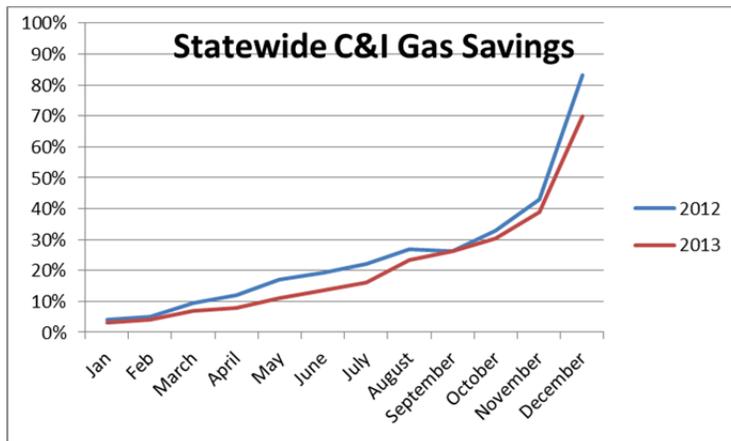


Figure 3 - Monthly Gas Savings Percentages



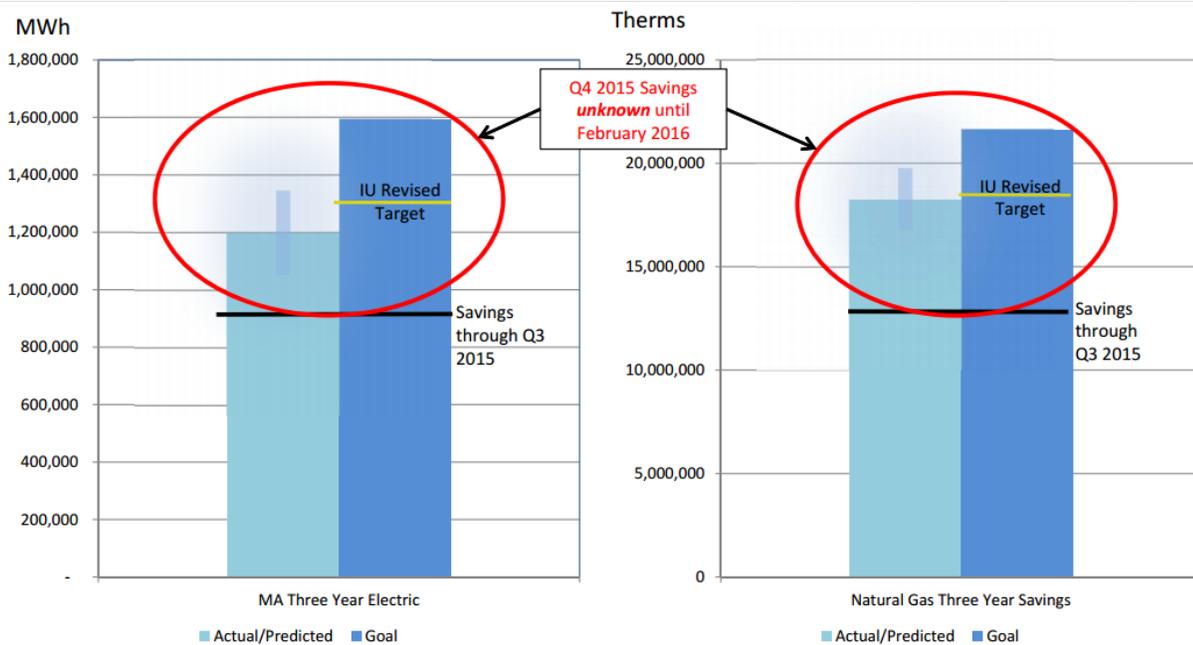
The move to three year goals has not mitigated the hockey stick effect. In fact it has further end loaded savings due to shortfalls in the first year, and anticipated in the second year, of the three year period. As shown in the Consultant Team’s July 2014 presentation to the Council³,

³ http://ma-eeac.org/wordpress/wp-content/uploads/EEAC_CT_Presentation-_CIRetrofit.pdf

Figure 4 demonstrates the cumulative effect of the Q4 concentration of project completions. The Council can expect that at least **32%** of the **total three year C&I goal** will be delivered in Q4 of 2015. While the PAs will provide projections, the actual achievement of the PAs relative to the goals in the Three Year Plan will be unknown until February 2016.

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Figure 4 - Cumulative Effect of Short Falls and Q4 Savings Bubble



Other issues associated with the end loading of project completions and savings claims may include:

- Savings are at risk in the event of a major winter storm. The PAs are utilities first and foremost. Should a major storm affect large portions of utility territory in Q4, PA staff will be diverted from energy efficiency to storm duty, contractors and customers will be focused on storm recovery and energy efficiency will languish. Because major weather events are increasingly common, it is important for the Council and PAs to consider this risk.
- PA staff is heavily focused on completing projects in the later part of the year. This can have benefits in that the concerted effort can build comradery and teamwork, but it can also potentially have downsides should individuals become overburdened. There is no direct evidence that issues such as lack of focus on new projects or new initiatives is currently an issue, but as goals increase and numbers of projects required to achieve the goals increase, such issues could arise.
- There is a potential for increased error rates due to work load. In 2013 the MA PAs completed over thirty-thousand projects in Q4, less than half that number in Q3 and only 10% of that number in Q1. As project completions increase ten-fold over the course of the year, staff burdens increase and the potential for errors and incomplete data also increases. When new resources are shifted into the energy efficiency project support pool to accomplish the year end push that also increases the opportunity for errors due to a learning curve. In order to meet 2015 goals, the project volume is expected to nearly double over the 2013 production levels meaning that the PAs could be trying to close over sixty-thousand projects in Q4 of 2015.

OPPORTUNITIES TO SMOOTH PROJECT COMPLETION RATES

While it is unlikely that the year-end push for project and savings will be eliminated, it is the Consultant Team's recommendation that the PAs undertake efforts to attempt to smooth project completion rates over the year to reduce the size of the year end push. In February of 2014, the EEAC Consultant Team engaged the PAs in a discussion of this issue at the Commercial Industrial Management Committee (CIMC) meeting. The following approaches to mitigating the hockey stick were discussed:

Develop negotiated incentive frameworks to drive earlier project completion

PAs are already negotiating incentives for custom projects. Part of that incentive structure could be higher incentives for projects that complete earlier in the year with reduced incentives for projects that are not advanced until Q4.

This can also be part of the MOU framework. Because MOUs often generate large projects, the PAs can work with customers to set targets and provide incentives for projects to complete over the course of the year instead of primarily in Q4.

Develop limited time offerings that drive earlier savings

In order to engage customers in achieving savings early the PAs could develop limited time offers and leverage events that are already taking place. For instance changes in season often drive customers to address HVAC systems – chiller upgrades typically occur in the winter/spring; heating equipment prices always increase in July. By tuning programs to the market, the PAs will be better positioned to advance efficiency in market activities that are occurring anyway and to drive additional upgrades into the market earlier in the year.

Provide additional benefits to drive early projects

Provide reduced cost engineering services (TA and/or RCx studies) for a limited time period. This could be for December/January to generate Q1 and Q2 project activity. Include a requirement that customers implement measures that meet a specified cost threshold within 4 months of study completion.

Provide staff incentives for continuous project enrollments and completions

Deploy more resources to sell projects across the year and provide incentives based on monthly goals for both enrollments and completions.

Use vendor incentives to smooth workflow

Vendor spiffs and performance incentives can be employed for upstream, retrofit, DI, etc. They can be staged and targeted to equipment and/or customer segments. These strategies are employed in sales in other industries and replicable in energy efficiency.

Deploy initiatives across the year

Deploy initiatives in Q3 and Q4 to deliver 1st and 2nd quarter results. In the current model planning occurs largely in Q1 and 2 to deliver 3rd and 4th quarter results.

NEXT STEPS

We acknowledge that changing an operating paradigm can be challenging, especially when under the pressure of the three year plan goals. However, failure to address the hockey stick continues to burden the PAs, the market and the implementation contractors with a huge effort in the fourth quarter of the year. In order to encourage the better operation of the market, enhance program performance and maintain the security of the saving stream, it is important to for the PAs to:

- Acknowledge that the hockey stick is an issue that should be addressed or clearly articulate why not.
- Assuming that the PAs agree that the issue needs to be addressed, the PAs should articulate at least two strategies that will be deployed **statewide** in 2015 to begin to mitigate the issue.
- The PAs should seek to continuously improve on efforts to mitigate the hockey stick and adopt new strategies as needed to smooth the completion of projects over the course of the year.