

## EEAC Workshop #6

Tuesday January 30<sup>th</sup>, 2018

9:00 AM – 1:30 PM

MassHousing, 1 Beacon Street, Boston

Facilitators: Dr. Jonathan Raab, Raab Associates & Toby Berkman, CBI

### Draft Meeting Summary

EAC Councilors, consultants, program administrators, and DOER staff were in attendance at this workshop. A list of these attendees is included in Appendix A. Numerous members of the public were also in attendance. The workshop background material and presentations can be found at <http://ma-eeac.org/january-30-eeac-planning-workshop-6/>.

#### INTRODUCTION AND WORKSHOP OVERVIEW

Dr. Jonathan Raab, facilitator from Raab Associates, welcomed the group to the workshop and reviewed the agenda. The workshop included the following topics of discussion:

- Active Demand Management (ADM)
- Finalizing EEAC Recommendations on High-Level Strategy Goals and Sector-Specific Strategies (Residential and Low Income, and Commercial and Industrial (C&I))

There was also a period for public comment at the end of the workshop.

Dr. Raab noted that the goal of the workshop was to finish the recommendations document so that it could be presented at the next Council meeting alongside the requisite resolution. He suggested that because the group needed to finish the recommendations during this meeting, during those instances when they cannot reach a consensus agreement in a timely fashion, they should move forward based on the preference of the majority of the Councilors. The Councilors agreed to this suggestion unanimously. Dr. Raab also reminded the group that the facilitators, DOER staff, and representatives from the Consultants and the Executive Committee had, with approval from the Council, worked to streamline the language in the recommendations document that had emerged from the first five EEAC workshops, and added nine high-level recommendations for the Councilors consideration. Their edits were distributed to the group in advance of the workshop in both clean and redline formats.

## ACTIVE DEMAND MANAGEMENT

### Councilor Presentation

Jeff Schlegel, EEAC Consultant, reviewed the topic of Active Demand Management and presented the consultants' draft recommendation. Slides from his presentation are available on the workshop materials website.

### Question & Answer Session

The Councilors made the following comments and asked the following questions during the question and answer session following Mr. Schlegel's presentation. *Responses from EEAC Consultants or PAs are in italics.* Unless otherwise noted, responses are from EEAC Consultants:

- The four options for measuring ADM impacts in the presentation all focus on the customer. If there were a utility-facing project that managed demand and was not behind the meter, like a big storage facility, could that be part of the program?
  - *That is probably a policy question, but we envision such projects being behind the meter, as authorized by the Green Communities Act (GCA).*
- Commissioner Judson further clarified that the 2016 Energy Diversity Act and the GCA made clear that behind-the-meter storage can be funded by energy efficiency programs, but did not specifically highlight grid-scale storage. Our focus should be on the customer side and behind the meter.
- The PAs already have an incentive to evaluate many kinds of ADM. If we name a specific goal, for example MWs for a set duration, might that focus the PAs too much on storage as opposed to other kinds of ADM?
  - *Not everything people think about for ADM will be cost-effective. The GCA has a cost effectiveness requirement for programs. With ADM, capacity avoided costs are especially important, and not everything will be cost effective. The consultants think it may be important to do things that are barely cost effective, given how industry is evolving. We will then be able to "piggy back" on these approaches to offer more services as time goes on. That is the rationale behind having a separate ADM goal.*
- Right now, costs for companies involved in demand management programs go way up if they use energy at the wrong time. How much are these programs worth to customers, and by what percentage will they cut their energy costs?
  - *For customers on demand charges, these systems can help manage those charges. While those charges have not historically been very high in Massachusetts, they might go up in the future. Demand management can also provide system or grid benefits. We need to figure out how much we need to incentivize customers to use these systems. Customers can then use these same systems to manage their demand at other times.*

- The \$30 per thermostat incentive is so low, it is hard to see why anyone would get involved. Customers need a per kilowatt-hour incentive.
  - *PA response: The PAs are testing a range of incentive types and amounts, including an enrollment incentive, a performance incentive, and incentive to purchase a thermostat. The PAs do not know the perfect incentive amount or type, which is why they are doing demonstration projects. Regarding the price per thermostat, there is a theory behind it. It takes two thermostats to achieve a kilowatt of load shed, so the incentive amounts to \$60-\$70 per kilowatt of load shed.*

### PA Presentation

\_Ezra McCarthy from National Grid and [REDACTED] from Eversource provided PA observations on ADM. They highlighted the following points:

- The PAs are trying to figure out appropriate ADM incentives through demonstration projects. The approach may need to be different across sectors, because ADM measures have very different impacts in different sectors.
- There is a need to balance ADM measures that result in load “shifting” with those that result in “shimmying” and “shedding.” Obtaining savings via “shedding” is necessary to overcome the cost of the programs, but the other two approaches also add value.
- The PAs have some concerns about splitting active and passive demand, and having a separate ADM goal. If the goal of the program is to reduce peak demand, both active and passive programs will contribute to this goal, and it may be preferable to give the PAs leeway to decide which approach is preferable. In addition, the quantifying measures in the Consultants’ presentation may lead to perverse incentives. The first measure, for example, could lead PAs to accumulate MWs but not at the right times. The second measure, MWs during specific performance hours, might make sense, but the PAs are already targeting these hours via passive demand measures. With respect to MWs for a set duration, the third measure, measuring them might lead PAs to over-procure ADM. For the fourth and final measure, MW-hours as an aggregate of MW reduction, the PAs could inflate these numbers by dispatching ADM during months where it is less needed. In other words, it is possible to achieve each of these measures without getting good operational outcomes.

A Consultant clarified that their recommendation does not involve four separate goals with four separate measures. Rather, the Consultants suggested one ADM goal separate from energy efficiency and an effort to quantify it, potentially using a combination of the measures noted in the document.

### Question & Answer Session

The Councilors made the following comments and asked the following questions during the question and answer session following the PAs' remarks. *Responses from the PAs and Consultants are in italics.* Unless otherwise noted, responses are from PAs:

- Consumer empowerment plays a big role in ADM. We should work to actively involve consumers in order to unlock the full potential of this measure. There is also the issue of energy justice. ADM should be for all segments of society.
  - *Without all types of customers we would not be able to achieve the value of ADM. We need customers to engage with the technology and have an interest in managing their energy costs. ADM needs to be available and promoted for all customers.*
- Customers should have access to ADM data so they know whether it is working or not. Without data, these programs will not go anywhere.
- Why is it that “shifting” and “shimmying” demand alone do not capture sufficient transmission and distribution (T&D) capacity benefits? If you can truly take off peak energy and use it during peak, then there should be a capacity benefit.
  - *The key driver for capacity and T&D value comes from when the system is stretched, which is driven by summer peak usage. The shift to mitigate ramps and capture surplus renewables is driven by Independent System Operator dispatch, not the distribution companies. The ADM sweet spot for PAs is “shift” and “shed,” while “shimmy” is more about frequency regulation.*
  - *Consultant response: This will change as new technologies come on the system, like electric vehicles (EVs).*
- Engagement with consumers should be a theme running through all of our goals. The more the consumer is aware of impacts the better.
- While it's true that passive demand management brings a lot of demand benefits, I don't understand the PAs' suggestion that it would be unhelpful to layer ADM on top of this.
  - *While the PAs believe in active peak reduction, they do not think it should matter how they achieve their overall goal so long as they achieve it. The concern is about artificial restraints.*
- Social science suggests people may be more likely to do something if you ask them to do it for free than if you pay them, and they will also change their attitudes. In California, for example, they sent out a bulletin saying, “Don't use energy between 6:00-8:00,” and it was effective. Before we spend money on ADM, we should test whether it is effective to get in touch with people and simply ask them not to use energy. We should conduct trials utilizing this approach, and see what savings we get for free.
  - *Consultant response: The goal does not preclude this kind of action.*
- The EEAC should call for time of use pricing. We are not going to capture the benefits of ADM without it.

- The Councilors need time to digest the pilot studies and lessons learned. I don't know that it would change the recommendations, but I fully expect the April draft to give us adequate time to absorb lessons learned from the pilots on ADM. The third draft recommendation on ADM has implications for how we structure performance incentives. Some items may not have high benefits within the first few years, so we need to think about changing the market. We should make sure we have enough time to address this before we vote on it in October.
  - *We are expecting results in February, and the PAs' demand potential studies are nearing completion.*

### Modifications to Recommendation

After discussing the issue as a group, the Councilors collectively agreed to maintain the consultants' draft recommendations on ADM for 2019-2021 as written, without amendment, as shown below. A clean version of all the revised recommendations is included in Appendix B:

Include goals specific to active demand management and integrate the delivery of active demand management offerings within the EE programs in the 2019-2021 Plan.

1. Move beyond the current demand demonstrations and scale up ADM activities fully in the 2019-2021 Plan, including claiming demand savings and quantifying impacts.
2. Integrate the delivery of ADM offerings with energy efficiency program delivery.
3. Develop a goal for ADM that is separate and distinct from goals for traditional EE/passive demand reduction. Plan, track, and report the capabilities, performance, and costs of active demand management separately and in a manner that will enable development of and tracking towards the active demand management goal.

### **FINALIZING RECOMMENDATIONS**

Consultants next reviewed the draft recommendations document in its entirety, beginning with the recommendations on High-Level Strategy, then Residential and Low Income, and then Commercial and Industrial (C&I). The outcome of this review process is shown below in the section on amended recommendations. To address those instances where the substance or outcome of the discussion is not reflected in the amended recommendations, some selected elements of the discussion are reported below.

### Selected Discussion

The group offered the following comments during the recommendation editing process, organized by theme. Unless otherwise noted, comments are from Councilors.

#### *Specifying overall savings and benefits*

- We should consider a high-level recommendation specifying an overall level of savings and benefits. For example, the document could recommend that PAs “maintain or increase overall savings and benefits relative to the 2016-18 plan.”
- Alternatively, we could include language like this as part of an introductory section. Right now, we have not yet had time to talk about savings or benefits levels, but the Council should do so once the consultant studies and analyses come out. The Council should consider a new resolution in April specifying its views on the numbers.
- It is too early to talk about savings and benefits levels right now, but we could consider adding a recommendation to “achieve all cost effective energy efficiency.”
- PA comment: The PAs would encourage the Council to keep their recommendations at the strategic level. The PAs value flexibility, given uncertainties about costs, program design, and cost effectiveness. The PAs provided comments to Dr. Raab that are consistent with this approach. (And Dr. Raab explained that he forwarded the PAs suggested edits to the group that refined the recommendations document—and asked them to review and bring forward to the Councilors any that they thought could improve the final recommendations.)

#### *Specifying types of hard to reach and underserved populations in high-level strategic recommendation #1*

- It is important to name specific groups in high-level recommendation #1, including renters.
- In this recommendation, we should not specify high-income sectors where customers are choosing not to participate.

Dr. Raab conducted an informal poll to see which Councilors in attendance supported specifying which specific groups in this recommendation. The results were as follows and consistent with groundrule incorporated in the recommendation all that received majority support from the attending Councilors:

- Moderate income: all in favor
- Renters: all in favor
- Small business: 9 in favor; 3 opposed
- Non-Profits (all in favor except one abstention)
- All Income (all opposed except 1 in favor)

*The final recommendation reads:* Increase participation by and savings from hard to reach and underserved populations and geographies, ~~including renters, moderate income households, and small business,~~ **including moderate income, renters, small business, and non-profits.**

#### Miscellaneous

- It is critical to include language around “cultivating and expanding an effective, motivated sales force.” This could be the most important potential recommendation in the document. [Note: Not supported by majority of Councilors for inclusion in the recommendations.]
- It is also very important to add the language “Weatherization should remain a high priority and focal point” at least somewhere in the document. Where the language is added is less important. Note: Supported by majority of Councilors for inclusion in the recommendations.]
- In the CHP recommendations section, the Council should consider changing the word “savings” to “participation” once they see the results of the potential studies. Note: Not supported by majority of Councilors for inclusion in the recommendations.]

#### Modifications to Recommendation

After discussing the recommendations as a large entire group, the Councilors collectively agreed to amend the draft recommendations as shown below. Additions to the draft recommendation **are shown in red**, and deletions ~~are in strikethrough~~. An issue on which the Councilors wanted to further consider is **highlighted in yellow**. Language from the prior draft on which that Councilors had not agreed, but which they agreed in this meeting delete, ~~is highlighted in yellow and is in strikethrough~~. A clean version of all the revised recommendations (which includes highlighted language) is included in Appendix B:

### **EEAC Councilor ~~DRAFT~~ Workshop Recommendations**

This document includes the draft EEAC Councilor strategic and tactical recommendations developed in **its workshop process**.

**Note from Workshop #6: May want to add an overall goal in Council resolution regarding the need to continue to pursue all cost effective energy efficiency savings, and savings and other benefits in the 2019-2021 Plan that are equal to or exceed the current Plan.** ~~workshops #2-#5 (there were no recommendations coming out of workshop #1 by design). However, the document begins with 9 key higher-level strategic recommendations for the Councilors consideration.~~

## Proposed Key Strategic Recommendations

- 1) Increase participation by and savings from hard to reach and underserved populations and geographies, ~~including renters, moderate income households, and small business,~~ **including moderate income, renters, small business, and non-profits.**
- 2) Include goals specific to active demand management and integrate the delivery of active demand management offerings within the EE programs in the 2019-2021 Plan.
- 3) ~~Include active demand management goals & integrate new active demand management offerings into the 2019-2021 Plan.~~
- 4) Promote & incentivize fuel switching ~~measures~~ **strategies** in all sectors that are consistent with and support the Global Warming Solutions Act.
- 5) Provide a new, integrated residential program design that maintains strong savings and benefits for all residential homeowner and rental initiatives by:
  - a. increasing customer capture,
  - b. providing new methods for realizing savings,
  - c. expanding HVAC, behavioral, financing, and upstream offerings, and
  - d. increasing conversion rates for HVAC and weatherization measures.
- 6) Increase the program savings in the C&I sector from HVAC, process, lighting, and CHP measures.
- 7) Actively promote zero energy **ready** buildings (ZEBs) & Passivehouse for new construction and major renovations in all sectors.
- 8) ~~Establish a new multifamily retrofit program framework~~ **Establish a multi-family framework that better integrates residential and commercial offerings and is cost-effective** ~~to ensure continued savings and cost effectiveness.~~
- 9) ~~Review low income programs for participation & achievement gaps, and additional savings & cost efficiency opportunities, to ensure continued success.~~ **Review low-income programs for potential improvements in participation and achievement of savings, and seek additional savings & cost-efficiency opportunities, to ensure continued success.**
- 10) Modernize data management across all PAs and sectors, **enhance accessibility to and usefulness of the data to the public,** and leverage additional data sources to accomplish items 1-8 above.

## Sector-Specific Recommendations

**The following are strategies that Councilors and the Council Consultants have identified through the workshop process that the PAs should consider during the next three-year plan and beyond, taking into account which will be most impactful in meeting the Council's higher-level strategic objectives and obligation to achieve all cost-effective energy efficiency.**



I. Following presentations and Q&A with the Consultants and PAs, and using draft recommendations developed by the Consultants, the participating Councilors refined and then agreed on the following recommendations for each topic at workshops #2-#5 unless highlighted in yellow indicating that one or more Councilors didn't agree with the language or the participating Councilors wanted to revisit the recommendation. Outstanding questions/notes [are in brackets].

## Cross-Sector Recommendations

### A) Active Demand Management

Include goals specific to active demand management and integrate the delivery of active demand management offerings within the EE programs in the 2019-2021 Plan.

4. Move beyond the current demand demonstrations and scale up ADM activities fully in the 2019- 2021 Plan, including claiming demand savings and quantifying impacts.
5. Integrate the delivery of ADM offerings with energy efficiency program delivery.
6. Develop a goal for ADM that is separate and distinct from goals for traditional EE/passive demand reduction. Plan, track, and report the capabilities, performance, and costs of active demand management separately and in a manner that will enable development of and tracking towards the active demand management goal.

## II. C&I Recommendations

### A) Combined Heat and Power:

The electric PAs should set a clear and increasing target to grow CHP savings by:

- Utilizing EM&V and Council feedback to streamline participation, test alternative outreach models (e.g. circuit riders with an emphasis on small/medium customers), and increase collaboration with CHP vendors.
- Addressing potential for CHP in New Construction and small CHP systems
- Continuing to explore and seek to deploy resiliency (e.g. black start-islanding) and ownership innovations (e.g. third party or other)

### B) C&I Process Savings:

The PAs should continue to increase process savings goals (electric and gas), in addition to other end use savings from industrial customers by:

- Increasing technical assistance and support to overcome barriers and increase savings
- Demonstrating that the PAs are sharing best practices and developing statewide initiatives on common end uses
- Providing additional energy consumption data to customers, including incentives for EMIS and benchmarking of different processes

### **C) Data-Driven Customer Acquisition and Engagement Strategies; and Big Data:**

The PAs should create a framework and incentives to increase the presence and use of market-driven data acquisition including software, granular energy usage measurement, and monitoring based commissioning services, including adjustments to the M&V framework to facilitate this activity.

### **D) Small Business:**

The PAs should increase savings in the Small Business Initiative (SBI) by:

- Unifying a SBI delivery model statewide (including statewide PA-led marketing)
- Promoting uptake of comprehensive measures
- Expanding outreach **strategies** and committed resources to target and engage a wider range of small business customers and owners of buildings occupied by small businesses
- Establishing a statewide small business **and non-profit** ambassador position that can act as an ombudsman for customers

### **E) New Construction:**

The PAs should seek opportunities and increase resources to drive continuous improvement and effective feedback loops in the new construction **and major renovation** market so that a higher percentage of buildings are served and low-energy use/low-GHG buildings are measured, recognized, promoted, and emulated in the market. **Specifically, actively promote zero energy ready buildings (ZEBs) & Passivehouse for new construction and major renovations. Also pay particular attention to the commercial real estate sub-sector including new construction, major renovations, and tenant fit-outs.**

### **F) Lighting & Controls:**

The PAs should maximize C&I lighting savings by emphasizing the linear lighting market and ~~incorporating~~ **incentivizing** active demand management-enabled controls. The PAs should increase the percent of lighting opportunities used as lead generation for non-lighting projects. Methods to consider include:

- Increasing participation in lighting initiatives (including upstream) by expanding marketing, outreach and technical support to customers, contractors, and trade associations
- A new offering, including education and training, to increase the penetration and successful use of advanced lighting controls
- Expanding lighting design service support for customers and designers/engineers, through a lighting design initiative.
- Converting all company owned streetlights to LEDs by the end of the next three year plan including strategies that incentivize use of controls to capture greater energy savings.

#### G) HVAC & Controls:

The PAs should increase HVAC savings and build market capacity for future HVAC savings growth. The PAs should work toward HVAC market transformation to make right-sized energy efficient HVAC systems the norm, and take a system optimization approach for existing and new systems in order to build a long-term upward savings trajectory for the next two three-year-plans. The PAs should:

- ~~Conduct a market effects study and then a follow up study by 2020 that will include recommendations to increase HVAC savings in the 2022-2024 three-year plan.~~
- Conduct a market baseline study that includes recommendations to increase HVAC savings in the 2022-2024 three-year plan, and lays the groundwork for potential future efforts to assess market effects.
- Promote optimized building automation systems, as well as including retro-commissioning and persistent commissioning of existing systems and rigorous design review and commissioning of new control systems.
- Address known market barriers to upfront investment in the engineering services necessary for system optimization through innovative program offerings. Incentivize performance verification and ongoing system tuning.
- Substantially increase ongoing education and training programs for building operators.

#### H) ~~New Demand Management Opportunities:~~

~~The Council would like to see all electric PAs include cost-effective demand management offerings in the 2019-2021 plan, in addition to achieving passive demand reductions through efficiency.~~

~~[Note: Councilors recommend this be revisited in the January stakeholder workshop after additional information is available.]~~

### **Fuel Switching:**

The Council recommends that the 2019-2021 Plan include fuel switching ~~measures~~ **strategies** that are consistent with and support the Global Warming Solutions Act. These include opportunities to strategically electrify energy use, and to switch from inefficient equipment to more efficient fuel and/or equipment, where cost-effective. A customer should be able to choose energy efficiency services regardless of current fuel, as long as the equipment or upgrade is to efficient equipment and is cost-effective.

### **I) Municipal**

**PAs should seek opportunities and increase dedicated resources to align relevant programs with municipal processes, timelines and financing streams, and to enhance savings and participation.**

## **III. Residential Recommendations**

### **A) Heating and Cooling Equipment:**

- Emphasize an integrated, systems-based approach to HVAC equipment promotion and installation, particularly for heat pumps and condensing boilers
- Streamline the customer experience and ensure seamless and comprehensive delivery of all measures
- Ensure service providers are broadly knowledgeable and compensated appropriately, and/or prescreen customer projects to match them with service providers with appropriate expertise
- Expand HVAC efforts by providing new active demand management and fuel switching measures along with the appropriate education of the consumer
- Expand water heating and HVAC upstream offerings, leveraging best practices and lessons learned from the C&I sector
- Enhance connections between HVAC, weatherization, and other whole-house offerings, enabling customers to engage in more holistic improvements in a single transaction or over time
- **Weatherization should remain a high priority and focal point**

### **B) Serving Hard to Reach and Underserved Populations and Geographies:**

- Increase participation and savings for hard to reach populations by:
  - Implementing a stakeholder engagement process to reassess program design and improve participation in renter and moderate income customer initiatives

- Identifying underserved demographic groups, developing new segmented approaches to serve them, identifying best marketing and sales approaches to reach them, and adequately funding and incentivizing these approaches
- Increasing outreach and partnerships with community based organizations and social networks, municipalities, employers, and other organizations
- Applying lessons learned from low income programs
- Using data more effectively to better target customers – specifically geo-targeting and identification of areas with linguistic barriers
- Develop new delivery models to increase participation rate of households between 60 and 80 percent median income
- Implement methods to increase access to and use of financing across all customer segments

#### **C) Behavior Programs:**

- Broaden current behavioral program strategies to include cost-efficient new approaches for customers of all Massachusetts PAs – for example, using a statewide procurement and integrating customer data for better customization, or points or reward programs for saved energy

#### **D) New Construction:**

- Offer specific low energy path(s) such as net zero energy ready and Passivehouse (multi-family) to better align with the stretch code and to drive construction of low energy buildings and market transformation
- Integrate active demand management measures that promote load shifting opportunities of solar photovoltaics, electric vehicles and chargers, and storage
- Explore opportunities to capture additional savings via major renovations

#### **E) Integrated Residential Program Design**

Increase participation levels and maintain strong program savings and benefits achievements for all residential homeowner and rental initiatives by providing a new integrated residential program design that:

1. **Increases customer capture:**
  - a. Segment, target, prioritize, and customize marketing and offers to customers by leveraging remotely accessible data, third-party sources, and real-time site data
  - b. Increase the points of entry into the Mass Save program for customers during home improvement, financing, and other transactions, linked to incentives that meet a wider range of customer needs

- c. Cultivate, diversify, and expand market channel and community partnerships to inform, recruit, and enroll customers in the program
- ~~d. Cultivate and expand an effective, motivated sales force~~
- ~~e. Acquire and upgrade information about customers' decision-making processes regarding participation in energy efficiency~~

**2. Provides new methods of realizing savings:**

- a. Promote cost-effective new fuel switching measures that are consistent with and support the Global Warming Solutions Act
- b. Integrate new active demand management measures (e.g. EV charging) and storage into EE programs, in addition to achieving passive demand reductions through efficiency
- c. Co-deliver and coordinate electric vehicles/charging, distributed energy resources, and other related services with EE programs, while ensuring primacy of energy efficiency measures

**2. Increases conversion rates for existing measures** (especially weatherization, heating and cooling)

- a. Develop new audit approaches, including data-driven remote options
- b. Provide an easier path and reduce barriers for customers – require fewer steps, automate and expedite the approval processes, and improve access to financing
- c. Improve feedback loop and increase targeted reengagement to close on recommendations
- d. Cultivate and expand trusted, long-term relationships with customers
- e. Offer greater customization to customers using single measure, comprehensive, incremental, and performance-based options

**F) Multi-Family Program:**

- 1. Establish a multi-family retrofit program framework that seamlessly integrates residential and commercial metered savings opportunities into whole building solutions, and increases uptake of whole building measures
- 2. Enable program tracking and energy benchmarking by building/facility to support improved customer service and provide customizable levels of service appropriate to varying customer and building types including incremental paths to whole building improvements
- 3. Identify and present options to address market and regulatory barriers to serving multifamily properties, including a blended benefit cost ratio for multifamily core initiative
- 4. Leverage key points in the building life cycle including refinancing
- 5. Reexamine a pay for performance program for market rate multifamily

### **G) Low income Programs:**

1. Identify and support new and enhanced electric and gas measures and innovative strategies
2. Review program model strategies to achieve additional cost efficiencies
3. Identify and implement continuous improvement opportunities and document in the 2019-2021 Plan
4. Assess whether there are gaps in participation and take steps to deliver equivalent and proportional services regardless of geography if necessary
5. Develop and demonstrate alternative measure packages and service delivery models to serve a wider and diverse range of customer needs and interests
6. Ensure communication between the market rate and Low-Income Programs to identify and coordinate program innovations when applicable
7. Increase outreach and partnerships with community based organizations and social networks, municipalities, employers, and other organizations

### **PUBLIC COMMENT**

After the Councilors finished reviewing the draft recommendations, Dr. Raab opened the meeting for public comment. Eight members of the public offered comments.

#### Steve Cowell, E4TheFuture

My comments have also been submitted electronically. I want to augment or supplement what's already been discussed. The group did a great job today. On residential, it is important to note that we should look at new technologies that link to demand response and customer responsive behavior modification, like the sense and whisker labs, or that link to energy tracking for appliances, or new technologies that are integrated with smart thermostats.

Regarding demand response, we should remember the importance of smart meters. That is how you get information to and from participants. Some technologies are doing that outside of having a proper meter. It would be very helpful to develop a dynamic pricing strategy. There are interesting and positive results from a model in Illinois.

Finally, we should find ways to look at integrating customers to work together outside their silos. Commercial, non-profit, residential, low income and non-low income customers frequently live next to each other. There are important ways you could unify a community to work collaboratively around energy savings and reduction. E4TheFuture will kick off a program tomorrow related to this issue.

Regarding C&I, E4TheFuture has been participating in a small business task force. We appreciate their efforts. One issue is that there is a difference between small

commercial and micro commercial. Micro is the least participating sub-sector. We've gotten feedback on this from PAs. Small businesses are the most diverse customers out there. We need to come up with strategies that silo down and look at common subgroups within the small business sector. There is a big difference between a shoe store and a bread maker with lots of ovens. You need to look at the type and profile of the business. I ran the Long Island Small Biz Association for ten years, and learned how hard this was.

In addition, we recommend that the ambassador program involve a third party, and a competitive solicitation with specific skills around sub-sector types. Split incentive has been a big issue between tenants, property owner, chain stores, and solely owned small businesses. Our recommendation is to work with PAs to come up with state strategies around sub-sectors and types of small businesses, to help with effective outreach and participation.

We hope to do focus groups within next month or to work collaboratively with PAs and consultants to get more information to design outreach and marketing, to increase it, and to better target it.

#### Mary Cerulli, Mothers Out Front

We at Mothers Out Front have a presence across eight states, but a huge presence here in Massachusetts. We went to DPU with a shared action plan with utilities to find and fix big leaks. There are a large number of natural gas leaks across state. 95% of them are methane, a powerful greenhouse gas. I'm concerned with some language in the recommendations about fuel switching. The recommendation on fuel switching strategies provides opportunities to strategically electrify and switch to more efficient fuel and equipment. But as it stands, we can go from oil to gas or gas to gas. That won't help us reach the Global Warming Solutions Act targets. The incentive to build more gas infrastructure is out of step with where Massachusetts needs to go. Massachusetts needs to go to renewables. It's a huge loophole. Imagine an example from the perspective of a mother. It's like your teenager goes out on New Years Eve. You tell her to not drive after midnight but she drives with her friends. Switching from gas to gas doesn't work, and it's a dangerous product with public health impacts, and toxins coming out through gas stoves and fireplaces. The idea that we would allow utilities to get compensated with ratepayers' money for that doesn't fly with me.

#### Daria Mark, Mothers Out Front

I have two children and I think about what climate change means for them every day. In my role, I give energy efficiency presentations about how people can cut electricity use and heating. This provides me with a great opportunity to connect with people. It goes great until the heating portion of my presentation. People will ask, "Is there a non-gas heating solution?" I say there are heat pumps. I say how much they typically cost, and



then they get a bad look on their faces. I say, “Don’t worry, MassSave has rebates for heat pumps.” But the highest rebate I saw was for \$300. For that amount, I don’t think anyone will buy a heat pump when they need to do construction on their home to do this. It’s of no value to use ratepayers’ money to get slightly more efficient gas burning heating systems when we’ll have to change it again soon anyway. My advice is change the language so the only time you can offer incentives for heating is to go to electric heat pumps. They require work to the home but they are a great product.

Jamie Dickerson, Northeast Clean Energy Council

The member companies of the Northeast Clean Energy Council include solar companies, wind, efficiency providers, and energy storage and management solutions provides. Our members wholeheartedly support the recommendations on ADM. We urge substantial ADM goals in the plan. Many members are starting to address peak demand. With adoption and implementation of the ADM recommendations, our member companies are poised to help the Commonwealth achieve substantial ratepayer benefits.

Emily Hartmann, ener-g-save

We’ve been doing outreach on energy efficiency in the Pioneer Valley for the past six months, collaborating with towns, contractors and grassroots organizers. We want MassSave data to be easily available in anonymous form so that municipalities and nonprofits can see trends and program results.

For contractors, we are interested in growing the weatherization industry. We want to incentivize contractors to aim for greater energy savings, and give them more freedom in advertising their services, for example by shortening the wait time for approval of marketing materials.

We also want to make clearly accessible any changes to incentives with information about duration and exceptions. Regarding fuel switching, we prefer clear language specifying the switch to clean energy only rather than oil to propane or natural gas, in the interests of advancing the goals of the Global Warming Solutions Act. We would also like Spanish and other language versions of websites and phone services.

Mike Prokosch, Boston Climate Action Network

This is a slightly different topic. There is a series of listening sessions, and an early one is in my neighborhood of Dorchester. I am wondering how those are being publicized. Are people who have used or tried to use MassSave energy efficiency programs being notified? There is a great wealth of knowledge and experience among people who have gotten audits but who didn’t complete weatherization. I have not been able to find information about the listening sessions on any website. I’m sure neighborhood organizations would publicize it if they were reached out to. If MassSave has contact

information for users of the program, it could publicize the listening sessions directly to them.

*A representative from DOER confirmed that there is a February listening session in Dorchester. Community organizations are helping DOER publicize it and they are asking the PAs to help. There will also be sessions in Salem, Fall River, Mashpee, Worcester, Lowell and Springfield. There will be plenty of opportunities for people to engage in a friendly and lively town hall.*

Katy Eiseman, PLAN for the Northeast

Thank you everyone for all your hard work on this. I agree on not wanting energy efficiency money spent on conversions to gas. I've noticed for a number of obvious reasons a lot of emphasis on electric utilities and more attention given to what they can do on ADM and peaking. But there needs to be some push on the gas side for peak reductions and other measures to keep gas PAs in line with the electric side, so that people who heat with gas don't have a \$2,000 cap on insulation.

I support and applaud the recommendation for more stakeholder engagement. I'd hope that would include engaging with contractors and energy efficiency companies who have on the ground, day-to-day experience with barriers to participation in the programs. I also want to reiterate the need for strong overall savings goals in the plan, which hasn't been discussed much. That's what this is all about.

Alex Papali, Clean Water Action

We're a member of the Green Justice Coalition. We've consistently raised through these planning processes the issue of access for folks who've faced significant barriers in the past, including those sectors mentioned here. Non-English speakers should be added to the list. They face significant barriers. We will be submitting additional comments through the process, but I will say a couple more things here.

We appreciate the listening tour being organized. We are just unsure who will be there. We suggest DOER staff and Councilors be at these meetings. You can see a significant focus on the Boston area, and it is good that folks from elsewhere will have an opportunity to weigh in.

Regarding data, the PAs have refused to implement DPU's very clear 2014 database order. It's not that the PAs tried and failed to implement it, they've simply flouted it. The available data on MassSave has been insufficient to meet the needs articulated by stakeholders for years, including by the Green Justice Coalition. We strongly recommend that the next plan include proper tracking and reporting of data. It's really quite simple.

At the end of the last planning process, the possibility of tying PAs' very large performance incentives to their performance was raised. That shouldn't be controversial. Councilors generally supported it, but felt they needed more time to discuss it. They've now had time to discuss it, and it shouldn't be a real cause for concern. We strongly urge the Council to recommend tying incentives to performance.

We also suggest enhancing attention paid in the draft to the small commercial sector, in which community members can play a significant role in outreach and reinforcement. PA efforts can be enhanced by community partnerships.

*A PA represented responded to the suggestion that PAs have not been acting in compliance with the DPU's order by noting that the DPU put a stay on the order, and the PAs are continuing to comply with statements in the order.*

## **CLOSING**

Judith Judson, DOER Commissioner and EEAC Chair, thanked those who provided public comment. She noted that she was glad to hear of the interest in the public listening sessions and in heat pumps. She noted that the Massachusetts Clean Energy Center has additional incentives on heat pumps, and incentives can also be found on DOER's Energy Sense website.

Ms. Judson thanked the Councilors and PAs for their participation, suggested that the group ended up with a great set of recommendations, and noted that the next step is to get the recommendations into a strong next three-year plan. She closed the meeting by noting that Massachusetts is number one in energy efficiency and wants to stay there. Energy efficiency is very cost effective, and aligns with the Commonwealth's ability to reduce greenhouse gas costs effectively.

## Appendix A: Attendance

The following Councilors, consultants, program administrators, and DOER staff were in attendance.

### Councilors

- Judith Judson (Chair)—DOER
- Amy Boyd—Acadia Center
- Elliott Jacobson—Low-Income Energy Affordability Network
- Brian Beote—Low-Income Energy Affordability Network
- Don Boecke (for Maura Healey)—AGO
- Bob Rio—Associated Industries of MA
- Rick Malmstrom—Dana Farber
- Sharon Weber—DEP
- Eric Beaton (for Chrystal Kornegay)—DHCD
- Mary Wambui—Dorchester Bay Economic Development Corporation
- Victoria Rojo—ISO-NE
- Cammy Peterson—MAPC
- Larry Chretien—Mass Energy Alliance
- Charlie Harak—NCLC
- Sharon Weber—DEP
- Paul Gromer—Peregrine Energy
- Paul Johnson—Small ESCOs (Greentek)

### Council Consultants

- Jeff Schlegel
- Eric Belliveau

### Program Administrators<sup>1</sup>

- Names?

### DOER Staff

- Ian Finlayson
- Alex Pollard
- Matt Rusteika
- Others? [

**Comment [TB1]:** Need additional names if we re going to keep these. Otherwise we can just use the Councilors' attendance and delete the rest.

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<sup>1</sup> Additional PAs attended the workshop as audience members, but are not included in this list.

## Appendix B: Clean Version of Revised Recommendations

### EEAC Councilor Workshop Recommendations

This document includes the draft EEAC Councilor strategic and tactical recommendations developed in its workshop process.

Note from Workshop #6: May want to add an overall goal in Council resolution regarding the need to continue to pursue all cost effective energy efficiency savings, and savings and other benefits in the 2019-2021 Plan that are equal to or exceed the current Plan.

### Proposed Key Strategic Recommendations

- 1) Increase participation by and savings from hard to reach and underserved populations and geographies including moderate income, renters, small business, and non-profits.
- 2) Include goals specific to active demand management and integrate the delivery of active demand management offerings within the EE programs in the 2019-2021 Plan.
- 3) Promote & incentivize fuel switching strategies in all sectors that are consistent with and support the Global Warming Solutions Act.
- 4) Provide a new, integrated residential program design that maintains strong savings and benefits for all residential homeowner and rental initiatives by:
  - increasing customer capture,
  - providing new methods for realizing savings,
  - expanding HVAC, behavioral, financing, and upstream offerings, and
  - increasing conversion rates for HVAC and weatherization measures.
- 5) Increase the program savings in the C&I sector from HVAC, process, lighting, and CHP measures.
- 6) Actively promote zero energy ready buildings (ZEBs) & Passivehouse for new construction and major renovations in all sectors.
- 7) Establish a multi-family framework that better integrates residential and commercial offerings and is cost-effective
- 8) Review low-income programs for potential improvements in participation and achievement of savings, and seek additional savings & cost-efficiency opportunities, to ensure continued success.
- 9) Modernize data management across all PAs and sectors, enhance accessibility to and usefulness of the data to the public, and leverage additional data sources to accomplish items 1-8 above.

## Sector-Specific Recommendations

The following are strategies that Councilors and the Council Consultants have identified through the workshop process that the PAs should consider during the next three-year plan and beyond, taking into account which will be most impactful in meeting the Council's higher-level strategic objectives and obligation to achieve all cost-effective energy efficiency.

### I. Cross-Sector Recommendations

#### A) Active Demand Management

Include goals specific to active demand management and integrate the delivery of active demand management offerings within the EE programs in the 2019-2021 Plan.

- Move beyond the current demand demonstrations and scale up ADM activities fully in the 2019- 2021 Plan, including claiming demand savings and quantifying impacts.
- Integrate the delivery of ADM offerings with energy efficiency program delivery.
- Develop a goal for ADM that is separate and distinct from goals for traditional EE/passive demand reduction. Plan, track, and report the capabilities, performance, and costs of active demand management separately and in a manner that will enable development of and tracking towards the active demand management goal.

### II. C&I Recommendations

#### A) Combined Heat and Power:

The electric PAs should set a clear and increasing target to grow CHP savings by:

- Utilizing EM&V and Council feedback to streamline participation, test alternative outreach models (e.g. circuit riders with an emphasis on small/medium customers), and increase collaboration with CHP vendors.
- Addressing potential for CHP in New Construction and small CHP systems
- Continuing to explore and seek to deploy resiliency (e.g. islanding) and ownership innovations (e.g. third party or other)

## **B) C&I Process Savings:**

The PAs should continue to increase process savings goals (electric and gas), in addition to other end use savings from industrial customers by:

- Increasing technical assistance and support to overcome barriers and increase savings
- Demonstrating that the PAs are sharing best practices and developing statewide initiatives on common end uses
- Providing additional energy consumption data to customers, including incentives for EMIS and benchmarking of different processes

## **C) Data-Driven Customer Acquisition and Engagement Strategies; and Big Data:**

The PAs should create a framework and incentives to increase the presence and use of market-driven data acquisition including software, granular energy usage measurement, and monitoring based commissioning services, including adjustments to the M&V framework to facilitate this activity.

## **D) Small Business:**

The PAs should increase savings in the Small Business Initiative (SBI) by:

- Unifying a SBI delivery model statewide (including statewide PA-led marketing)
- Promoting uptake of comprehensive measures
- Expanding outreach strategies and committed resources to target and engage a wider range of small business customers and owners of buildings occupied by small businesses
- Establishing a statewide small business and non-profit ambassador position that can act as an ombudsman for customers

## **E) New Construction:**

The PAs should seek opportunities and increase resources to drive continuous improvement and effective feedback loops in the new construction and major renovation market so that a higher percentage of buildings are served and low-energy use/low-GHG buildings are measured, recognized, promoted, and emulated in the market. Specifically, actively promote zero energy ready buildings (ZEBs) & Passivehouse for new construction and major renovations. Also pay particular attention to the commercial real estate sub-sector including new construction, major renovations, and tenant fit-outs.

#### **F) Lighting & Controls:**

The PAs should maximize C&I lighting savings by emphasizing the linear lighting market and incentivizing active demand management-enabled controls. The PAs should increase the percent of lighting opportunities used as lead generation for non-lighting projects. Methods to consider include:

- Increasing participation in lighting initiatives (including upstream) by expanding marketing, outreach and technical support to customers, contractors, and trade associations
- A new offering, including education and training, to increase the penetration and successful use of advanced lighting controls
- Expanding lighting design service support for customers and designers/engineers, through a lighting design initiative.
- Converting all company owned streetlights to LEDs by the end of the next three year plan including strategies that incentivize use of controls to capture greater energy savings.

#### **G) HVAC & Controls:**

The PAs should increase HVAC savings and build market capacity for future HVAC savings growth. The PAs should work toward HVAC market transformation to make right-sized energy efficient HVAC systems the norm, and take a system optimization approach for existing and new systems in order to build a long-term upward savings trajectory for the next two three-year-plans. The PAs should:

- Conduct a market baseline study that includes recommendations to increase HVAC savings in the 2022-2024 three-year plan, and lays the groundwork for potential future efforts to assess market effects.
- Promote optimized building automation systems, including retro-commissioning and persistent commissioning of existing systems and rigorous design review and commissioning of new control systems.
- Address known market barriers to upfront investment in the engineering services necessary for system optimization through innovative program offerings. Incentivize performance verification and ongoing system tuning.
- Substantially increase ongoing education and training programs for building operators.

#### **H) Fuel Switching:**

The Council recommends that the 2019-2021 Plan include fuel switching strategies that are consistent with and support the Global Warming Solutions Act. These include opportunities to strategically electrify energy use, and to switch from inefficient equipment to more efficient fuel and/or equipment, where cost-effective. A customer



should be able to choose energy efficiency services regardless of current fuel, as long as the equipment or upgrade is to efficient equipment and is cost-effective.

### **I) Municipal**

PAs should seek opportunities and increase dedicated resources to align relevant programs with municipal processes, timelines and financing streams, and to enhance savings and participation.

## **III. Residential Recommendations**

### **A) Heating and Cooling Equipment:**

- Emphasize an integrated, systems-based approach to HVAC equipment promotion and installation, particularly for heat pumps and condensing boilers
- Streamline the customer experience and ensure seamless and comprehensive delivery of all measures
- Ensure service providers are broadly knowledgeable and compensated appropriately, and/or prescreen customer projects to match them with service providers with appropriate expertise
- Expand HVAC efforts by providing new active demand management and fuel switching measures along with the appropriate education of the consumer
- Expand water heating and HVAC upstream offerings, leveraging best practices and lessons learned from the C&I sector
- Enhance connections between HVAC, weatherization, and other whole-house offerings, enabling customers to engage in more holistic improvements in a single transaction or over time
- Weatherization should remain a high priority and focal point

### **B) Serving Hard to Reach and Underserved Populations and Geographies:**

Increase participation and savings for hard to reach populations by:

- Implementing a stakeholder engagement process to reassess program design and improve participation in renter and moderate income customer initiatives
- Identifying underserved demographic groups, developing new segmented approaches to serve them, identifying best marketing and sales approaches to reach them, and adequately funding and incentivizing these approaches
- Increasing outreach and partnerships with community based organizations and social networks, municipalities, employers, and other organizations
- Applying lessons learned from low income programs
- Using data more effectively to better target customers – specifically geo-targeting and identification of areas with linguistic barriers

- Developing new delivery models to increase participation rate of households between 60 and 80 percent median income
- Implement methods to increase access to and use of financing across all customer segments

### **C) Behavior Programs:**

Broaden current behavioral program strategies to include cost-efficient new approaches for customers of all Massachusetts PAs – for example, using a statewide procurement and integrating customer data for better customization

### **D) New Construction:**

- Offer specific low energy path(s) such as net zero energy ready and Passivehouse (multi-family) to better align with the stretch code and to drive construction of low energy buildings and market transformation
- Integrate active demand management measures that promote load shifting opportunities of solar photovoltaics, electric vehicles and chargers, and storage
- Explore opportunities to capture additional savings via major renovations

### **E) Integrated Residential Program Design**

Increase participation levels and maintain strong program savings and benefits achievements for all residential homeowner and rental initiatives by providing a new integrated residential program design that:

#### **3. Increases customer capture:**

- Segment, target, prioritize, and customize marketing and offers to customers by leveraging remotely accessible data, third-party sources, and real-time site data
- Increase the points of entry into the Mass Save program for customers during home improvement, financing, and other transactions, linked to incentives that meet a wider range of customer needs
- Cultivate, diversify, and expand market channel and community partnerships to inform, recruit, and enroll customers in the program

#### **4. Provides new methods of realizing savings:**

- Promote cost-effective new fuel switching measures that are consistent with and support the Global Warming Solutions Act
- Integrate new active demand management measures (e.g. EV charging) and storage into EE programs, in addition to achieving passive demand reductions through efficiency

- Co-deliver and coordinate electric vehicles/charging, distributed energy resources, and other related services with EE programs, while ensuring primacy of energy efficiency measures
3. **Increases conversion rates for existing measures** (especially weatherization, heating and cooling)
- Develop new audit approaches, including data-driven remote options
  - Provide an easier path and reduce barriers for customers – require fewer steps, automate and expedite the approval processes, and improve access to financing
  - Improve feedback loop and increase targeted reengagement to close on recommendations
  - Cultivate and expand trusted, long-term relationships with customers
  - Offer greater customization to customers using single measure, comprehensive, incremental, and performance-based options

**F) Multi-Family Program:**

- Establish a multi-family retrofit program framework that seamlessly integrates residential and commercial metered savings opportunities into whole building solutions, and increases uptake of whole building measures
- Enable program tracking and energy benchmarking by building/facility to support improved customer service and provide customizable levels of service appropriate to varying customer and building types including incremental paths to whole building improvements
- Identify and present options to address market and regulatory barriers to serving multifamily properties, including a blended benefit cost ratio for multifamily core initiative
- Leverage key points in the building life cycle including refinancing
- Reexamine a pay for performance program for market rate multifamily

**G) Low income Programs:**

- Identify and support new and enhanced electric and gas measures and innovative strategies
- Review program model strategies to achieve additional cost efficiencies
- Identify and implement continuous improvement opportunities and document in the 2019-2021 Plan
- Assess whether there are gaps in participation and take steps to deliver equivalent and proportional services regardless of geography if necessary
- Develop and demonstrate alternative measure packages and service delivery models to serve a wider and diverse range of customer needs and interests
- Ensure communication between the market rate and Low-Income Programs to identify and coordinate program innovations when applicable

8. Increase outreach and partnerships with community based organizations and social networks, municipalities, employers, and other organizations