

**EEAC Residential Workshop #2  
Advancing/Enhancing Existing Initiatives, Approaches, & Measures**

**Tuesday October 24<sup>th</sup>, 2017  
9:00 AM – 1:15 PM  
Saltonstall Building, 100 Cambridge Street, Boston**

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

**DRAFT Meeting Summary**

EEAC Councilors, EEAC Consultants, program administrators (PAs), 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. Background material and presentations from this workshop can be found at <http://ma-eeac.org/october-24-residential-planning-workshop-2/>.

**INTRODUCTION AND WORKSHOP OVERVIEW**

Dr. Jonathan Raab, facilitator from Raab Associates, welcomed the group to the workshop and reviewed the agenda. Following an initial background presentation on residential savings, the workshop included the following topics of discussion:

- Heating and Cooling Equipment
- Serving Hard to Reach Populations
- Retail Lighting and Consumer Products
- Behavior Programs
- New Construction

For each topic, there was a similar process:

- First, a member of the consultant team presented background on the topic and a suggested recommendation that was prepared by the EEAC Consultant team, and the PAs were given an opportunity to add additional pertinent information.
- The Councilors asked questions to the PAs and consultants, and the PAs and consultants provided answers.
- After this question and answer session, the Councilors met at small tables that held 4-6 Councilors to discuss suggested revisions to the recommendation.
- Finally, the Councilors shared their suggested revisions to the recommendation to the entire group, and the Councilors agreed on the revisions.

This same process was repeated for each of the five topics. There was also a period for public comment at the end of the workshop.

Margie Lynch, EEAC Consultant, offered some additional background information on the workshop and how it fits within the larger sequence of the EEAC's strategic planning process. She noted that this was the second Residential Workshop. The first workshop took place in September and discussed big picture issues, specifically the upcoming reduction in available lighting savings and innovations to consider for the next plan. There were no specific recommendations for the Council to consider during that workshop.

Today's workshop focused more discretely on opportunities in a specific subset of the areas in which the PAs have programs. The third Residential Workshop, to take place on December 5, 2017, would involve strategies to address the rising baseline issues in the Residential sector.

## **BACKGROUND ON RESIDENTIAL SECTOR/INITIATIVES**

Glenn Reed, EEAC Consultant, provided some background on the residential sector and initiatives. Slides from his presentation are available on the workshop materials website (URL noted above). There were no questions following his presentation.

## **HEATING AND COOLING EQUIPMENT**

### Presentation

Mr. Reed reviewed the topic of Heating and Cooling Equipment and presented the consultants' suggested recommendation. Slides from his presentation are available on the workshop materials website.

### Question & Answer Session

The Councilors asked the following questions during the question and answer session. *Responses from either the PAs or EEAC Consultants are in italics.*

- What is the "payback period" for HVAC equipment? My understanding is it will take a consumer roughly 20 years to recoup the cost of a furnace or a boiler through energy savings. In light of this reality, should we be focusing more on weatherization than HVAC equipment?
  - *The payback period varies widely by technology and depends on the specific consumer's situation. For some equipment like a Wi-Fi thermostat, the period is probably a few months. While we need to be thoughtful about where we devote our resources, all of our work on HVAC equipment is cost effective.*

- *A recent Department of Energy energy savings analysis found a payback period of seven to ten years, but the period varied enormously depending on the equipment being replaced.*
- Contractors have limited knowledge about HVAC. How can we engage with them to ensure these programs are marketed appropriately?
  - *The PAs provide trainings to contractors on a variety of installation methods. We are also proposing providing more incentives upstream, which takes some of the decision making out of contractors' hands by providing benefits to distributors who sell higher efficiency equipment.*
  - *A lot of expertise is needed to install heating and hot water equipment. The PAs train auditors to identify when a heating or hot water system is ready for upgrade and could provide significant energy efficiency savings. The question the consultants are asking is whether the PAs should work to tie HVAC more closely into the Home Energy Services (HES) model.*
- Is it correct that there's a report coming out in November 2017 on the HEHE Incremental Cost Study?
  - *That research is separate from ongoing research on Evaluation, Measurement and Verification (EMV) activities, which found that a large percentage of high efficiency boilers were not fully condensing, resulting in lost savings. The PAs are in the second round of looking for remedies, and have found at best partial remedies.*
- A lot of boilers have been installed, so these lost savings seem like a big issue. How will this effect screening on this measure? Is it possible that our conclusions that high efficiency heat pumps don't fare well against natural gas may be based on old assumptions about the efficiency of boilers?
  - *Gas screening did not change much as a result of this issue. The average efficiency of boilers was less than expected, but the average building load was also lower, so the savings were in line with previous estimates. This is an ongoing issue and the PAs just submitted comments to EMV consultants about the next stage of looking at this issue*
- We should allow the people doing home energy assessments to spend more time on heating and hot water. We should do whatever it takes to make this happen, by providing more training and by holding people accountable for reporting. The assessment is like a visit to a primary care physician, and it's important it be performed thoroughly and effectively.
  - *That's all true. We should even consider having the assessment involve a visit by an energy specialist skilled in heating and hot water, including fuel-switching opportunities, who can describe the full range of opportunities.*
  - *In the future, when there are fewer lighting savings and therefore fewer bulbs to install, we should try to take advantage of some of the "free time" that will be opened up in the home energy assessment.*
- For the boilers issue, is the problem a failure of equipment, a failure of installation, or a failure of use?

- *It is often a lack of sufficient distribution, improper sizing, or the controls not being set up properly. The PAs have attempted to remedy the issue first with a controls only approach, and then through additional measures. The PAs have been able to claw back some of the lost savings but not all of them. The bottom line is that if the equipment is not working to its potential we are doing a disservice to our customers.*
- What is the incentive for a weatherization contractor to encourage HVAC?
  - *Any time we start putting more emphasis on a specific measure, one has to look at the compensation being provided to the person having the conversation with the customer. We want to make sure the “pitch” to the customer includes the appropriate emphasis. If the PAs were to ask HES auditors to spend more time on HVAC and hot water, then it would be important to look at their compensation/incentives for doing this.*

### Modifications to Recommendation

After meeting at their small tables and then discussing the issue as an entire group, the Councilors collectively agreed to amend the consultants’ draft recommendation on Heating and Cooling Equipment as shown below. Additions to the consultants’ draft recommendation **are shown in red**. Language on which the Councilors did not fully agree and wanted to further consider is **highlighted in yellow**. Outstanding questions (are in parentheses). A clean version of all the revised recommendations (which includes highlighted language) is included in Appendix B:

- 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.**
- **Service providers should be broadly knowledgeable and compensated appropriately and/or targeted appropriately through prescreening**
- 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 and 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.**
- **(Should weatherization be the highest priority and should there be a minimum efficiency requirement?)**

## SERVING HARD TO REACH POPULATIONS

### Presentation

Ms. Lynch reviewed the topic of Serving Hard to Reach Populations and presented the consultants' suggested recommendation. Slides from her presentation are available on the workshop materials website.

### Question & Answer Session

The Councilors asked the following questions during the question and answer session. *Responses from either the PAs or EEAC Consultants are in italics.*

- The absolute participation numbers for renters and moderate income are low. Our goal was to get more of this population into programs. Do we have a sense of whether this program is delivering more audits to renters and their landlords?
  - *No, we do not because there is no baseline data point. Before 2016, renter participation wasn't independently tracked by the PAs. Currently, it might be possible to link renters to program participation, but it would be data intensive and there's currently no program to do this.*
- The results for this program are highly disappointing. During the previous strategic planning process we worked hard to try to develop the program. The consultants' recommendations seem sensible but we do not have a Councilor here in attendance on the "Residential Seat", nor did we have someone on this seat at the last residential meeting. This isn't right. We need to look again at these issues when that person is on board, and before the PAs provide a draft plan in April 2018.
- It is good that the consultants' report discussed evaluation studies and how they can affect these issues. Page 18 of the report includes important evaluation studies that we should review before April. In addition to considering whether to expand moderate income to households above 80% of the average household income, we should work to fix the programs addressing households in the 60-80% range. If we don't have these critical evaluations before our residential meeting in January 2018, we will not be able to make informed decisions.
- Do we know what percentage of customers are renters versus owners?
  - *Yes. The PAs are tracking this in HES.*
- The title for this program should be serving *underserved* and hard to reach populations. Lots of people are not hard to reach but their communities are just not served. In addition, we should work on identifying underserved geographic groups not just underserved demographic groups. Working with social networks is also key.
- Why are there no savings attributed to the HEAT loan?

- *Most of that activity will be captured in the relevant initiative for which the loan is used, not by the loan itself. The one exception is replacement windows. There are no savings counted by PAs for replacement windows.*
- We need to be cautious that loans do not harm low-income people, by putting debt onto people who can't afford it.
  - *That's an important point. In addition, some situations, like replace on failure scenarios, are not good candidates for HEAT loans.*
- In addition to the people who apply for the loan but do not get it, there are also people who do not even apply because they do not think they will get it. It would be interesting to study those individuals.
  - *That's very true. The PAs have been making changes to the moderate-income HEAT loan offer, and we will see how those changes affect the numbers. The Councilors will get detailed numbers in the Q3 Report narrative. The evaluations under discussion will also provide a lot of rich data. The PAs are looking forward to improving whatever program is being offered as part of the new strategic plan,*
- How are the moderate-income programs doing compared to the low-income programs?
  - *I believe the moderate-income participation numbers are significantly below those for low-income.*
- To compare the moderate-income participation, we would need to identify how many moderate-income families are going through the HES program, so we understand where those customers are going.
  - *I believe there were about 35,000 in low-income single- and multi-family programs in 2016.*
  - *If there is good participation among moderate-income families in HES without enhanced incentives, we should consider what that means for program design.*

### Modifications to Recommendation

After meeting at their small tables and then discussing the issue as a entire group, the Councilors collectively agreed to amend the consultants' draft recommendation on Serving Hard to Reach Populations as shown below. Additions to the consultants' draft recommendation are shown in red:

#### SERVING HARD TO REACH **AND UNDERSERVED** POPULATIONS **AND GEOGRAPHIES**

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

- Identifying underserved demographic groups and developing new segmented approaches to serve them, and **identifying best marketing and sales approaches to reach them and adequately funding and incentivizing them**
- Increasing outreach and partnerships with community based organizations and social networks, municipalities, **employers**, and other organizations **specifically geo-targeting and identification of areas with linguistic barriers**
- **Applying lessons learned from low income programs**
- **Better use of data to better target customers**
- Implement methods to increase access to and use of financing across all customer segments

A PA offered the following additional comment on these recommendations and the Councilors' edits:

- A lot of moderate-income customers have already been served through HES, or have been served previously. The information displayed in the presentation captured their participation in three measures only. For some of these customers, there may not be weatherization opportunities. Eversource has performed internal data analysis and found that 9-10% of customers fall in the 60-80% income range, and 25% of them have been served.

Councilors then asked the following questions. *Responses from the PAs are in italics:*

- The Council has heard anecdotal evidence that the 60-80% population is not being well served. We should keep assuming that going forward unless the data shows otherwise.
  - *There are definitely opportunities for the PAs to serve these customers better and the PAs want to serve them. The PAs have made changes and enhancements to their moderate-income offerings that are not necessarily reflected in the data being shown. For example, they are covering up to 100% of the costs for weatherization, streamlining the income verification process, and providing income verification information before the home energy assessment. These efforts are statewide.*
- How did you get the 9-10% number?
  - *We got this number by cross-referencing Experian data against our account numbers.*

## **RETAIL LIGHTING AND CONSUMER PRODUCTS**

### Presentation

Mr. Reed reviewed the topic of Retail Lighting and Consumer Products and presented the consultants' suggested recommendation. Slides from his presentation are available on the workshop materials website.

### Question & Answer Session

The Councilors asked the following questions during the question and answer session. Responses from either the PAs or EEAC Consultants are in italics.

- I do not understand the first recommendation. Is it suggesting we should get out of residential lighting and in meantime pursue what is left, or is it saying we should exit lighting, only not do so completely.
  - *The lighting market is not homogenous. An exit strategy may be appropriate at the end of the plan period, but we may need to treat different lighting opportunities differently and exit them at different times.*
- Under existing programs, if I go into store will CFLs be marked down through the program? And if I have CFL in my home can I get an LED installed through the program?
  - *The PAs are no longer supporting CFLs. We do not offer a CFL to LED conversion installation. We will only offer this in the multi-family program if the light is on 24 hours a day.*
- Do we know the market penetration of efficient appliances in Massachusetts, and do we need an exit strategy for some of them too?
  - *We are not offering incentives for certain efficient units like dishwashers, where there is a high market penetration.*
- Can we show the information in the chart in table 14, which shows national appliance data, for Massachusetts only?
  - *I do not believe we have data with that level of granularity for appliances in Massachusetts.*
- Where the recommendations say, "leverage retail relationships to bring more customers into the Mass Save program," does that mean the retail sector should be seen as a recruitment space as well as a savings space?
  - *Yes. We should not underestimate opportunities to bring customers into the Mass Save experience. For example, Home Depot (in other regions) has kiosks to facilitate consumers to get into the larger set of services being offered by Tennessee Valley Authority (TVA).*
- In the past, the PAs have done nothing to encourage consumers buying light bulbs at the consumer level to do weatherization. In Wilmington, the PAs hosted a show where they gave out thousands of light bulbs, and they never mentioned an energy audit. How do we get the PAs to bring more people into weatherization? .

- *The PAs goal is not just to use retail transactions to convince a customer to get weatherization work. Their goal is broader. We want capture that customer in the program's data system so we can build a profile on them, understand their needs, get the program's name in front of them, and build a relationship.*
- What is the potential for savings through Wi-Fi connected appliances in Massachusetts?
  - *Programs to target Wi-Fi connected appliances have not been pursued much in Massachusetts or nationally. The number of connected appliances is still fairly small.*
- If the PAs were told to maintain the same amount of savings without the lighting program, and resources were no object, what would they do?
  - *There is no silver bullet to replace electric savings at the current cost. The PAs would ask how much money we have and what are our limitations. In the real world there is not just unlimited money and no limitations. Overall, we would ask for as much flexibility as possible.*
- Free ridership among the moderate-income population is very different from free ridership among the general population. We can do a better job getting new appliances to moderate-income families. These families should be screened differently from the general population.
  - *We account for free ridership for lighting among the hard-to-reach markets, but not for appliances. We could do that if we had the research to support it.*
- If we start adequately crediting for greenhouse gas (GHG) reductions, some programs would look much better.
- Where would energy efficient electric vehicle (EV) chargers fit in to these programs, if we added an incentive to support more efficient chargers or chargers that are demand response enabled?
  - *EV chargers specifically have not yet been a topic of conversation. They could have a place in the PAs' programs if there were evidence to support them, but the appropriate program under which to put them would be an open question.*

### Modifications to Recommendation

After meeting at their small tables and then discussing the issue as a entire group, the Councilors collectively agreed to amend the consultants' draft recommendation on Retail Lighting and Consumer Products as shown below. Additions to the consultants' draft recommendation **are shown in red**, and deletions ~~are shown as strikethroughs~~:

- Clearly articulate a **transition** strategy, **in particular the timing**, for residential lighting, while **aggressively** pursuing remaining savings opportunities for lighting

technologies and markets that merit continued program intervention **or enable further access for lighting controls and demand management**

- Identify and support new and enhanced measures and further leverage retail relationships to bring more customers into the Mass Save program
- **Pursue enhanced statewide appliance standards**

An EEAC Consultant offered the following additional comment on these recommendations and the Councilors' edits:

- I am glad to see the last bullet added by the Councilors. It would be helpful for DOER and the PAs to pursue a state appliance standards bill.

## **BEHAVIOR PROGRAMS**

### Presentation

Ms. Lynch reviewed the topic of Behavior Programs and presented the consultants' suggested recommendation. Slides from her presentation are available on the workshop materials website.

### Question & Answer Session

The Councilors asked the following questions during the question and answer session. *Responses from either the PAs or EEAC Consultants are in italics.*

- The example on slide 32 (which depicts a home energy report mailing) does not include any messages about getting a home energy audit. Why do the PAs refuse to encourage energy audits and weatherization?
  - *The slide is just an example. Other mailings include weatherization recommendations. The messages on the mailings change every month.*
  - *These reports include two different kinds of messages. Some of the messages are behavioral, and some promote participation in existing programs including weatherization programs.*
  - *In measuring the savings from programs, the PAs need to subtract savings attributed to behavioral programs. That means if the PAs are too successful in using behavioral reports to drive participation in other programs, it could make it so the behavior program is no longer cost effective.*
- Have the PAs discussed consolidating and doing a statewide behavioral program? It seems like this would be cost effective for piloting programs and "slicing and dicing" programs in different ways.
  - *The PAs have not begun discussions on that. When all the PAs are doing the same behavior program, there's the interactive effect. If every PA were doing the report model, their savings would have to change because the overlap would diminish those savings available to any individual PA.*

- We just heard two examples where the question of how we are doing the evaluation is driving what we are doing. Shouldn't we modify the evaluation so that it fits what is actually best for us to do?
- Have the PAs looked at and considered other behavioral programs beside this one?
  - *Yes. The O-Power program was cost prohibitive for Cape Light Compact. The PAs will need to discuss among themselves how to consider and apply the Council's recommendation on this issue.*
- How would the multi-year measure life work [for behavioral savings]?
  - *It would involve input from a variety of perspectives including the evaluators'. It would capture how other jurisdictions are applying measure life and best practices. It would involve applying it and figuring out how savings and costs are reallocated as a result.*
- After treatment by the program, is it correct that the behavior changes persist for around for 18 months?
  - *A study provides evidence that a strategy called cycling creates savings that persist for two to three years after treatment. Some jurisdictions are experimenting with not treating regularly every year, but instead applying the treatment, backing off, and then reapplying. There are various strategies being considered to assess those opportunities.*
- BC Hydropower in British Columbia has very low rebates. They give customers \$50 if they reduce electricity by 10% in a year, provide a monthly newsletter, and establish an interpersonal relationship with the customer. It costs very little money and it's effective. Would the Massachusetts PAs consider a similar program?
  - *That is something for the PAs to consider or explore. The PAs are open to all models if they're cost effective and deliver on savings.*

### Modifications to Recommendation

After meeting at their small tables and then discussing the issue as an entire group, the Councilors collectively agreed to amend the consultants' draft recommendation on Behavior Programs as shown below. Additions to the consultants' draft recommendation **are shown in red**. Language on which the Councilors did not fully agree and wanted to consider further is **highlighted in yellow**.

- 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; points or reward programs for saved energy**

### **NEW CONSTRUCTION**

## Presentation

Mr. Reed reviewed the topic of New Construction and presented the consultants' suggested recommendation. Slides from his presentation are available on the workshop materials website.

## Question & Answer Session

The Councilors asked the following questions during the question and answer session. *Responses from either the PAs or EEAC Consultants are in italics.*

- Starting in January 2018 there will be a solar ready roof requirement in the Massachusetts building code. There is also active discussion about including EV-readiness requirements at the code level. Passive house and HERS ratings are also available in stretch code communities, which cover over half the state. The question is how much the PAs want to align with and leverage the code versus being independent of it.
- Given that the new construction program includes many strategies for other programs, are there lessons from new construction that could be applied to other programs?
  - *Yes, there are lessons learned. For example, you cannot run a credible new construction program without addressing the building as a whole. And it is probably not best to run an HVAC program while addressing equipment and controls separately.*
- What is the relationship between the PAs' programming, code changes, and market transformation? Is the thought that if the PAs promote enough passive houses then the codes will change in response?
  - *The PAs get credit for code compliance through training and other activities. These activities raise the general level of code compliance. The PAs also participate in and provide resources for communities considering stretch code adoption. As the state continues to raise the bar on both codes, the PAs should look at the stretch code as a baseline and help move communities towards adopting it.*
  - *Generally, through new construction, codes, and stretch code communities, there are many ways the market is pushing the industry to become more energy efficient. It is very effective because the market is being attacked in multiple ways. The PAs have a codes program to help people get to code and they are claiming savings for that work. There is a lot of potential to educate people on how to get to net zero energy. The PAs want to promote the most sustainable housing possible, and they are partnering to make that happen. One missing piece is in renovations and additions. There is a lot of potential in that part of the market to continue driving people to be as energy efficient as possible.*

## Modifications to Recommendation

After meeting at their small tables and then discussing the issue as a entire group, the Councilors collectively agreed to amend the consultants' draft recommendation on New Construction as shown below. Additions to the consultants' draft recommendation are shown in red, and deletions are shown as strikethroughs:

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

## **WRAP UP AND NEXT STEPS**

Dr. Raab asked the Councilors for feedback on the meeting process. A number of Councilors commented that the format worked well. One Councilor suggested that the table setup felt cramped, and another recommended that the facilitators do whatever is possible to facilitate interaction between Councilors and PAs.

## **PUBLIC COMMENT**

Dr. Raab opened the meeting for public comment. Seven members of the public offered comments.

### Max Veggeberg—HomeWorks Energy

I am CEO of HomeWorks Energy, the largest home performance contractor in Mass Save. My comments are directed around the HVAC program and recommendations we have. We're uniquely situated because we offer both insulation and HVAC.

There are three major reasons why customers don't move forward with HVAC. First is fatigue. There are too many visits and too many different options. Second is confusion. There are too many rebates, brands, models, and incentive levels. Third is financing.

I have suggestions for some solutions to help shape the heating and cooling program and integrate it better with Mass Save. First, there should be a separate heating and cooling visit. This allows customers to engage specifically with the HVAC program. Second, offer standard pricing. If this happened, customers wouldn't need to go through multiple contractor visits before moving forward with heating and cooling equipment. It also would allow for removal of the Mass Save approval step from the HEAT loan process. Third, provide instant incentives. Customers have anxiety around what the contractor tells them and what they will actually get. Fourth, a standardized pricing structure would result in better quality control. A lot of contractors will just put in the exact same system regardless of the home, so they don't need to do a heat load calculation and so they can install a higher price unit with a higher margin. These units are often oversized for the home. It is against the contractors' interests to go with a properly sized system. By adding a level of transparency we could do quality control on systems and get savings through that step alone.

Councilors asked Mr. Veggeberg the following questions. *Mr. Veggeberg's answers are in italics:*

- Are you recommending a separate heating and cooling visit?
  - *Yes, it would be a way to reduce fatigue.*
- Under your suggestion, if I need a new heating system, who guides me as to which system to purchase? Will you sell me one, or oversee installation and get multiple bids?
  - *Ideally there should be a single point of contact for the customer, but that can take multiple forms. HomeWorks would handle it end to end rather than handling multiple bids, and a third party like ClearResults would do quality control.*

### Rev. Marianna White-Hammond—Bethel AME Church and the Green Justice Coalition

I'm here because this is my first time coming to one of these meetings and I wanted to raise some concerns. My concern is about the process. My church has had a couple energy efficiency meetings. We brought people in and signed people up. I would love to talk about why some people finished the program and some didn't. We're an urban church.

I also do a lot of facilitation work, and you always want to start with a deep dive into what the problem is before moving to solutions. This process seems like an attempt to find solutions, and then maybe take a look at what the problem is later down the line.

My question is whether this process will get to the kinds of solutions you're looking for. We talked a lot about underserved populations. I was looking at the people in this room, and we have only 5.3% people of color here in a state that is 27% people of color. My guess is that not so many of us speak a different language or are low income. We have a problem of underserved populations but the people at the table and in the room aren't getting to those communities. Are we going to get to those solutions?

I submitted my name for the "Residential Seat" on the Council, but I haven't heard back. Ultimately, this is a big pot of money and I know people in communities want to do something. Once people see that little place on their electricity bill about how they're paying into this, they start asking questions about how they're getting benefits. There's excitement and interest in this but people want to know more. I know it's not easy, and I'm not saying there's a conspiracy to keep people from it. But I am asking about how to shift it. And how do we do that if there are not enough people who are directly impacted in the room helping us think through how to do it? I'm willing to serve in whatever way possible.

9am to 1pm is not a realistic time for people who have jobs, people who are low income, or who do shift work. We can't get people to come downtown for four hours. If you want to get to those populations, you need to ask about when are we meeting, who is making the decisions, and what locations we are choosing. If you bring people in, they do want to be green. But there are a lot of barriers and some have to do with how these meetings are composed.

#### Susan Olshof—ener-G-save

Thank you for chance to tell you about our program. I will speak, then our colleague and program manager will talk about challenges, then our colleague from Co-op Power will talk about opportunities from our program.

Ener-G-save is a project trying to increase the number of people getting energy audits. It is a privately funded philanthropic program. We connected with a company that did 100,000 thermal images in ten towns in Pioneer Valley. We connected with towns and

spoke with mayors, and sustainability committees. We got buy in. We worked with local media and grassroots organizations trying to get support and get the word out.

The images were studied and we pulled out the 25% whose homeowner could most benefit by energy efficiency measures in the home. The images are being sent to homeowners and will be distributed in three batches in the next month. We have partners with about twelve Independent Installation Contractors (IICs) and Home Performance Contractors (HPCs) working with us. Our goal is to make it easy on the homeowner. On the image they receive will be a number or web link to sign up. Our partners at Co-op Power are handling calls, making it easy to line up an audit, find financing, and find a contractor. For people on fuel assistance they'll be able to be connected to one of the CAP agencies. We started doing outreach at the beginning of the summer at farmers markets and fairs, on radio programs and TV stations, at press conferences and with several mayors. Even before our images were mailed to 25,000 homeowners in Pioneer Valley, we received 300 leads generated from our hotline or web link. About 50% had never been engaged with any utility programs for energy audits. And of these 244 leads have been referred to 12 contractors, community action and Springfield partners.

#### Uli Nagel—ener-G-save

Our energy efficiency programs in Massachusetts have lots of outreach and amazing incentives, but they're still not getting to people enough. That was the motivation of the philanthropist, Harold Grinspoon, who wanted to do this ener-G-save program. He's a reputable name in Pioneer Valley. The challenges we've run into include how to evaluate how well it's working, and how the images are attracting attention. We'd need concrete feedback through HPCs and IICs. They're not allowed to give us data, even though customers told us they want to be treated like our customers. We could use some help there. We also realize our approach is unconventional.

We've also been hearing from contractors that they're not being encouraged to go further than Mass Save is encouraging, even though lots of people are willing to go further. It would be amazing if we could tweak the system so contractors are encouraged to do these kinds of things.

Also we are restricted in that we can't use the Mass Save name for what we're offering. It would be interesting to think how could that be changed. How can we make it more accessible? And HPCs and IICs are telling us they're struggling. They don't feel support for their own marketing, finding customers, and dealing with customers in easy ways. There are lots of opportunities to tweak and improve the program to make it more accessible.

#### Lynn Benander—Co-op Power

It seems there's a lot of customer excitement in working with this program. I'm not sure exactly why, but I talk with people who've never been involved with any program. There is something about this opportunity that's outside standard channels that's attracting people. I'm curious what is it that's bringing people in. I'm hopeful we can capture outcome data and figure out why things like the partnership with the mayor were effective. The mayor said, "Call this number to get energy efficiency work done," and many hadn't called before. What is it in this approach that's working? Access to outcome data will be a big part of knowing whether this experiment will be exciting or not. We're expecting of 25,000 letters saying your home can best benefit from energy efficiency programs. Getting that message out is really working. People are going out of their way to call in. The outcome data is really important. If the customer says they give permission for their data to be shared, can we find a way to get this pool of data, even if it doesn't identify individuals, so we can see what's working?

Councilors asked Ms. Benander the following questions. *Ms. Benander's answers are in italics:*

- What was the scale of this program?
  - *100,000 images were taken and 25,000 letters were sent.*
- Regarding verification, I'd think a homeowner could provide their own information if you request it.
  - *Yes, we'll go that route but they'll have to send a letter and any time you add a step it decreases compliance. While we have a CRM database, we'd get much higher and better quality data if allowed to get information from HPCs and IICs.*
- The Obama stimulus gave money to states and cities, including block grant money to support marketing of weatherization. It had significant impact on the Mass Save program. This seems like another jolt to the system of a scale worth noting. I'd like to see a meeting held when we have the new residential person. I would like to have the EEAC consultants engaged in this so they can ask more questions, figure out how to evaluate it, and how the PAs could interact to make it as impactful as possible. I think it's of a scale to make us ask if the 2018 plan is robust enough to handle this kind of influx and, if not, can we fix it.

Nicole Morris-McLaughlin—Marion Institute and the SouthCoast Energy Challenge<sup>1</sup>

Thank you for the opportunity to comment this afternoon. Since 2008, The SouthCoast Energy Challenge, now a program of the Marion Institute, has signed up to 14,000 residents for Energy Assessments in the South Coast of Massachusetts. Most of the middle- to high-income households we have worked with have had wonderful experiences with Mass Save; however, we have run into significant challenges with our

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<sup>1</sup> Ms. Morris-McLaughlin read from written comments, which she provided to the facilitation team and which are copied below.

low- to moderate-income, non-English speaking population getting access to Residential Energy Efficiency programs.

In 2015, the SouthCoast Energy Challenge hired a bilingual outreach coordinator (Spanish) to engage low-moderate income households in New Bedford to direct them to energy audits through Mass Save. The process would go as follows: 1) SouthCoast Energy Challenge would reach out to non-English speakers at ESL classes, soup kitchens, community garden workshops and other community engagements. We would give them information to contact Mass Save through the Eversource Energy Efficiency Information line: 1-844-887-1400. 2) Through the Eversource Energy Efficiency line there were no non-English instructions. Even more concerning was that the option on the phone for large or multifamily units (five or more units) led to dead air on the phone call, no human ever picked up or no message was given. 3) For those who qualified for income eligible programs, the operator gave them yet another phone number to call: 1-866-537-7267. This line provided instructions in multiple languages that led to being transferred to the local Community Action Program; in New Bedford's case it was Citizens to Citizens. 4) Citizens to Citizens had Spanish and Portuguese speakers on staff but none of these individuals knew details about energy efficiency audits. When the SouthCoast Energy Challenge intervened on behalf of non-English speakers who qualified for income eligible programs, we were told that the non-English speaker would need to have an interpreter with them during the phone call and during the audit. We believe this experience puts an unfair burden on non-English speakers to gain access to a program they were paying toward every month on their utility bill.

Typically the non-English speakers we work with spend a much larger percentage of their income on energy bills than higher income residents. This non-English speaking, low-moderate income population has the most to gain from their homes being energy efficient and they have not been served adequately. We ask that the Council address the roadblocks that non-English speakers face trying to access energy efficiency programs.

Thank you for your time.

Steve Cowell—E4TheFuture:

I have four things to discuss. One, we're starting a project called Community Clean Energy. This is the overall conceptual approach: link energy efficiency, clean energy and renewables together rather than separating them out. We are creating 501(c)(12)s, and trying to link residential consumers with nonprofit, commercial and institutional actors, so everyone in the community can work together using a common strategy to go clean and efficient. We're incorporating Mass Save as part of the package. It's starting to take off now.

Two, there's an announcement this week that the first national federal clean energy credit union was just set up and approved. It is a national credit union focused on efficiency, clean energy and EVs. We want to get them involved in the Mass Save program. We co-funded them the money to get going.

Third, regarding the Vermont Energy Investment Corporation (VEIC) zero energy mobile home, there's a grant pending from DOER. We agreed to put in funding to support that because we think mobile homes are very much ignored in Massachusetts. I see a bunch of them in the Berkshires. They're harder to make efficient. I'd love to get VEIC into Massachusetts and we're helping to do that

Lastly, there's legislation. Paul Gromer, I and the team have put together House bill 1724 that would modify the Green Communities Act to clarify and make explicit the incorporation of a broad range of resources, not just traditional energy efficiency, so there wouldn't be the sense of a barrier to thinking bigger and more broadly. A hearing on that will be in a few weeks. I just wanted to let you know those things are happening.

Following these public comments, Dr. Raab thanked participants and adjourned the workshop.

## Appendix A: Attendance

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

### Councilors

- Judith Judson (Chair)—DOER
- Brian Beote (for Elliott Jacobson)—Action, Inc.
- Eric Beaton (for Chrystal Kornegay)—DHCD
- Don Boecke (for Maura Healey)—AGO
- Amy Boyd—Acadia Center
- Larry Chretien—Mass Energy Alliance
- Paul Gromer—Peregrine Energy
- Charlie Harak—NCLC
- Paul Johnson—Small ESCOs (Greentek)
- Rick Malmstrom—Dana Farber
- Michael McDonagh—Realtors Association
- Bob Rio—Associated Industries of MA
- Victoria Rojo—ISO-NE
- Sharon Weber—DEP

### Program Administrators<sup>2</sup>

- Leah Berger (Columbia Gas)
- Austin Brandt (Cape Light Compact)
- Maggie Downey (Cape Light Compact)
- Michael Goldman (Eversource)
- Cheryl Harrington (Eversource)
- Derek Kimball (Unitil)
- Laurie Pereira (Liberty Gas)
- Brenda Pike (Eversource)
- Mike Sommer (Berkshire Gas)
- Bill Stack (Eversource)
- Amy Vavak (National Grid)
- Stephan Wollenburg (National Grid)

### Council Consultants

- Eric Belliveau
- Margie Lynch
- Courtney Moriarta

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<sup>2</sup> Additional PAs attended the workshop as audience members, but are not included in this list.

- Glenn Reed

**DOER Staff**

- Ian Finlayson
- Lyn Huckabee
- Alex Pollard
- Emily Powers
- Matt Rusteika
- Arah Schuur
- Alissa Whiteman

## Appendix B: Revised Recommendations

The following language was agreed to by the Councilors attending the 2<sup>nd</sup> Residential Workshop. Language on which the Councilors did not fully agree and wanted to further consider is highlighted in yellow. Outstanding questions (are in parentheses).

### 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.
- Service providers should be broadly knowledgeable and compensated appropriately and/or targeted appropriately through prescreening
- 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 and 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.
- (Should weatherization be the highest priority and should there be a minimum efficiency requirement?)
- 

### Serving Hard to Reach and Underserved Populations and Geographies

- Increase participation and savings for hard to reach populations by:
  - Implementing stakeholder engagement process to reassess program design and improve participation in renter and moderate income customer initiatives,
  - Identifying underserved demographic groups and developing new segmented approaches to serve them, and identifying best marketing and sales approaches to reach them and adequately funding and incentivizing them
  - Increasing outreach and partnerships with community based organizations and social networks, municipalities, employers, and other organizations specifically geo-targeting and identification of areas with linguistic barriers
  - Applying lessons learned from low income programs
  - Better use of data to better target customers
- Implement methods to increase access to and use of financing across all customer segments

### 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; **points or reward programs for saved energy**

### New Construction

- Offer specific low energy path(s) such as net zero energy and Passive House (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 saving via major renovations