

Memo

To: **EEAC**
From: **Eric Belliveau and the EEAC Consultant Team**
Date: **2 July 2014**
Subject: **June Monthly Report**

The Consultant Team is pleased to provide this update to the Council on our recent activities.

SUMMARY OF TASKS COVERED IN EACH SECTION OF THE REPORT

EM&V

- Completing work with the PAs on EM&V-related portions of the 2013 Plan-Year Reports
- Making progress on 8-10 draft final reports in various stages of completion
- Launching two of the most ambitious new field studies ever initiated in Massachusetts
- Holding the second in a series of public EM&V webinars intended for Councilors and other parties
- Experiencing the first instance of a non-consensus application of EM&V results to savings claims since the current EM&V framework was established

PLANNING & ANALYSIS

- Reviewing and analyzing the 2014 Implementation Update including work on all three Deep Dives
- Providing technical support for the 2013 Plan-Year Reports and PA filings in DPU 14-05
- Conducting technical analysis and review on the nature and timing of bill impacts and the EERF reconciliation process

RESIDENTIAL AND LOW INCOME SECTORS

- Continuing the discussion and review of preliminary evaluation results and 2014 plans for the Efficient Neighborhoods+ (EN+) initiative with the PAs
- Preparing for the HES presentation to the Council in August
- Reviewing outstanding information requests and next steps for the multifamily Deeper Dive for the implementation update
- Developing the Implementation Update Lighting Deeper Dive topic for presentation to the Council and follow-up analysis

COMMERCIAL AND INDUSTRIAL

- Continuing work on Health Care Best Practices Study
- Supporting code compliance initiative
- Advancing retro-commissioning best practices
- Developing the Large C&I Retrofit Deeper Dive

MONITORING, COORDINATION, AND CROSS-CUTTING TASKS

- Assisting with content preparation for the Council's 2013 annual report to the Legislature
- Reviewing 2013 plan year reports
- Coordinating with DOER staff on various issues
- Speaking with PA representatives about data for the PAs' interim database
- Monitoring the work of the various working groups

TECHNICAL SERVICES

- Producing draft minutes for the June 10, 2014 EEAC meeting
- Continuing to work on upgrading the EEAC website using the EEAC approved site map
- Making progress towards completing the Annual Report to the DPU and Legislature

EVALUATION, MEASUREMENT & VERIFICATION

In May, the EM&V Advisory Group continued its full range of ongoing activities across the spectrum of EM&V planning, implementation, reporting, and policy issues. Highlights of May activities included: completing work with the PAs on EM&V-related portions of the 2013 Plan-Year Reports; moving toward finalization 8-10 draft final reports that are in various stages of completion; launching two of the most ambitious new field studies ever initiated in Massachusetts; and holding the second in a series of public EM&V webinars intended for Councilors and other parties. We must also highlight the fact that the 2013 Plan-Year Reports filed by the PAs include the first instance of a non-consensus application of EM&V results to savings claims since the current EM&V framework was established in 2009. Specifically, ex-post assumptions for residential furnace baseline efficiency that we believe are more inefficient than the EM&V evidence justifies, which leads to probable overstatement of residential gas savings claims for 2013.

Oversee EM&V Study Implementation

The Group advanced toward completion the roughly 40 studies identified in the 2013-2014 EM&V plan that are currently in the implementation stage. A few examples include the following: HES Program Delivery, HEAT Loan, LED Market Effects, Top-Down NTG, and Market Effects Framework studies. This is a continuous process and a work area for the Group.

Oversee EM&V Reporting

The Group worked with the PAs to finalize 11 EM&V reports that were included in the 2013 Plan-Year filings. The group also worked to move toward finalization some 8-10 draft reports that are in various stages of completion. We note that the elapsed time between the receipt of first drafts of EM&V reports and the finalization of these reports appears to be increasing of late. We believe this increase in report processing time reflects a number of trends, including increased stakeholder participation in report review and intensified efforts by both the EEAC consultants and the PAs to ensure that final reports are contributing to Council-related processes such as the Deep Dives. While the increase in report processing time results in delays before reports are publicly distributable, on balance we believe this is a favorable trend, as the increased stakeholder input is helping to make reports more actionable.

Oversee EM&V Planning

While the Group was involved in numerous EM&V planning activities in June, we highlight the final planning efforts for two important field studies that are both expected to be released within a few weeks of this report: Phase 2 of the C&I Existing Buildings study, and Phase 2 of the MiniSplit study.

C&I Existing Buildings Study, Phase 2. Phase 1 of this study consisted of a general population survey of C&I customers, intended both to help support a number of other C&I studies in-progress and to lay the groundwork for Phase 2. Phase 2, which is expected to run through late 2015, consists of on-site visits to 800 C&I buildings to characterize equipment and building characteristics and quantify patterns in recent equipment purchases. With a

total budget in excess of \$3.5 million, this will be the single most ambitious study ever undertaken in Massachusetts. We anticipate that it will aid in developing the next three-year plan, updating baseline assumptions, assessing market effects, formulating policies regarding the C&I sector, and revising C&I programming approaches. An interim report is expected in February of 2015, and a final report in late 2015.

MiniSplit Study, Phase 2. Phase 1 of this study consisted of a survey of residential MiniSplit participants, intended both to characterize the circumstances under which rebated MiniSplits are being purchased and used and to lay the groundwork for Phase 2. Phase 2 is an extensive field study of the performance and energy savings from rebated MiniSplit units, utilizing on-site visits, end-use metering, and billing analysis. MiniSplits are rapidly increasing in popularity and in their contribution to residential program savings, yet there are many questions nationwide regarding how they are being used and performing. We therefore see this as a particularly important study.

Council and Stakeholder Engagement

The Group collaborated with the PAs to hold the second in a series of public EM&V webinars on the results of individual studies. The webinar, presented by the lead EM&V contractors, was held on June 5 and focused on the results of the Residential New Construction Net-to-Gross, Residential Lighting HOU, and Low-Income Lighting HOU studies.

EM&V Policy Issues

The Group worked with the PAs to finalize the EM&V-related portions of the Plan-Year Reports, including EM&V highlights, summaries of key studies, and the 2013 Plan-Year version of the TRM. While the PAs and the EEAC consultants reached consensus on the vast majority of issues pertaining to EM&V-related ex-post savings claims reflected in the Plan-Year Reports, a key exception is the baseline assumption claimed for residential furnaces. The 78% baseline assumption reported by the PAs in the Plan-Year version of the TRM is based on the current Federal standard. However, we believe EM&V evidence strongly suggests the market has advanced beyond the minimum Federal requirements, making 78% an unrealistically inefficient baseline assumption. We therefore conclude that there is strong potential for ex-post residential gas savings claims for 2013 to be over-stated by approximately 25%. We note that this is the first instance of a non-consensus application of EM&V results to ex-post savings claims since the current EM&V framework was established in 2009. We anticipate providing further information to the Council on this issue in connection with our reporting regarding the 2013 Plan-Year report filings.

The Group also provided EM&V-focused input into the Deeper Dive, Implementation Update, and Statewide Database processes, as well as the EM&V Forum's reporting templates and net-to-gross protocols projects. In several cases, we have shaped the timing and content of final and interim EM&V reports around the imperative of providing timely input to the Deeper Dive process.

Lastly, the Group worked with the C&I team and the PAs to refine plans for the EM&V study intended to provide overall analytic support for the newly launched Code Compliance Enhancement Initiative (CCEI). The shape of this study is interwoven with complex policy issues that are yet to be resolved, such as the manner and timing by which the PAs will claim savings from CCEI. As such, finalization of the study is requiring close coordination between groups.

PLANNING AND ANALYSIS

In June, the EEAC Consultant Planning and Analysis Group focused on the primary tasks described below to support and push for the effective implementation of the key components of the 2013-2015 Three-Year Plan. This included reviewing and analyzing the 2014 Implementation Update including work in June on all three of the Deeper Dives, providing technical support for DPU proceedings, and conducting technical analysis and review.

Participate in EEAC Meetings; Brief and Support the Council

The Group prepared for, attended, and provided technical support during the EEAC meeting on June 10, and for the Executive Committee meeting on June 25. The Group coordinated with DOER as chair of the Council on a weekly basis, and briefed individual Councilors in advance of the EEAC meeting and during the month,

substantive issues and outcomes from which are summarized in the task descriptions below. EEAC Meeting and Council support is on-going and is a regular monthly task area.

Track, Analyze, and Report on the Implementation Update and “Deeper Dives”

The review, analysis, and assessment of the 2014 Implementation Update (originally provided by the PAs in March) were major tasks of the Consultant Team in June. The Implementation Update is a combination of looking back at past performance (2013) and looking forward at PA projections of future performance (2014-2015), which will support the Council in reviewing progress towards achieving the three-year goals of the 2013-2015 Plan. In June, the major focus of the Consultant Team was on the three Deeper Dives: Residential Lighting, C&I Retrofit, and Multifamily. The Deeper Dives are based on additional PA narratives and PA-provided data focused on the most significant drivers of changes from the original Plan values.

In early June, the focus was on following up on the Consultant data request memo (distributed by the Consultants on April 25) to identify and receive from the PAs the data necessary to complete the three Deeper Dive analyses. The data are also intended to inform the focused analysis work for the first Deep Dive, Residential Lighting. We completed the Residential Lighting analysis in early June, distributed a draft of our report to the EEAC, and presented our findings (based on the data available at that point in time) to the EEAC on June 10. Some additional Deeper Dive analysis on Residential Lighting will continue into the late summer. This analysis will be informed by the data provided in the 2013 Plan-Year Reports (filed by the PAs on June 20) and other data from the PAs.

As discussed at the June 10 EEAC meeting, the PAs have expressed some different views than the Consultants about the necessity and appropriateness of some of the Deeper Dive data requested. The PAs have declined to provide some of the requested data, which has limited the ability of the Consultants to continue and complete the Deeper Dive analyses. These remaining differences over data have affected the C&I Retrofit Deeper Dive to the largest extent. We prepared and provided a status update on the C&I Retrofit data to the Executive Committee on June 22.

The C&I Advisory Group conducted individual interviews with each of the PAs in an effort to better understand the Large C&I Retrofit pipeline and the potential for the PAs to attain the reduced savings levels proposed in the Implementation Update. Analysis was conducted based on the information provided and it is clear to the Group that it is unlikely that the PAs will achieve the 3 year plan goals for C&I Large Retrofit. The Group also worked closely with the PAs on the PA presentation, providing guidance on the focus and content necessary to help build Council and Consultant confidence that the PAs are on track to meet the goal. Both perspectives will be presented to the Council in July.

The Deeper Dive work will continue to be a strong focus in July and in future months, as the results of the deeper dives and other related analysis are to be presented to the Council in July and August.

Support the Council on Regulatory Issues and DPU Proceedings

The Group provided technical support for DPU proceedings and regulatory processes. In early June, we reviewed the proposed technical tables (one year and multiple year formats) drafted by the PAs for the 2013 Plan-Year Reports, which were filed by the PAs on June 20. The Group also conducted some analysis of the PA filings in DPU 14-05 regarding the 2013 avoided cost study (AESC), the effects of the new AESC values on 2013-2015 Plan benefits, and the performance incentive model. Future work on other regulatory issues and DPU proceedings (e.g., DPU 14-05 or other proceedings) will depend on the nature and timing of DPU activities and actions in the future.

Provide Technical Analysis

The Group followed up on inquiries from several councilors about the nature and timing of bill impacts and the EERF reconciliation process. As part of the PAG meetings in May, and again at the PAG meeting on June 24, we discussed with the PAs the value of and process for updating the “typical customer” summaries of EE bill impacts and how different packages of EE measures offset the bill impacts to significant degrees. This information will be useful to have available as customer energy bills increase during 2014. The “typical customer” summaries

prepared in the past were much more accessible and understandable than the more detailed DPU bill impact documents. Work will continue on this in July.

The Group monitored PA work on the development and implementation of an interim reporting system for data and data management to ensure reliable, internally-consistent, and more accessible data in the interim while the statewide database is being developed. We reviewed the current working draft of the interim reporting system, called “Mass Save Data” (rather than “MAREE”). We have not received and therefore have not reviewed any PA-proposed system requirements.

The Group followed up on Birud Jhaveri’s (DOER) presentation on winter energy issues at the April 8 EEAC meeting. We explored some initial ideas about how the EE programs could potentially help to mitigate the effects and some of the causes of the winter energy issues. These ideas included accelerating, reallocating, refocusing, and/or geo-targeting some of the EE programs.

RESIDENTIAL AND LOW INCOME SECTORS

In June, the Residential Advisory Group worked on the tasks described below. The focus for June included continued discussion on the evaluation results and 2014 plans for the Efficient Neighborhoods+ (EN+) initiative, work on the multifamily and lighting Deeper Dives for the implementation update, as well as preparing for the HES presentation to the Council in August.

Residential Whole House and Low Income Programs

The Residential Advisory Group continued to discuss the preliminary evaluation results and 2014 plans for the Efficient Neighborhoods+ (EN+) initiative with the PAs. We and other stakeholders submitted and discussed a set of questions with the HES Working Group on June 5 and posed questions and comments to evaluators on the draft evaluation. We plan to review the final evaluation in July and confirm 2014 plans with the PAs.

On June 23, the Residential Advisory Group met with PA representatives to review the consultants’ outstanding information requests and next steps for the multifamily Deeper Dive for the implementation update. In July we will continue our work to outline the presentation, coordinate with the PAs, and secure and analyze the requested multifamily data. The results of this work will be presented to the Council on August 12.

Our June work also included preparing for the HES presentation to the Council in August. Our team prepared an outline for the presentation and reviewed the draft with the Residential Management Committee at its June 25 meeting. In July, the Group will be gathering and analyzing the information necessary for the presentation while coordinating with the PAs to confirm the availability and accuracy of information, keep them apprised of the information we are intending to present, and discuss opportunities for collaboration.

Residential Products Program

The continued focus for June was developing the implementation update lighting Deeper Dive topic for presentation to the Council and follow-up analysis. The follow-up analysis leverages the recently released PA Annual Report data to allow a more accurate assessment of PA lighting program activity. The analysis, combined with additional 2014 program planning data expected from the PAs, will inform the completion of the lighting implementation update planned for early August. The Residential Group provided follow-up comments to the EM&V Consultants to support their review of NEEP’s Lighting Market Lift draft report. The Residential Group had provided comments to NEEP on an earlier draft of this report at NEEP’s request. Other areas of activity included continued engagement on the delayed federal furnace standard, the close-out of TopTen USA and its impact on the PAs’ products program, and responses to Councilor questions on lighting market lift and the PAs’ heat pump water heater (HPWH) offering.

Innovative Strategies

Members of the Residential Advisory Group met by phone with a representative of Opower to learn about a new product offering that uses behavioral techniques to generate additional savings from communicating thermostats. The Group will continue to explore the potential of such an approach and intends to further discuss the opportunity with the PAs.

COMMERCIAL AND INDUSTRIAL

In June, the C&I Advisory Group worked on the tasks described below to support the PAs in their work to meet the 2013-2015 Three-Year Plan C&I goals. These tasks included gathering information about Large C&I Retrofit, continued advancement of segmentation including garnering support at the CIMC for undertaking segmentation work in that forum, and advancing research on health care best practices.

Planned work for July will focus largely on delivering the large C&I Retrofit implementation update to the Council, advancing work on adoption of best practices, developing a specific process for targeting a selected market segment with the CIMC and interviews for the health care best practice research.

Comprehensive Segment Strategies

A key objective in the Consultant Team 2014 Workplan is to engage with the PAs on the development of formal comprehensive segment strategies that can provide value to customers and the PAs. This work is intended to support the PAs as they seek to improve performance in C&I Retrofit. In June, we worked with the CIMC to further advance segmentation as a recognized area of future work by the CIMC.

We continued work on the Health Care Best Practices study, including holding three meetings with the PA team, drafting the criteria for best practices, developing survey instruments and interviewing the PAs regarding the Massachusetts programs.

Coordination and Partnerships

We continued to monitor activity and progress on the code compliance initiative and related EM&V work. The contractor (CSG) is currently working to develop curriculums and set-up training sessions that will begin in July. In addition, the evaluation contractor (NMR) has developed a draft research plan, which the Consultant Team is reviewing and provided comments on in early June.

We discussed the Health Care Best Practice study with Health Care Without Harm, an international coalition that promotes the health of people and the environment, who offered to assist in obtaining input on market barriers as well as identifying potential contacts for the interviews of market actors in the Massachusetts health care sector.

Innovative Strategies

In June the Group continued to work on advancing retro-commissioning best practices. We drafted a proposed adoption regime and presented it at the CIMC. The CIMC agreed to consider the proposal and the consultants continue to work with the PAs to identify potential test projects that can use elements of the recommended programmatic approach.

Achieve Greater Savings Earlier in the Year

The Group, in conducting PA interviews as part of the Large C&I Retrofit deeper dive, heard several PAs reference the “hockey stick” (i.e., the historic project completion profile with most savings accruing in December) and their efforts to increase the constancy of project closures and savings claims over the course of the year. This is a positive indicator that the PAs are recognizing the limitations associated with this pattern and beginning to take action to change the project completion profiles.

MONITORING, COORDINATION, AND CROSS-CUTTING TASKS

Monitor and Advise Current Programs

The Residential Advisory Group finalized and presented a residential overview presentation to the Council on June 10. Our group is also assisting with content preparation for the Council’s 2013 annual report to the Legislature. We also continue to monitor the work of the various residential working groups.

Coordinate with the Council on Programs and EM&V Results

The Residential Advisory Group continued its coordination with DOER staff on various residential issues,

particularly Residential Conservation Services guidelines. In June, the Group participated in the June 24 RCS stakeholder meeting. In July we plan to provide continuing analytical assistance to DOER to support the guidelines revision.

Review and Assess PA Reports and Data

The Team reviewed the 2014 1st Quarter report of the PAs, the PA presentation on the 1st Quarter report, and the June 2014 monthly dashboard. During the PAG meetings, we have discussed how and when to include PA forecasts of year-end and three-year program performance in the quarterly reports and potentially in the monthly dashboards. The Consultants have continued to recommend including the forward-looking PA forecasts of performance in PA reporting beginning in the second quarter.

In late June, the Consultants began our review of the 2013 Plan-Year Reports filed by the PAs on June 20, including a high-level comparison to the 2013 preliminary year-end results reviewed with the EEAC in February. We discussed the Plan-Year Reports and table/data formats with the PAs during the PAG meeting on June 24. We requested and received from the PAs the statewide rolled-up data tables for the Plan-Year Reports, and continued our analysis, a summary of which will be presented to the EEAC at the July 8 meeting.

The Team reviewed and commented on the Technical Reference Manual provided with the 2013 Plan-Year Reports on June 20, as it was being developed and compiled by the PAs.

Support the Statewide Database

Members of the Residential Advisory Group spoke with PA representatives on June 26 about the HES-specific data for the PAs' interim database. The Consultants suggested it would be beneficial to include more detailed measure-level and granular cost information. The PAs and Consultants agreed to continue working together as this section of the database progresses. The Deeper Dive efforts noted elsewhere are also identifying needed data and the scope and level of detail necessary to support understanding of program results.

Prepare for the 2016-2018 Plan

Explored how best to address several forward-looking strategic planning topics for the upcoming 2016-2018 Plan, including how some of the insights gained as part of the Implementation Update and deeper dives could inform the next Plan, and also how best to consider and incorporate stakeholder input in the next Plan. We expect to continue discussions with the PAs and EEAC in July and future months.

TECHNICAL SERVICES

Produce Minutes from all EEAC Meetings

The Consultant Team is charged with producing draft and final meeting minutes for each EEAC monthly meeting. Consultants produced draft minutes for the June 10, 2014 EEAC meeting and forwarded them to the EEAC Chair on May 28, 2014. The EEAC Chair will review the minutes and distribute them directly to the EEAC prior to the next EEAC meeting to be held on July 8, 2014. The EEAC approved the May meeting minutes during their June meeting. These minutes have been posted on the EEAC website.

Develop EEAC Logo and EEAC Website Upgrade

Based on approval for the logo from EEAC, Cahoots Design produced EEAC and EEAC Consultant Team letterhead, memo, report and PowerPoint templates. These templates are complete and are now in use.

Cahoots Design continues to work on upgrading the EEAC website using the EEAC approved site map. The newly upgraded website is expected to launch by the end of July 2014.

Revise the Consultant Team Monthly Report

This task has been completed. The new format is being utilized for all Consultant Team Monthly Reports as of April 2014.

Produce the Annual Report to the DPU and Legislature

The Consultant Team continued to prepare material for inclusion in the EEAC's annual report to the legislature. This included working with PA representatives on developing case studies and gathering information on topic areas to highlight in the report. The Team also coordinated with Cahoots and DOER on the layout and structure of the report. We intend to have a draft report for internal review completed by the mid-July, subject to receiving complete case study material from the PAs.