

Memo

To: **Energy Efficiency Advisory Council**
From: **Eric Belliveau and the Consultant Team**
Date: **August 30, 2019**
Subject: **DRAFT - EEAC Consultant Team Proposed September-December 2019 Work Plan and**

SUMMARY

Strategy for this Work Plan

As in the past, our work is divided into several advisory groups, representing the major areas of effort across the entire range of Consultant responsibilities and portfolio of Program Administrator (PA) programs. Within each advisory group, several work areas further clarify the tasks and topics that we plan to address over the coming year. The advisory group leaders worked with representatives from DOER and others to define and present the information included in this work plan. In each section below, the Consultants worked to make sure EEAC priorities are embedded in our plan. The work plan provides detail on known work areas and deliverables while retaining flexibility to respond to the Council and as other topics/issues arise. **The Consultant Team's contract is being extended through December 2019 and the budget described in this work plan reflects the 4-month period of September-December. Most of the work plan tasks and deliverables will be concentrated over of this same time period.**

At a high level, the Consultant Team expects much of its focus to be on supporting and guiding implementation of the numerous new elements included in the PAs' Plan. These elements include active demand reduction (ADR), energy optimization/fuel switching and an MMBtu savings metric, the residential program redesign, passive house, and strategic energy management, among others. The PAs will have many implementation, evaluation, and reporting details to figure out related to these new elements as they begin carrying out the new Plan. The Consultant Team looks forward to working collaboratively with the PAs to resolve any issues that come up and ensure successful program outcomes.

PLANNING & ANALYSIS

Context

Our work in the area of planning and analysis will focus on several important Council support activities. These include:

- Supporting the Council in its efforts to ensure effective program and portfolio performance and to achieve the 2019-2021 Three-Year Plan goals. This includes providing guidance related to new elements in the Plan.
- Reviewing and assessing the results of the 2016-2018 Three-Year Plan, including analyzing successes and missed opportunities.
- Ensuring that the Council is effective in the performing its responsibilities, and that Council processes are informative, effective, and efficient

- Providing technical analysis to support the development and implementation of a strategic vision for the future, in order to identify opportunities and implement crucial adjustments to the energy efficiency picture in Massachusetts

To work towards and facilitate these outcomes, we will work in the three major planning and analysis areas described below. To the extent a task comes up that is not explicitly or fully listed in this plan, the Consultant Team will establish a scope and budget for its execution.

Work Areas

PARTICIPATE IN EEAC MEETINGS, BRIEF AND SUPPORT THE COUNCIL

- Prepare for and attend four EEAC meetings and four Executive Committee meetings.
- Provide independent technical support in advance of and during Council and Executive Committee meetings for all areas of energy efficiency and demand reduction planning, policy development, technical and economic analysis (cost-effectiveness), program design and implementation, reporting and analysis of results from 2016-2018, and tracking and monitoring of progress towards achieving the 2019 goals. **This includes a variety of deliverables including emails, spreadsheets, memos and presentations.**
- Propose, support, prepare, and **provide (when assigned) briefing documents**, informal pre-meeting informational sessions or webinars on priority topics identified by the Council in its meeting/topics schedule.
- Provide individual briefings to Councilors on a rotating basis with a goal of talking to each Councilor at their desired frequency.
- Assist with providing orientation for new(er) Councilors. This includes in-person meetings, review and edit of the councilor handbook and any other historical information the new councilor may need.
- **Develop a document defining the Consultant Team's roles and responsibilities for supporting the EEAC.**

TECHNICAL ANALYSIS

- **Review and analyze 2019-2021 planning process**
 - **Review the process used to provide guidance to the Council during 2019-2021 planning cycle. Identify challenges, things that worked well, and ways the process might be improve for the next cycle. This will take the form of a memo.**
- Support planning and analysis for implementation of 2019-2021 Plan; review and analyze results
 - Review and analyze available information to guide implementation, evaluation, and reporting of new elements in the Plan such as ADR, energy optimization/fuel switching, KPIs, the residential program redesign, and strategic energy management, among others.
 - ADR supporting tasks will include:
 - Continue supporting the Demand Reduction Working Group with the PAs for a two-part discussion on the 2019 ADR results (programs and demonstrations) and the planned efforts for the summer of 2020, including for storage offerings.
 - Coordinate with the PAs to review the EM&V results of 2019 efforts and to do initial planning for 2020
 - Assist in planning the winter 2019-2020 demand management efforts.
 - Coordinate with the Residential and Commercial and Industrial (C&I) teams to ensure fully integrated program delivery of ADR and EE in the programs.

- Review, analyze, and assess the PAs' reports and reporting, including the monthly dashboards and quarterly reports. Review trends and multi-year comparisons, review reporting on new elements of the Plan, and provide Consultant findings and recommendations to the Council. **This task includes presentations to the Council throughout the year.**
- Use the PA reporting to assess and report to the Council on the status of program achievement towards the 2019 and 2019-2021 Three-Year Plan goals and related topics. Identify and assess any data or programmatic trends which portend successes or challenges in program delivery and savings. **This may take the form of presentations and/or memos.**
- Identify reporting improvement opportunities
 - Work with the PAs and the Council to design and implement further improvements to the PA reports, quarterly and otherwise, in response to Councilor feedback, including forward-looking projections and enhanced trend comparisons in the reports.
 - Review Mass Save Data and recent revisions and provide feedback to the PAs. Provide input on future revisions and additions. Task includes ongoing discussions and **written suggestions on potential changes.**
- Support cost-effectiveness screening, benefits analysis, and EM&V activities
 - Provide technical input to and review of draft work products for the additions or supplements to the Regional Avoided Energy Supply Component (AESC) avoided costs study and participate in the study group meetings with the PAs (and potentially with representatives from the participating states) in the period between official AESC studies, e.g., GWSA carbon valuation, winter benefits and resiliency, etc. Task includes review of past studies, participation in study group, and written and analysis output as needed.
 - Provide technical input to and review of draft work products for the study to quantify benefits associated with winter peak capacity reduction including winter resiliency. The Team will help ensure that the study results will be aligned with and compatible with the 2018 AESC.
 - Coordinate with the PAs on gas demand reductions opportunities and potential benefits, which may include impacts on electric prices.
 - Analyze cost-effectiveness screening, assessment of benefits and costs, and application of EM&V results and field experience; propose appropriate improvements for cost-effectiveness analysis and common screening tools. **Task includes a memo reviewing current tools and suggestions for synthesis among MA PA tools.**
 - Review, comment on, and contribute to the electronic Technical Reference Manual (eTRM). This is still an evolving process and the Consultant Team will assess what is needed as more information becomes available. Early review indicates a significant level of disagreement between BCR models and the eTRM.
- Coordinate strategic planning
 - Coordinate strategic planning efforts with the PAs through the more regular meeting of the Planning and Analysis Group (PAG). This group has a different function in non-planning years but provides a forum to discuss long term strategic planning issues that may not be part of the current plan. Examples of this in 2019-2021 are C&I lighting, demand programs, and residential retrofit. This is separate from the implementation teams' approach to the issues.
- Contribute to other state and regional planning and analysis efforts
 - Contribute to and review ISO-NE efficiency forecasting efforts, ensure the consistent and appropriate treatment of efficiency in the forecast, and review and provide comments on the work of the ISO-NE Energy Efficiency Forecast Working Group. Task includes

participation in the working group and close coordination with DOER and **reporting to the Council on outcomes and for interim decisions that determine key project direction.**

- Provide technical assistance for reporting and tracking of the Three-Year Goals and energy efficiency impacts for the Clean Energy and Climate Plan (CECP), including impacts of efficiency programs and other efficiency strategies on the 2020 CECP goals. **Task includes memos and/or presentations to the Council as needed.**

SUPPORT THE COUNCIL ON REGULATORY ISSUES AND DPU PROCEEDINGS

- Track, monitor, review, summarize, and present to the Council information on all relevant DPU proceedings affecting energy efficiency and demand reduction programs, as assigned.
- Review and analyze any potential revisions to the DPU EE Guidelines coming out of Plan review and DPU approval or Performance Term Report review.
- Support additional proceedings that the Council wishes the Consultants to cover including grid modernization and performance-based ratemaking as they relate to the continued delivery of the Three-Year Plan.

RESIDENTIAL AND LOW-INCOME

Context

Residential programs were a significant focus during the 2019-2021 planning period and will continue to be so for the Consultant Team in 2019. With the significant reduction in the ability of the Program Administrators to claim comparatively inexpensive savings from lighting in their residential—and to a lesser extent—low income programs, the 2019-2021 Plan includes increased emphasis on residential active demand reduction, strategic electrification—particularly heat pumps, increasing conversions through facilitated services, energy optimization education for customers, Passive House, and serving all customers. In all, the Plan includes a large set of PA commitments to enhance the residential and low income programs, and much of the Residential and Low Income Consultants' work in 2019 will be focus on collaborating with the PAs on how these enhancements will be implemented, and tracking, assessing, and reporting to the EEAC on progress in doing so. At the same time, we will be continuing to identify and bring forward opportunities to the PAs and to the EEAC for realizing an integrated, state-of-art residential program in Massachusetts that fully capitalizes on the most advanced technologies and practices that the market has to offer.

Work Areas

PLANNING, TECHNICAL, ANALYTICAL, AND STRATEGIC SUPPORT FOR IMPLEMENTATION OF THE 2019-2021 PLAN

- Track, provide input on, and report on PA progress in meeting 2019-2021 Plan commitments
- Support PA efforts to achieve Plan commitments and Council priorities by identifying best and effective practices and other information
- Identify state of the art strategic innovations for residential and low income program designs, practices, measures, and data management
- Review and analyze residential and low income information and data in the PAs' monthly data dashboards, quarterly reports, **and periodic reporting on relevant indicators and other term sheet commitments**
- Work with relevant Council members, LEAN, and other stakeholder groups to inform approaches to achieving PA commitments
- Support DOER and the Council's priorities and efforts, in particular regarding residential active demand and storage, fuel switching, Residential Conservation Services, and scorecards

PARTICIPATE IN RESIDENTIAL MANAGEMENT COMMITTEE AND COUNCIL MEETINGS

- Participate in RMC meetings twice per month, with a focus on discussing progress and providing

support to PA efforts to achieve their commitments

- Participate in Council meetings with a residential and low income focus, **including preparing meeting materials as appropriate, reviewing PA draft presentations, and briefing Councilors**
 - Collaborate with PAs regarding relevant content for their September EEAC presentation; prepare Consultants' presentation for same with content to be determined as PAs content solidifies
 - Preparation for the meeting includes a written report on the state of residential programs as we bridge the era of inexpensive and plentiful lighting savings. The paper will lay out the future for residential programs including revamping reporting to include data requirements, MMBtus, demand benefits and non-energy impacts from new sources.

COORDINATE WITH EM&V EFFORTS

- Provide direction and guidance in study planning to ensure necessary data are collected, and useful data are reported
- Review final studies and reports, with a focus on ensuring PA implementation of study recommendations
 - Continue work with PAs and LEAN to address findings, outputs, and recommendations of Multifamily Census and Low Income Process Evaluation with a focus on program marketing strategies, electronic data collection, and equity

COMMERCIAL AND INDUSTRIAL

Context

The Commercial and Industrial sector has experienced several evolutionary changes as markets are transformed, technology advances, and evaluation practices are updated. The lighting market is rapidly changing over to LED products, and away from fluorescent and high intensity discharge options, as LEDs become less expensive and more readily available in all forms. The challenge for the Massachusetts programs is to drive the market towards the most efficient options available, while including controls, in order to maximize savings in the 2019-2021 plan period. The Program Administrators will need to focus on engaging with customers complete custom CHP, HVAC and manufacturing projects in order to sustain significant savings. This engagement will require ongoing and stronger partnerships with market actors such as the architects, engineers, contractors, and distributors in Massachusetts and neighboring states. In particular, there is the opportunity for increased focus on the use of controls on new equipment, retro-commissioning and updating the controls for existing equipment, and claiming savings from operational and behavioral savings. Some of the operational and behavioral savings can be driven using strategic energy management, and some could be driven by demand reduction efforts. There are also several new focus areas in the 2019-2021 Three Year Plan. Energy Optimization is not well defined with respect to the C&I market, so putting it into practice will require close monitoring to prevent unintended consequences. In addition, demand response and active demand reduction should be well integrated with the efficiency programs to leverage mutually supporting results in order to achieve goals.

Work Areas

The C&I Consultant Team anticipates a continuation of work in a few key areas of activity:

TECHNICAL SUPPORT FOR PROGRAM STRATEGIES AND SEGMENTATION

- Analyze historic and current program performance to identify trends, opportunities, and deficiencies, including:
 - Small Business/Turnkey Initiative participation, savings, and comprehensiveness
 - New construction program improvements, including performance-based design, zero net energy, and Passive House

- Strategic energy management (SEM) pilot recruiting, implementation, and program results (including traditional project savings resulting from SEM participation)
- Lighting and lighting controls, including lighting transition planning and street lighting
 - **The Team will develop a whitepaper on the potential for C&I programs to continue to leverage savings from lighting as the market transitions rapidly to LED sources. The paper will also predict the likelihood for lighting savings to drop due to saturation and when that drop may occur**
- Custom HVAC projects including average project savings size and retro-commissioning savings
- Manufacturing custom process customer participation and savings
- Technical assistance and training for contractors and distributors, especially with respect to lighting and HVAC controls
- Combined Heat and Power savings and project size
- Demand and storage program performance
- Energy Optimization and fuel switching, including heat pumps

IDENTIFY AND REVIEW NEW TECHNOLOGIES

- Identify new or underperforming technologies/measures
- Advise on new technologies and the potential for savings and integration into the programs by working with the Massachusetts Technology Assessment Committee
- Track trends in measure adoption to identify opportunities for changes and improvements to the programs to encourage either a systems or multi-measure approach.
- Advise on implementation strategies to help adoption of underperforming technologies.

PARTICIPATE IN CIMC, COUNCIL AND OTHER RELEVANT CALLS AND MEETINGS

- **Prepare and deliver presentations for the CIMC**
- **Report on the impact of CIMC discussions to the Council**
- **Participate in October C&I focused EEAC meeting, including preparing meeting materials as appropriate, reviewing PA draft presentations, and briefing Councilors.** Much of the content for the meeting will be drawn from the lighting whitepaper.

COORDINATE WITH EM&V EFFORTS

- Provide direction and guidance in the planning of EM&V studies to ensure necessary data is collected, useful data is reported, and the Council can be confident in reported savings values
- **Provide comments on draft reports to improve the quality of the work product**
- Review studies and reports, and follow up with the PAs to determine if recommendations from evaluations are being incorporated into the programs
- Participate in the implementation of the Baseline Framework including the establishment of the mutually agreed upon baselines, and dual baselines process and protocols
- **Produce memos or presentations as requested by the Council**

EVALUATION, MEASUREMENT, AND VERIFICATION

Context

Our work in the area of Evaluation, Measurement, and Verification (EM&V) continues to be shaped by the requirements of the 2009 Council resolution that established the Commonwealth's current EM&V framework, which assigns substantial responsibilities to the Council Consultants. Working on the Council's behalf, we are charged with overseeing every phase of the EM&V process, including evaluation planning, contractor procurement, study implementation, reporting and outreach, and application of study results. While we must work closely and collaboratively with the PAs, the resolution specifies that if consensus cannot be reached between the PAs and the Council Consultant, decision-making authority (subject to a system of appeals) rests with the Council Consultant as the Council's agent.

The EM&V research agenda for the current contract period has already been largely established through two planning processes that occurred in 2018: the 2019-2021 Strategic Evaluation Plan (SEP), which, in addition to establishing the overall strategic direction for the EM&V program, lays out 26 specific studies to be initiated in 2019; and the Term Sheets, which contain a number of EM&V-related provisions agreed to by the parties. The SEP and the Term Sheets were in turn both shaped to a significant degree by the Council's priorities.

Specific EM&V research objectives in this contract period include:

- Overseeing planning, implementation, and reporting of the studies laid out in the SEP.
- Conducting tailored evaluations in 2019 that address participation levels and potential unaddressed barriers for potentially underserved groups, including renters, moderate income, non-English speaking households, and small business customers.
- Developing new impact evaluation methods to support Passive House new construction initiatives.
- Evaluating active demand reduction programs.
- Evaluating newer initiatives, including Energy Optimization and Strategic Energy Management (SEM)
- Developing additional studies as needed to support the evolution of programs, policies, and markets.

Our ability to cover the entire portfolio of EM&V studies depends on available funding. If available funds are not sufficient to cover all studies, we will work with DOER and the Council to determine the specific studies to be covered.

Work Areas

OVERSEE EM&V PLANNING

- Move individual studies laid out in the 2019-2021 Strategic Evaluation Plan (SEP) through the detailed planning process to the implementation stage. Planning for individual EM&V projects focuses on refining research objectives, determining data collection and analysis activities, setting budgets, assigning contractor staff, and laying out project schedules. In order to ensure consensus and maximize opportunities for stakeholder input, the planning process for individual studies includes three separate planning stages from the time a study is conceived to the time it is implemented.
- Plan new studies to address the EM&V-related Term Sheet provisions.
- Develop additional studies as needed.

OVERSEE EM&V STUDY IMPLEMENTATION

- Oversee the implementation of individual EM&V studies once they have completed the detailed planning stage. EM&V study implementation can include a wide range of data collection and analysis activities, the specific nature of which varies by type of study. Each study can have as many as eight stages from draft scope to survey instruments to draft and final reports.

OVERSEE EM&V REPORTING

- Oversee the development and dissemination of interim and final reports on EM&V studies. Final EM&V reports in Massachusetts generally need to go through multiple drafts, as various stakeholders provide comments that must be processed collaboratively. This work area also encompasses overseeing the incorporation of impact evaluation results into the eTRM.

COUNCIL AND STAKEHOLDER ENGAGEMENT

- Work with the Council, individual Councilors, and stakeholders, both to incorporate their input into EM&V plans and reports and to brief them on study results through presentations and other forms of outreach. **We plan to give one overall presentation on EM&V issues to the Council during this contract period.** Based on the Council meeting schedule, we currently anticipate that this will occur at the March Council meeting.

TECHNICAL SERVICES

Context

The Technical Services team is responsible for a variety of administrative tasks that support the Council's information sharing through the website including production of the Annual Report to the Legislature. These tasks are described in more detail below.

Work Areas

PRODUCE MINUTES FROM ALL EEAC MEETINGS

- **Ensure meeting minutes are collected from all EEAC and EEAC Executive Committee meetings** subject to the open meeting law and that these minutes are circulated for comment, corrected, and issued in final form for posting to the EEAC website. We note that for budgeting purposes, the minute taking will be included in the "Council Meetings" budget category.

WEBSITE UPDATES, REVISIONS, AND MAINTENANCE

- **Regular and timely updates of the website content.**
- **Make changes or expansions in structure or organization of the website that are identified by the Council.**

CONSULTANT TEAM QUARTERLY REPORT

- Provided timely and meaningful report of Consultant Team activities. **The Consultant Team will produce activity reports on a quarterly basis.**

SUPPORT PRODUCTION OF THE ANNUAL REPORT TO LEGISLATURE

- Work with DOER to support the development of annual reports for the DPU and Legislature covering years 2016-2018. **Specific tasks and timelines will be determined in collaboration with DOER.**

PROPOSED BUDGET

EEAC Consultant Team Budget September - December 2019		
Advisory Group	Category	Amount
Planning and Analysis		
	Participate in EEAC Meetings, Brief and Support the Council	\$94,000
	Technical Analysis	\$35,000
	Analyze Results	\$14,500
	Strategic Planning	\$35,000
	Support the Council on Regulatory Issues	\$9,500
C&I		
	Technical Support for Program Strategies and Segmentation	\$46,800
	Identify and Review New Technologies	\$11,700
	Participate in CIMC, Council and other relevant calls and meetings	\$7,800
	Coordinate with EMV Efforts	\$11,700
Residential		
	Planning, Technical, Analytical and Strategic Support for the 2019	\$64,400
	Participate in Residential Management Committee and EEAC Meetings	\$18,400
	Coordinate with EMV Efforts	\$9,200
EM&V		
	EM&V Planning	\$30,240
	EM&V Study Implementation	\$30,240
	EM&V Reporting	\$30,240
	Council and Stakeholder Engagement	\$17,280
Technical Services		
	Produce Minutes from All EEAC Meetings and Ex Com	\$7,770
	Website Updates, Revisions, and Maintenance	\$6,660
	Consultant Team Quarterly Reports	\$2,220
	Support the Production of the Annual Report to Legislature	\$4,440
Total		\$487,090