

# Memo

To: **EEAC**  
From: **Eric Belliveau and the EEAC Consultant Team**  
Date: **6 June 2014**  
Subject: **May Monthly Report**

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

## ITEMS FOR COUNCIL CONSIDERATION

Aside from the material to be presented at the May Council Meeting, there are no additional items that we feel need Council attention at this time.

## EVALUATION, MEASUREMENT & VERIFICATION

In May, the EM&V Advisory Group continued its focus on working with the PAs to implement the overall 2013-2014 EM&V plan submitted to the Council last October. The bulk of the studies listed in the 2013-2014 EM&V plan have now cleared the detailed planning stage and the EM&V Advisory Group is increasingly focused on overseeing study implementation. In addition, many of the studies begun last fall have started to reach fruition, so the Group has recently received a surge of interim and final reports.

### 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: the HES Program Delivery, HEAT Loan, Low-Income HOU, Minisplit, C&I Existing Buildings, Efficient Neighborhoods, 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 received, commented on, and processed with the PAs and evaluation contractors the following draft and final reports:

- ▶ **Draft reports:** C&I Customer Profile Report, Existing Buildings Survey Report, Existing Buildings Market Sector Profiles, SBDI Process Evaluation Interim Report, C&I Boiler Market Characterization Report, Low-Income Hours of Operation Report, Efficient Neighborhoods Report, Top-Down Net-to-Gross Study, Literature Review Memo
- ▶ **Final reports:** HVAC Contractor Branding Report, Regional Lighting Hours of Operation Report, Minisplit Participant Survey Report, Residential Lighting Shelf Study Report

### Oversee EM&V Planning

The Group moved several studies currently in the planning stage toward implementation, including the following: Multi-Family New Construction Baseline study; Phase 2 of the Minisplit study, which will focus on field monitoring of participating homes; and Phase 2 of the C&I Existing Buildings study, which will focus on on-site visits to

roughly 800 buildings over the 2014-2015 period.

The PAs and the EEAC consultants are dedicating increasing attention to systematically coordinating related EM&V efforts between studies and across research areas. A recent example includes efforts to collect data from HVAC market actors such as contractors and distributors. A number of different studies in all three research areas (residential, non-residential, and cross-cutting) are seeking to collect data from these actors. We have therefore stepped up efforts to coordinate all of the relevant studies in order to enhance efficiency and guard against over-contacting.

## **Council and Stakeholder Engagement**

The Group collaborated with the PAs to develop the second in a series of public EM&V webinars on the results of individual studies to be presented by the lead EM&V contractors. The webinar, scheduled for June 5, is to focus on the results of the Residential New Construction Net-to-Gross, Residential Lighting HOU, and Low-Income Lighting HOU studies. The Group also briefed individual Councilors and stakeholders on completed and planned research into minisplits.

## **EM&V Policy Issues**

The Group wrapped up work on 2013 Plan-Year Report version of the TRM. A key aspect of this process was attempting to reach consensus with the PAs on the specific application of the results from several impact evaluations to this update of the TRM. While consensus was reached on the vast majority of issues, there was one issue on which the Group was unable to reach agreement with the PAs: the appropriate ex-post assumption for baseline efficiency for residential furnaces. As a result, the Group believes that the savings that the PAs will be reporting from residential furnaces in 2013 could be overestimated. We plan to provide further information to the Council on this issue in connection with the 2013 Plan-Year report filings by the PAs.

The Group also provided EM&V-focused input into the Deep Dive, Implementation Update, and Statewide Database processes, as well as the EM&V Forum's reporting templates and net-to-gross protocols projects.

## **PLANNING AND ANALYSIS**

In May, 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 the three deep dives, providing technical support for DPU proceedings, and conducting technical analysis and review.

### **Participate in EEAC Meetings; Brief and Support the Council**

Prepared for, attended, and provided technical support during the EEAC meeting on May 13, and for the Executive Committee meeting on May 28. Briefed individual Councilors in advance of the EEAC meeting and during the month (the substantive issues and outcomes are summarized in the task descriptions below). Coordinated with DOER as chair of the Council on a weekly basis and with various Councilors periodically. Updated the working list of topics for future EEAC meetings based on the list of "scheduled topics" reviewed at the February meeting, the Implementation Update tasks and deep dives (discussed below), and other planned or expected activities. EEAC Meeting and Council support is on-going and is a regular monthly task area.

### **Track, Analyze, and Report on the Implementation Update and Deep Dives**

The review, analysis, and assessment of the 2014 Implementation Update (originally provided by the PAs in March) was a major task of the Consultant Team in May. 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 May the major focus of the Consultant Team was on the three deeper dives, following up on the Consultant data request memo distributed on April 25 to identify the data necessary to complete the deep dive analysis, and the focused work on the first deep dive to be presented to the EEAC on June 10. The three deep dives are Residential Lighting, C&I Large Retrofit, and Multifamily.

We assisted in drafting the EEAC Positions on the Implementation Update, including on the three deep dives, which was approved the EEAC on May 13. We also coordinated with the PAs on a joint status update to the Council, provided in writing on May 22.

Coordinating with the PAs, we followed up on the April 25 data request memo to clarify and attempt to secure the data needed for the three deep dives, which will be conducted jointly with the PAs. The deep dives are to be based on additional narratives and PA-provided data focused on the most significant drivers of changes from the original Plan values. Much of the work in May consisted of addressing and attempting to resolve differing views between the PAs and Consultants over the data for the deeper dives.

We discussed the deep dives and the Consultant data requests at length during the Planning and Analysis Group (PAG) meeting on May 16, following the discussion at the May 13 EEAC meeting. To date, the PAs have provided some of the data needed for the deep dives (particularly for Residential Lighting), and an outline of the Residential Lighting presentation to the Council was developed jointly and collaboratively in late May. However, the PAs have some different views than the Consultants about the necessity and appropriateness of some of the remaining data requested, and the PAs have declined to provide some of the requested data, which has limited the ability of the Consultants to continue the deep dive analysis. These remaining differences over data current affect the C&I Large Retrofit deep dive to the largest extent. We will provide a written update to the EEAC in early June.

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

### **Support the Council on Regulatory Issues and DPU Proceedings**

Provided technical support for DPU proceedings and regulatory processes. Reviewed the proposed technical tables (one year and multiple year formats) drafted by the PAs for the 2013 Plan-Year reports, which are now due to be filed by the PAs on June 20. Discussed the development of the 2013 Plan-Year Reports with the PAs during the PAG meeting on May 16. In June we will be reviewing the 2013 Plan-Year Reports. Also reviewed the technical analysis and proposal regarding the calculation of the avoided cost of compliance with the Global Warming Solutions Act (GWSA), which was filed in DPU 14-86 by DOER and DEP on May 16, to briefly assess the potential impacts on the cost-effectiveness of future EE programs, if the avoided cost of compliance with GWSA is adopted by the DPU.

Reviewed the PA reply comments filed on May 23 in DPU 14-05 regarding the 2013 avoided cost study (AESC) and the performance incentive model, which replied to the comments of LEAN, the AG, DOER, ENE, and LEAN filed on March 29. The specification of the EE performance incentive model, the consistency of performance incentive amounts, and the future role and existence of performance incentive metrics are issues in this DPU proceeding.

Future work on other regulatory issues and DPU proceedings (e.g., DPU 14-05) will depend on the nature and timing of DPU activities and actions in the future.

### **Provide Technical Analysis**

Answered inquiries from several councilors about the nature and timing of bill impacts. As part of the PAG meetings in April and May, 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, which 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 June.

Monitored PA work on the development and implementation of the 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. The interim reporting system is now called “Mass Save Data” (rather than “MAREE”). The PAs demonstrated the current draft of the system to the Consultant Team on May 9, and we reviewed and commented on the reporting system during the demonstration. Also, we reviewed a draft version of Mass Save Data using a link that the PAs provided. We have not received and therefore have not reviewed any

PA-proposed system requirements.

Following up on Birud Jhaveri's (DOER) presentation on winter energy issues at the April 8 EEAC meeting, we developed some initial ideas about how the EE programs potentially could help to mitigate the effects and possibly partly reduce some of the causes of the winter energy issues, by accelerating, reallocating, refocusing, and/or geo-targeting some of the EE programs. Subject to EEAC direction, in June we hope to share these ideas with the Council.

## RESIDENTIAL AND LOW INCOME SECTORS

### Residential Whole House and Low Income Programs

The Residential Advisory Group reviewed the draft evaluation report for the Efficient Neighborhoods+ (EN+) initiative. We participated in the Residential Barriers Working Group meeting on May 14 at which the EM&V Group presented the preliminary results to stakeholders. While the draft evaluation indicates a lift in participation and savings in participating communities, the effect of the various outreach strategies, marketing messages, and enhanced incentives appears not to be well understood. The Consultant Team has posed additional discussion questions for the HES Working Group, which meets June 5 to continue the EN+ discussion, and will be working to support a critical assessment of 2014 plans for the initiative.

In May, the Residential Advisory Group worked on the multifamily Deeper Dive for the implementation update. This work has included discussions with the PAs to clarify the data requests presented in April and follow up work to secure that information. On May 28, the Consultant Team met with the Residential Management Committee to discuss a subset of the Deeper Dive work. This work related to developing a methodology for conducting a high level assessment of the savings potential for allowing the PAs to provide energy efficiency services to oil (and other delivered fuels) heated multifamily buildings. In June and July we will continue our work to secure and analyze the requested multifamily data. The results of this work will be presented to the Council in August.

### Residential Products Program

The primary focus for May was developing the implementation update lighting deeper dive topic for presentation to the Council in June. The Residential Group provided analysis and data to the EM&V Advisory Group to support their engagement with the PAs to update the gas furnace baseline. The delay in the federal standard for this key gas HVAC product required that the baseline be revised. We examined the impact of upcoming federal standard changes (June 1, 2104) on the PAs' current offering and investigated the possibly large opportunity for ENERGY STAR and even more efficient heat pump dryers. We anticipate discussion on these matters with the PAs in coming months.

### Innovative Strategies

There is no specific work to report for this work area in May.

## COMMERCIAL AND INDUSTRIAL

In May, the C&I Advisory Group worked on the tasks described below to enable to PAs to advance towards meeting the 2013-2015 Three-Year Plan C&I goals. These tasks included gathering information about Large C&I Retrofit, continued advancement of segmentation including a presentation to the Council, and advancing research on health care best practices.

Planned work for June will focus largely on segmentation, Large C&I Retrofit research and health care best practice research.

### Deeper Savings in All Programs

While the Consultant Team issued a memo defining depth of savings and outlining the data needed to understand depth of savings in (April 25), no formal or written response has been received from the PAs.

### 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 May, we presented information on best practices, the current state of segmentation in MA and the opportunities presented by advancing segmentation to the Council. Segmentation was discussed in both May CIMC meetings with some agreement among the PAs to undertake a forward looking segmentation process.

In May, we held a kick-off of the Health Care Best Practices study, prepared a work plan and schedule for the project and met with the PA lead consultant on the effort, Naomi Merriman. The Consultant Team conducted market research on the MA health care market and began the literature review component of the study.

## **Coordination and Partnerships**

The C&I Advisory Group engaged with the DOER, the PAs, and their implementation contractor (CSG) to develop a strategy for applying to the U.S. DOE for grant funding to supplement the residential portion of the codes and standards initiative budget already approved. It was agreed to jointly submit a proposal to the DOE on behalf of both Massachusetts and Rhode Island, which are both pursuing similar code compliance efforts on a similar schedule, and with the same contractor (CSG). CSG took the lead in writing the proposal, which was submitted to the DOE with support from DOER and the PAs on May 21. If successful, this additional funding would benefit Massachusetts by: 1) reducing ratepayer costs currently allocated to the code compliance initiative; 2) provide funds to expand the scope of efforts, including development of a new “E-learning” on-line training tool and expanded curriculum and trainings; 3) enable more detailed and timely EM&V studies related to baseline and ultimately achieved compliance levels; and 4) provide additional visibility and impacts outside Massachusetts through national level promotion of Massachusetts efforts. This latter benefit is significant because Massachusetts and Rhode Island are pursuing a strategy that no other state has really done, and will likely have results prior to other states. As a result, we expect significant market transformation benefits could occur from the national exposure that DOE will bring to our efforts that can be leveraged by other states.

In addition to the DOE proposal, 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 will be providing comments on in early June.

We also engaged with Health Care Without Harm, an international coalition that promotes the health of people and the environment, to obtain information on their efforts to advance energy efficiency in health care in Massachusetts and globally.

## **Innovative Strategies**

The Group presented the findings from the retro-commissioning best practice study to the C&I Management Committee and issued the final report. We are working with the CIMC as it continues to discuss ways to advance the practices recommended in the study.

## **Achieve Greater Savings Earlier in the Year**

The Group conducted some preliminary analysis of the remaining Large C&I Retrofit savings and the historic project completion profile (the so-called “hockey stick”). The analysis suggested it is likely that, unless the pattern changes, over 25% of the three year goal would be completed in the fourth quarter of the third year and that 20% would be completed in the final month of the third year. We continue to collect data to improve this analysis and will be sharing these findings and obtaining PA input on them in June.

## **MONITORING, COORDINATION, AND CROSS-CUTTING TASKS**

### **Monitor and Advise Current Programs**

The Residential Advisory Group continued to refine its outline and began content preparations for the residential overview presentation to the Council on June 10. The Consultant Team reviewed the revised draft with the PAs at the May 28 RMC meeting. During May, we also met individually with several RMC members to increase

awareness of their current work efforts and to continue relationship building. Additionally, we 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, including home energy scoring and Residential Conservation Services guidelines. In June, the Group will be working with the EM&V Group to identify information available to support its HES and multifamily analysis work.

### **Review and Assess PA Reports and Data**

Reviewed the 2014 1<sup>st</sup> Quarter report of the PAs. During the PAG meetings in April and May, discussed how best 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 recommended including the PA forecasts of performance in PA reporting begin in the second quarter.

### **Support the Statewide Database**

The Consultant Team was invited to participate in a demonstration on May 9 of Mass Data, the PAs' interim database. We provided input on the usability and contents of the tool and anticipate providing further input as the PAs launch it and make subsequent enhancements (e.g., HES-specific data).

### **Prepare for the 2016-2018 Plan**

Following up on the April 30 strategic planning meeting with the PAs, discussed how best to address 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 deep dives could inform the next Plan. We expect to continue discussions with the PAs and EEAC in June and future months.

## **TECHNICAL SERVICES**

### **Inventory and Organize Recurring Technical Services**

The Technical Services Advisory Group produced an inventory of all ongoing technical services tasks. The Group submitted the inventory to the Chair of the EEAC on April 30 to ensure that no tasks were omitted. Once the inventory is approved, a master schedule will be put in place.

### **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 May 13, 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 June 10, 2014. The EEAC approved April meeting minutes during their May meeting. These minutes have been posted on the EEAC website.

### **Develop EEAC Logo and EEAC Website Upgrade**

Based on approval from EEAC for the logo, Cahoots Design is producing EEAC and EEAC Consultant Team letterhead, memo, report and PowerPoint templates. The schedule calls for these templates to be available in early June.

Cahoots is 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 began preparing material for inclusion in the EEAC's annual report to the legislature. This included working with PA representatives on developing case studies and information on topic areas to highlight in the report. We intend to have a draft report for internal review completed by the end of June, subject to receiving complete case study material from the PAs.