

Memo

To: **EEAC**
From: **Eric Belliveau and the EEAC Consultant Team**
Date: **June 16, 2017**
Subject: **March-May 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 March-May 2017 timeframe.

SUMMARY OF MAIN TASKS COVERED IN EACH SECTION OF THE REPORT

EM&V

- Advancing 50 studies in the implementation stage and advancing roughly 25 studies in the reporting stage
- Engaging in the SEP update process
- Working on a Demand Response EM&V plan
- Supporting policy issues including: the Plan Year Report, the Demand Reduction Committee, the Informal Collaborative Discussion group, and the pending new RCS regulation
- Developing two EM&V presentations scheduled for the June Council meeting

PLANNING & ANALYSIS

- Reviewed and analyzed information and data in the PAs' 2016 Plan Year Reports
- Developed a memo on challenges and opportunities related to cost-effectiveness in the Massachusetts
- Participated in the Strategic Planning Group to plan for 2019-2021
- Supported the Demand Reduction Subcommittee

RESIDENTIAL AND LOW INCOME

- Preparing for April and May EEAC meetings, including developing presentations and conducting Councilor briefings
- Reviewing and analyzing results for the PAs' new renter and moderate income initiatives
- Assessing the implications of reduced claimable residential lighting savings on the residential programs
- Participating in RMC meetings and discussing a variety of topics
- Reviewing and commenting on draft residential EM&V work products and ongoing coordination with EM&V Advisory Group members

COMMERCIAL AND INDUSTRIAL

- Researching and publishing a manufacturing process memo
- Updating a Strategic Energy Management memo based on recent developments
- Researching new program delivery methods and demand savings performance
- 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

Key EM&V planning activities during this reporting period included: (1) the development of an update to the 2016-2018 Strategic Evaluation Plan (SEP); (2) the development of an overall evaluation plan for peak demand reduction pilots and demonstrations; and (3) moving individual projects through the detailed planning process toward the implementation stage. Each of these activities is described in more detail below.

SEP Update. The 2016-2018 Strategic Evaluation Plan (SEP) included 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. The SEP update process began in January 2017, and was in full swing during the March-May period. The SEP update was ultimately completed in early June, resulting in the addition of roughly 40 new EM&V studies to be completed by late 2018. This total does not include evaluations of peak demand reduction (DR) pilots, which are discussed below. A copy of the completed SEP update can be found at <http://ma-eeac.org/wordpress/wp-content/uploads/2016-2018-Strategic-Evaluation-Plan-Update.pdf>

Evaluation Plan for Peak Demand Reduction Pilots and Demonstrations. 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. This evaluation plan was initiated in December of 2016, and finalized in March. It discusses plans for evaluation of roughly 12 peak demand reduction pilots and demonstrations.

Project-Specific Planning. Detailed planning for many of the studies in the SEP update and Peak Demand Reduction evaluation plan was already underway during the current reporting period, and a number of new studies have already reached the implementation stage. Not all of the new studies are starting immediately, and fielding of many of the peak demand reduction pilots is pending approval by the DPU. However, roughly 35 new studies were in the project-specific planning stage during the course of the current reporting period.

Oversee EM&V Study Implementation

Roughly 50 studies were in the implementation stage during the March-May period. These represent a combination of those new studies discussed above that have already reached the implementation stage, and long-running studies that were generally nearing the finish line. 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 the following: C&I setback thermostat impact evaluation; C&I Custom Electric Process Impact evaluation; 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. Most of these finalized reports were included in the PAs' Plan-Year Report (PYR) filed on May 1, along with numerous other final reports completed over the last year.

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 the Plan Year Report, 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, and work on two

EM&V presentations scheduled for the June Council meeting.

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

The P&A Group also participated in the Strategic Planning Group's March meeting, which was focused on cost-effectiveness. The Group also took part in informal strategic planning discussion with the PAs and DOER.

The Group developed a memo on challenges and opportunities related to cost-effectiveness in the Massachusetts energy efficiency Framework. Topics covered included: Multifamily programs, demand reduction resources, distributed solar resources, and C&I Non-Energy Benefits. The memo was intended to help DOER and the PAs to prioritize these issues as planning for the next Three Year Plan begins.

The Group began reviewing 2016 Plan Year Reports and analyzed evaluated results compared to the plan as well as preliminary results. Results of this analysis will be presented at the June Council meeting.

The Group also supported the Residential Advisory Group's effort to analyze the impact of reduced claimable lighting savings, described in more detail in the residential section below.

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. The Group continued work on and analytical framework for demand (including cost-effectiveness analysis), and review and tracking of demand reduction demonstrations. The Group assisted with and prepared the LBL presentation on CA demand response and demand management study, provided to PDR Subcommittee on May 25.

RESIDENTIAL AND LOW INCOME SECTORS

Technical Support for Programs and Effective Practices

The Group continued its work on the future of the Mass Save residential programs, with a particular focus on the implications of the loss of most claimable lighting savings. On April 25, the Group participated in the second meeting of the Residential Programs Subcommittee of the larger strategic planning group including representatives of the PAs and DOER. This group is 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. Subsequent to the meeting the Consultants and PAs exchanged their respective quantitative analyses of the projected impact of reduced lighting savings for the next plan period and met by telephone on June 6 to discuss them. The consensus was that very little claimable lighting savings will be available in 2019. The next step is to assess more specific impacts of this development on the Home Energy Services and Multi-Family Retrofit Initiatives, which the Group has begun analyzing. A meeting to advance this work is being planned and should be scheduled within the next few weeks.

In April, the PAs reported to the EEAC on the second six months of activity for the new renter and moderate income initiatives at the statewide level. Similar results were available by PA in May (in the Q1 report). The Residential Advisory Group reviewed and analyzed these results, and discussed them on several different

occasions with the PAs, DOER, Councilors, and stakeholders. The Group also prepared recommendations for the PAs to support increased participation in the new initiatives. During this quarter the Team has also been working with the City of Boston to assess HEAT Loan participation by residents of the City.

Over the course of the quarter, the Group also reviewed Cape Light Compact's MTM request, the PAs' Q1 2017 report, and 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.

Participate in RMC and Council Meetings

The Residential Advisory Group spent a significant amount of work in this quarter preparing for two EEAC meetings—a Residential topics focused meeting on April 26 and a Low Income topics focused meeting on May 17. At the April meeting, the team presented a presentation it had prepared on [Residential Strategic Electrification and Heat Pumps](#). At the May meeting the team presented on [Low Income Pressures and Opportunities](#). In addition to the presentation preparations, work in support of the meeting included planning meetings with the PAs, DOER staff and ExCom; reviewing and commenting on draft presentations from other presenters; and briefings of several EEAC members. The Group also began planning for the July 19 EEAC meeting, which will focus on Multi-family topics.

The Group met with the Residential Management Committee four times during this past quarter. On March 7, the Group reviewed the PAs' significant increase in lighting unit goals to understand the underpinnings of the increase and strategies for how they could be achieved. The discussion also included a review of rebate activity for other measures incentivized through the Products Program. At the April 12 RMC meeting the Consultants and PAs reviewed and discussed draft presentations for the April 26 EEAC meeting. On May 10, the RMC, Consultants, and DOER discussed efforts to ensure Mass Save program contractors properly dispose of thermostats containing mercury. The Group also reviewed and discussed the draft presentations for the May 17 EEAC meeting. At the May 24 RMC meeting, the Consultants and RMC had a focused discussion on additional opportunities to improve performance of the renter and moderate income initiatives.

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 also reviewed and provided comments on drafts of several in-progress residential evaluations, including the heat pump water heater impact study, ductless mini-split heat pump impact study, multi-family program research and multi-family census, Home Energy Services evaluation (including the renter and moderate income initiatives), boiler barriers research, proposed products evaluation research, lighting onsite survey findings, and updated lighting in service rate estimates.

COMMERCIAL AND INDUSTRIAL SECTOR

Technical Support for Programs and Effective Practices

During March-May, the C&I Advisory Group completed a new memo on manufacturing process savings, contributed to a cost effectiveness memo, and updated a memo on increasing energy productivity through Strategic Energy Management. The Group analyzed demand savings data for 2016 evaluated results. The Group reviewed the Small Business customer direct option where businesses can use their own contractors for retrofits as well as Multi-family program results.

Technical Support for New Technologies and Innovation

The C&I Advisory Group continued to support the PAs in their investigation of Strategic Energy Management through presentations, finding and sharing reports and evaluations, and multiple meetings. This work also included addressing the issue of savings life and persistence. The Group also reviewed a report about the capabilities of energy reporting from Power Over Ethernet LED lighting systems. Additional work included reviewing new Department of Energy tools for helping customers implement ISO 50001, and investigating the MEETS pay for performance program model which is based on an intelligent meter that measures savings, and reviewing a paper on lumens (lighting) as a service.

Reporting Updated and Best Practices

The Group reviewed the 2015 C&I Customer Profile study and alerted DNV GL to some errors in the data. The Group reviewed information and provided feedback on topics including: regional demand reporting and forecasts, 2016 year end reporting, a survey of Non Energy Benefits, and the new MassSave website. 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 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 researched, created and presented a primer on regression modeling for creating a counterfactual baseline that can be used to measure operational and behavioral savings as part of a Strategic Energy Management (SEM) program.

Incorporate Feedback from EM&V and Studies into the Programs

The Group reviewed documents on the methodology to set Roof Top Unit baselines, and reviewed Combined Heat and Power interim process evaluation findings, and the draft study on PA Differences. The Group also investigated best practices for measure lives for operational and behavioral savings, and reviewed what the California programs are doing with respect to the establishment of the proper baseline for retrofit versus early retirement measures. Other evaluation studies reviewed includes parking garage ventilation, mid-sized business, small business, upstream lighting, custom process, and best practices for evaluating SEM programs.

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 February 15, March 15, and April 26 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 March-February this included posting materials for EEAC meetings and other meetings that occurred during the month.

For the March-May time period, there were:

- 3,359 sessions
- 1,724 users: 35% new visitors and 65% returning visitors
- 9,905 page views with an average of 2.9 page views per session

Produce the Annual Report to the DPU and Legislature

In March, the Team sent a revised draft of the 2013-2015 Report to the Legislature to DOER.