

# Memo

To: **EEAC**  
From: **Eric Belliveau and the EEAC Consultant Team**  
Date: **March 10, 2017**  
Subject: **December-February Consultant Team Summary Report**

The Consultant Team is pleased to provide a summary to the Council of our activities.

This report serves as a summary of key activities, accomplishments, and deliverables completed by the Consultant Team during the December-February 2017 timeframe.

## SUMMARY OF MAIN TASKS COVERED IN EACH SECTION OF THE REPORT

### EM&V

- Advancing 55 studies in the implementation or reporting stage and 15 new studies in the planning stage
- Engaging in the SEP update process
- Developing a Demand Response EM&V plan
- Planning 10 additional individual studies
- Recruiting new cross-cutting EM&V contractor teams.
- Supporting policy issues including: quarterly reports, the Demand Reduction Committee, the Informal Collaborative Discussion group, and the pending new RCS regulations

### PLANNING & ANALYSIS

- Reviewed and analyzed information and data in the PAs' 2013-2015 Term Reports; completed a storyboard and presentation of findings and results
- Reviewing and analyzing PAs' Q4 report and associated data; developed a presentation of results
- Participated in the Strategic Planning Group to plan for 2019-2021
- Supported the Demand Reduction Subcommittee

### RESIDENTIAL AND LOW INCOME

- Reviewing and analyzing residential and low income information and data in the PAs' 2013-2015 Term Reports
- Continuing to assess reduced claimable residential lighting savings
- Reviewing and analyzing PAs' Q4 report
- Participating in RMC meetings and discussing a variety of topics including those presented at the November EEAC meeting
- Providing input on SEP update; reviewing and commenting on draft residential EM&V work products and ongoing coordination with EM&V Advisory Group members

### COMMERCIAL AND INDUSTRIAL

- Reviewing and analyzed C&I information and data in the PAs' 2013-2015 Term Reports
- Reviewing and analyzing PAs' Q4 report
- Researching and writing on a manufacturing process memo
- Presenting on the C&I sector, including where savings come from, barriers to future savings, and solutions
- Reviewing major C&I evaluation and market study reports

## TECHNICAL SERVICES

- Continuing regular administrative functions, including EEAC meeting minutes and website maintenance and document uploads
- Revising a draft of the 2013-2015 Report to the Legislature

## EVALUATION, MEASUREMENT & VERIFICATION

### Oversee EM&V Planning

The EM&V Advisory Group performed four major planning activities during this reporting period: the SEP update process, the Demand Response (DR) evaluation plan, planning additional individual studies, and recruiting new cross-cutting EM&V contractor teams. These activities are described in more detail below.

The 2016-2018 Strategic Evaluation Plan (SEP) included plans for a number of specific initial studies, but was primarily focused on establishing overall strategic priorities for EM&V activities in the current cycle. Reflecting this focus on overall strategic direction, the SEP called for a mid-term process through which specific studies for the remainder of the cycle would be added. However, the SEP was not specific about the timing or nature of the mid-term update process. In January, as many of the first wave of studies initiated through the SEP neared the finish line, the EM&V Group and the PAs concluded that the timing was right for the update process to begin. In February, ideas for new studies were solicited from stakeholders, and a series of conference calls were held among the working groups for individual research areas. The SEP update process was still underway as of this writing, but was expected to wrap up by mid-April.

An October, 2016 Council resolution called for the PAs to submit an overall evaluation plan for the 2017 DR pilots and demonstrations being run by the PAs. In December, the EM&V Group began working with the PAs and the assigned EM&V contractor teams to develop the required plan. A draft was presented at the February 23 meeting of the Demand Reduction Committee, with further presentation planned for future Council meetings.

In addition to the cohorts of studies laid out in the SEP and the SEP mid-term update process, the SEP envisioned that individual studies would be added on an as-needed basis throughout the current program cycle. Roughly 10 such new studies were developed and added to the research portfolio during this reporting period.

An RFP covering a number of specific cross-cutting EM&V functions was released in October, proposals were received in November, and new contractor teams were selected in December.

### Oversee EM&V Study Implementation

The Group oversaw implementation efforts for roughly 70 studies during the November-February reporting period (55 studies in the implementation or reporting stage and approximately 15 new individual studies in the planning stage, in addition to the longer-term planning efforts described in the planning section above). Many studies in the implementation stage are scheduled to be completed by mid-April. A comprehensive status report on the current status of the Massachusetts EM&V program can be found at <http://ma-eeac.org/studies/>.

### Oversee EM&V Reporting

Final reports for roughly 25 studies were either finalized or in progress during this reporting period. Finalized reports included: multifamily impact evaluation follow-on study; minisplit field monitoring study; lighting decision-making study; C&I gas steam trap impact evaluation; gas boiler market characterization study; RNC baseline/compliance study; C&I Baseline Framework study. Reports in progress included: C&I setback thermostat impact evaluation; C&I Custom Electric Process Impact evaluation; C&I incentivized equipment study; C&I impact evaluation framework; MFNC baseline study; Res lighting MAM; Res Heat Pump Water Heater impact evaluation; heating and cooling contractor study; stretch code communities study; net-to-gross methods study; Res lighting upstream distribution model; residential condensing boiler study; statewide marketing campaign study; 2015 C&I customer profile report. All of these in-progress reports were expected to be finalized by mid-April, in time for inclusion in the upcoming Plan Year Report (PYR).

A second key EM&V reporting oversight activity consisted of negotiating and ultimately reaching agreement with the PAs regarding application of the results from a number of completed or nearly-completed impact evaluations to the PYR.

## **EM&V Policy Issues**

The team's work on EM&V policy issues focused on coordination with a number of major policy processes that were in motion in this reporting period, including review and analysis of quarterly reports, the Demand Reduction Committee, the Informal Collaborative Discussion group, and the pending new RCS regulations.

## **Council and Stakeholder Engagement**

Council and stakeholder engagement activities in this reporting period included coordination with DOER through both monthly overall check-in calls and discussions on issues regarding individual studies; a series of public webinars on the results of the C&I on-site study; and supporting Council presentations by other teams.

## **PLANNING AND ANALYSIS**

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

The P&A Advisory Group prepared for, attended, and provided technical support during the meetings of the EEAC and coordinated through Executive Committee each month. 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. Also, the P&A Advisory Group assisted with the development, planning, and coordination of potential topics for future EEAC meetings. EEAC Meeting and Council support was an on-going and regular monthly task area.

### **Provide Technical Analysis and Review/Assess Reports**

In December-February, the Group completed its review of the PAs' 2013-2015 Term Reports. The Group finalized a "storyboard" document to summarize results and conclusions, which was posted to the December EEAC meeting materials. The Group also presented a subset of the storyboard content for the December Council meeting.

The P&A Group also participated in the Strategic Planning Group's effort to think about new issues that may be important in the 2019-2021 Three Year Plan. These issues may have long lead times and policy considerations that need to be addressed. For example, during the next goal setting process, we may need to rethink how we measure and track achievement, consider strategic electrification and what it means, and consider the impact of changes in lighting savings on future programs. A residential group has formed to strategize on lighting considerations. A separate scheduling group has been formed to look at a detailed two-year timeline to coordinate Council topics, planning deadlines, and Three-year Plan deliverables in an effort to avoid an information log jam in the first quarter of 2018.

### **Planning and Analysis Support for Implementation of the 2016-2018 Plan**

The P&A Advisory Group provided technical support for the Demand Savings Group, which is making progress on demand related issues in Massachusetts. In the coming months, we will be reviewing responses to an RFQ soliciting vendors to implement programs in the summer of 2017.

## **RESIDENTIAL AND LOW INCOME SECTORS**

### **Technical Support for Programs and Effective Practices**

The Residential Advisory Group continues to focus on the implications of changing lighting savings opportunities. In December-February this included working with the PAs and EM&V Advisory Group to develop the Lighting Market Adoption Model for the 2016 plan year. Model outputs from this work will be used to generate 2016 annual and lifetime savings values for the PAs' retail and direct install lighting activities. The Group also assessed the impact of revised (reduced) lamp measure lives and revised federal definitions of general service lamps on PAs'

lifetime lighting savings claims and lighting program activities. The Group also reviewed and analyzed monthly retail lighting initiative invoice data.

The Group completed its work on the residential and low income content for the Consultant Team's 2013-2015 Term report analysis, which was provided to the Council in December. The Group briefed several Councilors on content of the analysis. The Group also reviewed and analyzed residential and low income results in the PAs' Q4 report.

On January 27, the Group participated in the first meeting of the Residential Programs Subcommittee of the larger strategic planning group including representatives of the PAs and DOER. This group will be focusing on how the Mass Save residential programs might need to transition in the 2019-2021 plan period, particularly given the PAs' reduced ability to claim lighting savings. We are working with the PAs to determine the date and agenda for the next meeting and look forward to providing an update to the EEAC at the April meeting.

Over the course of the quarter, the Group conducted its ongoing business of coordinating with DOER staff on residential and low income issues and supporting the Council by providing answers to Councilor inquiries. The Group has also started talking with LEAN to assess the potential energy efficiency program benefits and challenges associated with leveraging and integrating external resources into the program.

### **Participate in RMC and Council Meetings**

The Residential Advisory Group met with the Residential Management Committee four times during this past quarter. On December 14, the Group sought answers to questions raised by Councilors at the November 16 Council meeting on the renter and moderate income initiatives. The PAs were able to provide answers to many of the questions, but questioned the Council process for how the answers should be provided. Work is ongoing on this question. The Group and RMC members also discussed action items for the Multi-family Program Overview (presented to the Council in November) as well as next steps in addressing them. This discussion was continued at the January 11 RMC meeting after the PAs had shared guidance with the Group on counting multi-family program participants that had been prepared for program contractors. The PAs questioned the value of the Consultants' focus and recommendations on participation, savings per participant, establishing unique site IDs as recommended in several multi-family program evaluations, and of several of the action items noted in the Multi-family Program Overview. The Group is working to more fully demonstrate the value of these recommendations.

At the January 25 RMC meeting, the Consultants and RMC members reviewed residential program incentive and specification changes for 2017 with a particular focus on ductless mini-split heat pumps and heat pump water heaters. Changes in incentives for heat pumps were prompted in part by a recently completed impact evaluation, which was also discussed at the meeting. On February 8, the Consultants discussed installation of condensing boilers and the steps the PAs are taking (e.g., contractor training) and might additionally take (e.g., enhanced pairing of equipment incentives with assessment and improvement of building envelopes) to ensure installed equipment is fully delivering at rated efficiency. The Group will continue its assessment of continuous improvement opportunities in this product area.

### **Coordinate with EM&V Efforts and Incorporate Feedback from EM&V Studies into the Programs**

The Group continued its monthly coordinating calls with the EM&V Advisory Group to exchange information and discuss priority evaluation issues and implications for implementation. The Group compiled residential study recommendations for the mid-term update to the Strategic Evaluation Plan. It also reviewed and provided comments on drafts of several in-progress residential evaluations, including the HVAC manufacturer panel report, heat pump water heater impact study, ductless mini-split heat pump impact study, residential new construction baseline and code compliance study, multi-family program research, stretch code market effects, and multi-family non-energy impacts and literature review.

## **COMMERCIAL AND INDUSTRIAL SECTOR**

### **Technical Support for Programs and Effective Practices**

The C&I Advisory Group spent time during this reporting period preparing for a presentation to the EEAC in

February, and other deliverables as part of the C&I work plan. The Group analyzed DNV GL data to develop an estimate of lighting potential. The Group worked on understanding the manufacturing sector in Massachusetts and the associated savings, as well as the differences between the PAs in realizing these savings. We also researched options for ISO 50001 trainings, reviewed PA proposed demand pilot projects, and reviewed 2016 4th quarter data and report. The Group also completed its work on the C&I content for the Consultant Team's 2013-2015 Term report analysis, which was provided to the Council in December.

### **Technical Support for New Technologies and Innovation**

The C&I Advisory Group investigated several new technologies and implementation approaches. Work included reviewing CHP potential in Massachusetts, researching energy efficiency programs for RV parks and marinas, and a determination of the number of ice rinks in Massachusetts. The Group also did preliminary work towards investigating workforce development options at the request of the Massachusetts PAs. Work also continued to support the PAs in their investigation of Strategic Energy Management.

### **Reporting Updated and Best Practices**

The Group spent significant time writing a memo on manufacturing process. This memo is the first of a planned series of memos on different topics, which are intended to inform the board or current practices and opportunities. The manufacturing process memo defines what process savings are, how the PAs currently reach out to and account manage manufacturers, and how outreach may be changed in order to improve savings results.

The Group also reviewed and tracked the PAs' progress towards commitments made in the 2016 Annual Plan.

### **Participate in CIMC and Council Meetings**

The Group researched, created and presented an overview of the state of the C&I programs that included: a discussion of what end uses the majority of C&I electric and gas savings come from, how the market looks for each of these end uses, and what barriers must be overcome to continue to realize savings. This presentation was delivered to the Council at the February EEAC meeting.

The Group participated in a number of CIMC meetings and informal calls with the PAs to discuss implementation methodology, share best practices, and progress towards savings goals to date. For example, the Group shared what we considered significant findings in the Onsite Study with the PAs at the January CIMC meeting.

### **Incorporate Feedback from EM&V and Studies into the Programs**

The Group continued to study the C&I Onsite Study and the 2015 C&I Expedited Customer Profile. These documents have provided significant information that enabled better insight into the C&I programs. These reports informed the February C&I presentation as well as a memo on manufacturing process. The Team also reviewed documents on the methodology to set baselines, DOER comments on this document, and asked questions regarding the methodology.

## **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. The Team produced draft minutes for the November 16, December 21, and January 18 EEAC meetings and forwarded them to the EEAC Chair. These minutes along with all documents and presentations distributed at the September-November meetings have been posted on the EEAC website.

### **EEAC Website Upgrades, Revisions & Maintenance**

Consultant Team staff continue to manage the updated website on a day-to-day basis. In December-February this included posting materials for EEAC meetings and other meetings that occurred during the month.

For the December-February time period, there were:

- 3,556 sessions
- 1,674 users: 40% new visitors and 60% returning visitors
- 10,394 page views with an average of 2.9 page views per session

### **Produce the Annual Report to the DPU and Legislature**

In December-February, the Team worked with DOER to revise the draft of the 2013-2015 Report to the Legislature.