



MEETING MINUTES

Wednesday, September 21, 2016

100 Cambridge St, 2nd Floor

Conference Rooms B & C

Boston, MA 02114

Councilors Present: Marie Abdou (for Jeremy Newberger), Donald Boecke (for Maura Healey), Amy Boyd, Elizabeth Cellucci, Larry Chretien, Maggie Downey, Betsy Glynn, Paul Gromer, Frank Gundal (for Tilak Subrahmanian), Charles Harak, Paul Johnson, Richard Malmstrom, Deirdre Manning, Michael McDonagh, Jerrold Oppenheim (for Elliott Jacobson), Thomas Palma (for Cindy Carroll), Arah Schuur (for Judith Judson), Nancy Seidman (for Martin Suuberg), Michael Sommer, Brad Swing (for Austin Blackmon), Trish Walker, Eric Winkler

Councilors Absent: Michael Ferrante, Alana Murphy (for Chrystal Kornegay), Andrew Newman, Robert Rio

Consultants Present: Eric Belliveau, Jennifer Chiodo, Craig Johnson, Mark Kravatz, George Lawrence

DOER Staff Present: Alex Pollard, Emily Powers, Matt Rusteika, Joanna Troy, Steve Venezia

Others Present: Megan Aki, JoAnn Bodemer, Samantha Capuro, A.T. Desta, Erin Engstrom, David Gibbons, Jonathan Goldberg, Jodi Hanover, Berl Hartman, Jenn Kallay, Kristina Kelly, Amit Kulkarni, Bob Laurence, Deborah Lebl, Emmett Lyne, Nelson Medeiros, Kevin Morley, Jack Oster, Laurie Pereira, Emily Powers, Matt Sanders, Lisa Shea, Margaret Song, Linda Soucy, Tabitha Vigliotti, Liyang Wang, Sharon Weber

1. Informal Session – LED Streetlights

Prior to the start of the full Council meeting, George Lawrence of the consultant team (C-Team) gave attendees an overview of LED streetlights that included an update on current technology. Nelson Medeiros, Thomas Palma, and Margaret Song also presented on the progression of LED streetlights in Massachusetts. Their presentation included statewide progress to-date, participation pathways, considerations for implementation, and case studies from the Cape Light Compact (CLC), Eversource, and Unitil service territories.

Matt Rusteika also informed attendees that DOER has a grant program to help municipalities convert their municipally-owned streetlights to LEDs. He indicated that the grant structure was set up to help cover 30 percent of the cost of street light conversions. He also noted that they were working to align the program with the efforts currently being made by the program administrators (PAs).

2. Call to Order

Schuur called the meeting to order at 1:10 PM.

3. Public Comment

Berl Hartman of Environmental Entrepreneurs gave public comment to thank the Council for all the good work it has done, but also to push the Council to do more. She indicated that as a member of the GWSA implementation advisory committee, she was recently informed that the state had achieved 19.5% of the 25% target. She indicated that she thinks that energy efficiency will need to do more than it has in the past in order to reach that target. She advocated that more resources be allocated towards higher achievements in the commercial and industrial sector (C&I) and expressed concern that the sector's target for this year is less than what was achieved last year.

Schuur added that DOER received a written letter of public comment from Healthcare Without Harm and that it would be posted to the Council website.

4. Council Updates and Business

EEAC Meeting Minutes – August 17, 2016

Boecke motioned to approve the minutes as submitted. Malmstrom seconded. All were in favor, with no opposed or abstaining. Nonetheless, the Chair elected to carry over the Council's consideration of the August 17th EEAC draft minutes until the next meeting due to the fact that they had only been posted earlier the same day.

C-Team Update on 2013-2015 Results

Belliveau indicated that the C-Team has been reviewing the results and that they are working towards a finished product of a report with a visual approach. He noted that the report would be a record of what the C-Team reviewed and commented on. Lastly, he indicated that the C-Team would be finishing the report and presenting on it in more detail at the October EEAC meeting.

DOER Update on State of Charge Energy Storage Report

Schuur noted that DOER recently released the State of Charge Energy Storage Report and that Judson would be presenting on it in more detail at the October EEAC meeting. She also noted that there would be a public presentation on the report and its findings on Tuesday September 27, 2016 and that details for that could be found on DOER's website.

5. C&I Introduction

Pollard began by noting that the goal of having themed Council meetings was to focus on commitments laid out in the energy efficiency plan. In particular, he noted that the Council asked for updates on elements of the plan, including semi-annual reporting on CHP and the

Massachusetts Technical Advisory Committee, and PA commitments to give regular and specific updates on items such as program progress and penetrations, measures like street lighting, and innovations in the programs. He indicated that the goal of this meeting would be to give updates on some of these items. Pollard also highlighted some of DOER's innovative efforts as well as a high-level review of Commercial Property Assessed Clean Energy (PACE).

6. Innovative C&I Technologies

HVAC Systems and Controls

Malmstrom began with an overview of HVAC systems which included information about what makes up an HVAC system, the different types of systems, and how they work within a C&I building. Chiodo then took over and presented on controls for HVAC systems. She began by noting that controls that operate the many moving parts of an HVAC system can result in a wide variety of benefits, including bill savings on the order of 10-30 percent. She also gave an overview of the different types of controls, how to get controls into the market, the different types of control strategies, and the opportunities to advance savings through controls. Malmstrom then gave an overview of a real-life example of how Dana Farber used a third-party energy management information system (EMIS) to control its HVAC system. He noted that the cost of the system was \$120,000 between programming, monitoring, and implementation, and that the savings, have exceeded \$700,000, since it was installed in 2011.

Johnson noted that some building operators are fearful of "losing the building." In other words, building operators are concerned that their temperatures could get out of range and that that fear has created a lot of redundancy. He asked what could be done about that. Malmstrom noted that if systems and controls are engineered and installed properly then there should be no concern of that happening.

Lighting and Controls

Lawrence began by noting that lighting is and should still be considered an efficiency resource with large potential. He noted that LEDs and controls can cut lighting consumption by an additional 50% of what has already been achieved. Lawrence also indicated that the biggest potential for C&I lighting and controls is with linear lighting. He noted that about three-quarters of all interior C&I lighting is linear and that less than 5% of those are LEDs. Lawrence also highlighted a few case studies and presented ways C&I energy efficiency programs can promote lighting savings in the future.

Palma noted that one barrier the PAs face is that there are custom projects where customers want to do T5s and that they will just do those, if they are cost-effective. Gundal added that that is problematic because once those fixtures are in they lose their opportunity to do dimming controls. He added that the optimal thing to do is a fixture replacement. Chretien noted that that is an example that demonstrates why he prefers that programs focus on lifetime demand or energy savings because when the customer chooses to install just bulbs you miss opportunities for additional savings. Abdou agreed and noted that the PAs are focused on lifetime savings.

Johnson asked how the PAs decide whether they will incentivize fixtures versus controls. Lawrence indicated that it is probably on a case-by-case basis because and noted that if you were

retrofitting a parking garage you probably would not do controls because there is not much need for control there. Lawrence also pointed out that the PAs are pushing more for fixtures with controls as opposed to just bulbs. Gundal agreed and added that the programs are voluntary and that the PAs cannot just force people to install fixtures if they want to do just bulbs. Belliveau added that many customers have a maintenance person in charge of lighting and it is often just easier for that person to replace bulbs rather than pay an electrician to come in to do fixtures.

7. Program Innovations in the C&I Sector

Massachusetts Technical Assessment Committee (MTAC)

Bob Laurence gave an overview of MTAC which included information about its purpose, who participates, and the process required for reviewing and considering new technologies. He also highlighted considerations that the PAs make when reviewing new technologies as well as what is excluded. Lastly, Laurence went over the various technologies that MTAC has reviewed and approved, noting that since 2014 it has referred 19 new technologies out of 49 [38.7%] that were reviewed.

Malmstrom asked if they look at technologies that are not yet commercially available. Laurence indicated that they do.

Seidman asked how they are advertising MTAC. Laurence indicated that they have held open houses across the state where vendors and channel partners can learn about MTAC. He also noted that MTAC is featured in the energy efficiency newsletters that go out every quarter.

Johnson asked what drives MTAC to find, review, and recommend new technologies. Laurence noted that it supplements and reinforces their mission statement as it relates to energy efficiency. He also noted that they want to save energy on multiple fronts by introducing new technologies into the marketplace.

PA Innovation & Technology

Amit Kulkarni and David Gibbons on behalf of the PAs presented on how the PAs identify, assess, and deploy new opportunities to customers. They began with a review of the innovation and technology committee where they highlighted its purpose, responsibilities, as well as items or tasks that are not within their scope of work. They also gave an overview of the three stages of their process which include defining, assessing, and recommending emerging technologies. As part of the process of evaluating emerging technologies, the committee determines technical viability and potential energy savings, determines commercial viability, analyzes existing deployments, and recommends the proper delivery model and incentive structure. They then presented a case study of how the process worked for roof top unit controllers. For the case study, they gave an overview of the technology and the timeline as it relates to identification of the opportunity, the testing and assessment of the technology, and the launch of the technology. They also highlighted results and adoption of the technology since its launch.

Belliveau asked what would happen if someone had a non-technology implementation idea and where that would fit into the process. Gibbons noted that it would feed into the innovation and

technology committee as opposed to MTAC. Schuur asked if there have been any examples of non-technology ideas that have made it through the process yet. Gibbons indicated that there have been no examples so far.

Seidman noted that the timeline for the case study was relatively long and asked if there were examples with shorter timelines. Kulkarni noted that that project took a long time because it was a completely new technology. He also noted that there are certainly examples of technologies that only had a six month timeline as opposed to a timeline that is several years long.

8. Adjournment

Schuur adjourned the meeting at 3:57 PM.