MA ENERGY EFFICIENCY ADVISORY COUNCIL

Final Report

Energy Efficiency Advisory Council Three-Year Plan Workshop

February 19, 2021

Facilitated by:
Raab Associates, Ltd.
with
CONCUR, Inc.

RAAB ASSOCIATES,LTD

CONCUR
NEGOTIATING EFFECTIVE ENVIRONMENTAL AGREEMENTS

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Section I: Introduction/Overview

In preparation for the development of the next Three-Year Energy Efficiency Plan (2022—2024) (Plan) by the Massachusetts Program Administrators (PAs), the Energy Efficiency Advisory Council (EEAC) held six workshops between November 2020 and January 2021. The purpose of the workshops was to discuss current and foreseeable challenges and potential opportunities, and to develop recommendations from the Council for the PAs to consider in the development and implementation of their next Plan.

The first five workshops each focused on a unique set of issues and opportunities as delineated in the table below. A sixth and final workshop focused on fine-tuning and finalizing the recommendations from the prior five workshops. The participating Councilors' recommendations will be forwarded to the full Council for review, further refinement if needed, and adoption at its late February EEAC meeting.

Table of Dates & Topics for Each Workshop

Workshop	Date	Workshop Topics
Workshop 1	*Thursday – 11/5*	**New Construction (Res and C&I); & Active Demand**
Workshop 2	*Tuesday – 11/10*	**Income Eligible Programs**
Workshop 3	*Tuesday – 12/1*	**Existing Buildings #1 – C&I Focus**
Workshop 4	*Tuesday – 12/15*	**Workforce Development; & Existing Buildings #2 - Residential Focus**
Workshop 5	*Tuesday – 1/12*	**Existing Buildings #3 - Equity Focus**
Workshop 6	*Wednesday – 1/20*	**Review and Finalize Recommendations**

Major Themes

Several major themes, in addition to the on-going efforts for continuous improvement of the pre-existing portfolio of programs and initiatives permeated these workshops for the next three-year plans. First was the need to continue to re-orient the portfolio of programs initiative to better support the Commonwealth's efforts with the Massachusetts Global Warming Solutions Act climate goals which includes ramping up the support for electrification of the building sector. Second, there was a concerted effort to look both more broadly and deeply at how to address an array of equity challenges through multiple energy efficiency programs and initiatives (beyond the Commonwealth's Income Eligible Programs). Relatedly there was also a focus on how to improve energy efficiency workforce development in more equitable ways. Finally, there was a continued effort to enhance active demand management.

Process Used to Develop Recommendations

The draft recommendations discussed at the first four workshops, with the exception of several of the workforce development recommendations were developed by the EEAC Consultants in consultation with DOER but were largely based on presentations and discussions of these issues at prior EEAC meetings. The equity recommendations discussed at workshop 5 as well as the bulk of the workforce development recommendations discussed at workshop 4, were developed by an Equity Working Group (EWG), Co-Chaired by EEAC Councilors and comprised of some EEAC Councilors, PAs, and community-based NGO members (see Appendix A for EWG Members).

Raab Associates, Ltd., with Concur Inc, was retained to help design and then facilitate the workshops. The facilitation team also helped the Council Consultants (Consultants), PAs, and DOER to prepare for each workshop, and documented the discussion and recommendations in detailed meeting summaries.

The approach to each workshop was substantially similar. Background materials including recommendations and slide decks containing just the recommendations were developed primarily by the Consultants in consultation with DOER, or for workshop 5 and part of workshop 4, by the Equity Working Group. The PAs were typically afforded the opportunity to review and comment on the draft background documents and recommendations prior Consultants/DOER to finalizing them for posting, as was LEAN for the workshop 2 materials on Income Eligible Programs.

At each workshop, the Consultants (or the Equity Working Group members) opened the discussion by presenting the logic and text for the recommendations. The Councilors would be given the opportunity to ask the Consultants and the PAs (and LEAN for the Income Eligible Initiatives and the Equity Working members for the equity and related workforce development recommendations) clarifying questions about the background material and the specific recommendations.

Following the Q&A period in each workshop, the Councilors would then discuss the draft recommendations, and propose suggested improvements. Relatedly, Councilors were also asked to explain if they could not support a given recommendation in its current form and propose specific changes. The meeting summaries prepared by the facilitators captured all the suggested improvements/changes.

The Consultants and DOER then carefully considered all the suggested improvements/changes from workshops 1 through 4 and made redline changes to the recommendations. These redlined recommendation were then posted on the website along with a combined and clean set of recommendations for workshops 1 through 4. The revised recommendations were then discussed during workshop 6, and based on the feedback primarily from Voting Councilors, were revised again (and can be found in the following section).

Meanwhile, the suggested changes improvements on the equity recommendations from workshop 5 and on the workforce recommendations from workshop 4 that emanated from the EWG, were cycled back to the EWG for further refinement. The EWG met twice to update the recommendations, and these revised recommendations can also be found in the next section. The combined final draft recommendations from all six workshops were then forwarded to the EEAC for their further consideration at the February 24th EEACC meeting.

Overview of Report

The next section of this Report includes the proposed workshop recommendations that were forwarded to the EEAC for its finalization. The remainder of this Report includes a section on each of the six workshops, including the detailed agenda for the workshop; a link to the detailed meeting summary; and the Councilors, Consultants, and other presenters who attended each workshop.

Section II: Proposed Recommendations From Workshop Process

Workshops 1-4: Proposed Recommendations

DRAFT – Revised 2022-2024 EEAC Three-Year Planning Workshops 1-4 Recommendations
February 19, 2021

NEW CONSTRUCTION

Residential

1. **Continue to grow the pipeline of new multi-family (5+ units) Passive House projects by increasing participation and workforce training.**
    a. Include specific targets and goals
    b. Run demonstrations to address centralized water heating barriers
2. **Investigate opportunities for promoting zero-energy modular homes based on DOER's Zero Energy Modular Affordable Housing Initiative (ZE-MAHI)**
3. **Better characterize the non-energy impacts of fossil-free new construction.**
    a. Prioritize/accelerate evaluation activities that quantify health and equity-related non-energy impacts of gas stoves and other in-home fossil fuel combustion so that findings are available for review and inclusion in the 2022-2024 Plan.
4. The PAs should provide tools and training to promote the use of variable refrigerant flow (VRF) and ground-source heat pump HVAC systems.
5. **Develop one to four unit all-electric program offers.**
    a. Develop and implement an education and outreach strategy for all relevant participant segments (customers, builders, developers etc.)
6. **Develop connected home requirements.**
    a. Include a broad range of active demand measures and opportunities, including Wifi thermostats, home energy management systems and/or connected equipment such as HVAC and hot water equipment, and electric vehicle charging.
    b. As part of this connected home effort, the PAs should leverage opportunities to actively recruit new homeowners to participate in the PAs' active demand management (ADM) efforts, and more seamlessly integrate already available storage, EV-charger, and PV incentives into the program.

C&I

1. **Increase thresholds for participation and increase incentives to push for deeper efficiency, ensuring significant impacts on building energy use through investments in very high efficiency building envelopes and electrification to avoid more costly future deep energy retrofits.**
    a. Ensure EUI baselines used for Paths 1 and 2 are stringent enough to drive projects towards the highest efficiency achievable with modern construction practices.
    b. Emphasize Path 1 (ZNE ready) as often as possible – including with smaller buildings that are motivated to achieve ZNE status. Include bonus incentives for electrification and reduced thermal loads by focusing on high-performance building envelope.
    c. Address barriers to and find means for consistently shifting new construction to all electric buildings to avoid more costly deep energy retrofits in the future.
    d. Enhance pathways for smaller buildings to participate in ZNE offerings
    e. Increase use of performance monitoring and monitoring-based commissioning, particularly in Path 2.
2. **Actively promote projects with small or mid-size customers in the less comprehensive new construction Paths 3 & 4 that utilize modern building envelopes and high performance HVAC systems such as Variable Refrigerant Flow or Ground Source Heat Pumps paired with Dedicated Outdoor Air Systems.**
    a. Include commissioning and operator training, and actively promote performance monitoring and monitoring-based commissioning
    b. Study project impacts on energy and non-energy benefits including: energy and cost savings, lifetime carbon emissions, indoor air quality and occupant comfort.
3. **Develop Connected Buildings offerings for all four C&I new construction paths that build ADM capabilities into the design of new buildings of all sizes.**
    a. Leverage controls for end uses like lighting and HVAC in new buildings, for active demand management (ADM) from early in the design process, tailoring approaches to address sophistication and size of customers.
    b. Expand marketing for ADM and co-market EE and ADM for all customers
    c. The U.S. Department of Energy has coined the term “Grid Interactive Efficient Buildings”, which integrates technologies ranging from EE, to ADM, to distributed generation and EV charging. Integrate the themes of this concept into the New Construction programs.
    d. Develop an approach that supports campuses in overcoming compatibility issues that otherwise could limit their investment in modern control systems in new buildings.

ACTIVE DEMAND

1. **Direct Load Control (DLC)**: Increase participation in existing DLC offerings, incorporate new end uses, and increase participation of low income customers.
    - **a.** Increase wifi thermostat DLC penetration through tactics including bundling wifi thermostats and DLC with heating and cooling system installations including heat pumps, and comarketing and delivery coordination of DLC with in-home audits and wifi thermostat rebates. Increase enrollment and penetration of wifi thermostats in DLC, e.g. from 3% of wifi thermostats to 15% (residential and small business).
    - **b.** Incorporate new end uses by expanding or adding EV charging and pool pumps, and revisit the cost-effectiveness and potential addition of appliance DLC opportunities such as water heaters and dehumidifiers.
    - **c.** Increase the participation of low income customers in the DLC offerings.
    - **d.** Include a target date for the implementation of the National Grid EV charging effort.
2. **C&I Load Curtailment:** Grow the C&I load curtailment resource through integration with normal program and market sales channels and with the new construction program. Before 2022, assess the eligibility for new CHP/generators to participate in C&I load curtailment for the 2022-2024 Plan, including an assessment of GHG emissions impacts. Also consider phasing out existing CHP/generators that are currently enrolled during the 2022-2024 period.
3. **Storage:** Significantly expand the program behind-the-meter (BTM) storage targets to contribute to the Commonwealth's overall storage goal of 1,000 MWh by 2025 (or 500 MW with storage duration of 2 hours). Revise the program outreach and integration processes to enable increased and broader participation of customers and storage/inverter providers. Identify and highlight other value streams. Help integrate the storage program offerings into a statewide framework that leverages SMART and the Clean Peak Standard, possibly including through co-delivery.
4. **Electric Vehicle (EV) Charging and Mobility:** Increase enrollment and participation of EV chargers in the bring-your-own-device (BYOD) ADM program offering including payment of pay-for-performance incentives. Develop and implement co-marketing and targeted incentives for newer-technology EV chargers, and for EV chargers for some customer segments to provide equitable opportunities to benefit from transportation electrification. Implement co-marketing or co-delivery integration with other state EV and charger programs including potential co-funding sources. Develop and implement a state-wide program for BYOD for EV chargers and/or vehicle-controlled charging if feasible to be implemented by a specific date.
    - **a.** Explore possible co-marketing or program support for other mobility solutions beyond individual automobile approaches.
5. **Winter Demand Management:** Revisit the performance and cost-effectiveness of winter ADM by mid-2021 after the AESC 2021 study is complete. Consider combining summer and winter efforts into an annual ADM offering. Continue winter ADM efforts in the interim in 2020-2021 by leveraging investments in summer ADM to increase utilization in winter.

6. **Gas Demand Management.** Assess the potential benefits and costs of gas ADM, building on the preliminary analysis of Eversource and National Grid. Develop and implement a gas ADM program offering that complies with the DPU orders in the Eversource and National Grid gas rate cases that direct the PAs to pursue gas ADM through the EE programs.

INCOME ELIGIBLE

Increasing heat pump installations and introducing new measures

1. **Increase cold climate heat pump installations, by identifying and prioritizing cost-effective applications for IES customers, developing protocols to standardize decision-making, identifying and addressing barriers to participation and installation, and working to increase customer education and support for operation and maintenance.**
    a. The overall heat pump goal should increase over the three-year term and be broken out to include goals for whole house conversions, partial displacement, and heat pump water heaters. Progress on goals should be reported within the PA quarterly reports.
    b. Provide education to customers on the viability and benefits of electrification, as well as on current market pricing; provide training to operators on maintenance and operations of heat pump systems.
    c. Ensure proper sizing of heat pumps by continuing to complete any necessary air sealing and weatherization work prior to heat pump installation.
2. Develop heat pump expertise to include at least one specialist at each Community Action Program (CAP).
3. Increase participation in active demand management programs, including developing and implementing protocols for appropriate installation of WiFi thermostats for energy efficiency and demand management. Include follow-up, when necessary, to provide customer support.
4. Collect and report data on the number, type, and location of barriers including those related to installation (e.g., building code violations) as well as those related to participation. Use this data to inform program delivery.

Ensuring adequate budgets

1. **Ensure that income eligible budgets reflect expected increases in the number of new low-income households due to COVID impacts, and reflect revised measure mixes, including increased installation of heat pumps, and improved protocols.**
    a. Collect data on and report to EEAC if and when there are deferrals or delays in service (in whole or in part) due to budget constraints.

Ensuring equitable service

1. **Determine if there are differences in service by CAP territory, PA territory, or PA program (gas or electric) that are not warranted by differences in proportions of low-income households.**
    a. Develop and implement strategies to correct unwarranted service differences, including additional resources to CAP agencies.
2. **Expand efforts to enroll customers newly eligible for IES services as a result of the COVID-19 pandemic, including** coordinating with the outreach efforts the PAs have taken, and continue to take, to promote payment plans, arrearage management programs, and discount rates.

Strengthening multifamily pipelines and protocols

1. **Increase and improve service to multifamily buildings, including naturally occurring affordable housing (NOAH).** Strategies should include:
    a. Working with the Massachusetts Department of Housing and Community Development (DHCD), the U.S. Department of Housing and Urban Development, and public housing authorities to identify and reach out to owners and managers of small multifamily buildings that are part of the certificate-based Section 8 program.
    b. Utilizing PA account data to identify multifamily buildings.
2. **Provide more flexibility for multifamily building owners undergoing scheduled rehabilitation, renovation, or refinancing, to enable deeper energy-savings.**
    a. Collaborate with affordable housing developers and key stakeholders to establish a workable pay-for-savings approach which promotes deep energy retrofit projects .
3. Develop and implement protocols to combine income eligible and non-income eligible services and streamline delivery of such services to building owners of buildings with a mix of income eligible and market rate units
4. Develop and implement protocols to require blower-door testing for air leakage rates of multifamily buildings to ensure health and comfort of residents.

Improving data and systems for program assessment and improvement

1. **Strengthen regular reporting in order to identify areas of improvement and resources needed to support comprehensive and equitable service to all submarkets.** Reporting should provide insight into specific program activities and buildings served, as well as identify where program designs are working well or need modification. Quarterly reporting to the EEAC should allow differentiation of program activities by more granular parameters, including:
    - PA and CAP territory
    - Program (gas, electric)
    - Service type (Appliance Management Program (AMP), weatherization, heating system)
    - Building size (number of units)
    - Resident status (owner or renter)
    - Ownership (public housing, subsidized affordable housing, private)
2. **Develop and implement a statewide computerized audit tool by the third quarter of 2022 that can provide regular, timely, and consistent information to support identification of best practices and needed continuous improvement as well as reporting to the Council and providing data for EM&V.**

C&I EXISTING BUILDINGS

Lighting Controls

1. **End support for non-dimmable TLEDs by the end of 2021 across all program pathways.** To receive support, dimmable TLEDs should be installed and commissioned to deliver some combination of initial wattage tuning, daylight harvesting, occupancy controls and dimming capabilities. Refocus upstream product offerings on "smart" dimmable and controllable TLEDs and DLC qualified luminaire-level lighting controls.
2. **Drive customers towards luminaire-level lighting controls** wherever possible using performance lighting and other more comprehensive pathways. Improve the ease of participation for the Performance Lighting Plus program, particularly for existing buildings.
3. **Increase investments in lighting controls training for contractors/installers and customers;** expand training efforts to include commissioning for contractors/installers, sales strategies for distributors/contractors, operation and maintenance best practices for facility managers, and customer education on energy and non-energy benefits of controls.
4. Continue to transition all state and municipal, and company owned streetlights to LEDs incorporating streetlighting controls at the time of conversion.

HVAC

1. **Increase electric and gas HVAC savings from existing buildings** by improving realization rates, increasing participation, streamlining the custom application process, addressing system optimization, including envelope upgrades and commissioning from project concept through operations.
    a. Improve realization rates for implemented HVAC projects by consistently including third party commissioning to ensure the Massachusetts ratepayers and Incorporate standardized benchmarking across PAs (using ENERGY STAR Portfolio Manager) as a pre-post component of project implementation.
    b. Increase participation in custom HVAC projects and pursue system optimization to increase savings per project. System optimization includes right-sizing, eliminating pinch-points and by-passes, adding energy and heat recovery, implementing optimal sequences of operations and commissioning.
    c. Consistently prioritize support for building envelope assessments and upgrades including air sealing, insulation and incremental improvements to siding and windows when investments in thermal envelope are planned.
    d. Align timing of interventions with planned infrastructure upgrades to support deeper, more comprehensive upgrades.
    e. Develop a pathway for public buildings that emphasizes HVAC and building envelope measures with enhanced incentives. Conduct a study specific to public buildings to establish baselines for this customer segment.
    f. Explore additional financing opportunities for capital-intensive HVAC projects
2. **Increase and drive demand for electrification projects,** including conversions to variable refrigerant flow (VRF), air source and ground-source heat pump systems paired with Dedicated Outdoor Air Systems (DOAS) and providing operator and occupant training.
    a. Establish increasing target for electrification projects by fuel type.
    b. Establish target for heat-pump water heating.
    c. Provide training to customers on the viability and benefits of electrification; provide training to operators on maintenance and operations of heat pump systems.
3. **Undertake a Deep Energy Retrofit Pilot** including working with customers to leverage planned replacements to achieve cost-effective deep energy retrofits that result in balanced investment in envelope, HVAC and other improvements. Engage private and public customers with significant real estate portfolios to identify potential buildings and undertake integrated design with scenario modeling, lifecycle and financial analysis to identify the optimum investments. Completed retrofits should reduce energy use by at least 40%[1] to move participants toward ZNE and renewable-ready buildings. Use the pilot to build the supply chain and workforce including identifying existing market actors with the skills best suited to delivering successful projects and training providers. Document project characteristics in promotional materials.

[1] DOE Deep Energy Retrofit Challenge https://www.energy.gov/management/spo/articles/doe-s-sustainability-performance-office-announces-deep-energy-retrofit

a. Work with customers with significant real estate portfolios to identify buildings suitable for inclusion in the pilot with a target of 50 participant buildings. Help customers realize the full benefits of holistic lifecycle cost analysis by working with them to plan how they will replace equipment, systems and envelope components nearing end of life in order to move buildings towards lowest required energy inputs for HVAC operation.
b. Use an integrated design approach incorporating early retirement of existing equipment, systems, and components to ensure comprehensiveness and to identify the optimal package of integrated energy efficiency measures for the client; consider electrification in every package. Incorporate envelope improvements including assessments of the addition of insulated exterior cladding and upgrading windows to triple glazed units at the time of replacement.
c. As part of the process assess which service providers are best suited to support customers and the PAs in pursuing Deep Energy Retrofits.
d. Document project costs, savings, benefits and measured results in case studies and other promotional materials.

4. **Expand delivery of services and savings relating to building automation and energy management information systems including legacy system upgrades and replacements and portfolio optimization.** Require the use of and provided incentives for independent third-party commissioning in the existing building sector to improve savings.
    a. Work with customers to upgrade legacy systems and optimize HVAC system performance. For customers with significant real estate holdings, work to ensure interoperability and optimization across their portfolio by helping them bring existing systems up to modern standards when new buildings or systems are added.
    b. Require existing building commissioning to use independent third-party commissioning providers who participate in the project from kick-off through Measurement and Verification and include operator training.
5. **Increase support for and participation in Energy Management Information Systems (EMIS) measures and monitoring-based commissioning (MBCx).**
    a. Include participation rates, estimated savings, achieved savings and project costs in quarterly reports to the Council.
    b. Evaluate EMIS and MBCx to identify market barriers, identify proven programmatic approaches that addressed those barriers in other jurisdictions and assess the market actor competency in delivery EMIS and MBCx services.

Industrial/Process Savings

1. **Continue to identify and eliminate barriers that are preventing project implementation** and savings already identified through the Industrial Initiative.
    a. Continuously check back regularly with customers to see if circumstances have changed, or what it would take to move forward. Once a project has been identified, and quantified, the incremental support to cause a project to move forward should be less than the effort and cost to identify a new potential project.
    b. Provide sales training to Industrial Initiative contractors.
    c. Use the Massachusetts Pro Forma tool to provide cash flow analysis, rate of return, and other project financial information to the customer CFO to sell the project.
    d. Report to the EEAC on work being done to reduce barriers for industrial process savings.
2. **Expand Strategic Energy Management (SEM) to a full program offering for all industrial customers.**
    a. Pair SEM with implementation of traditional Industrial Initiative to drive more capital projects. Track any increases in capital projects to assess the impact of SEM participation in Massachusetts. SEM may be the most valuable marketing tool available to target manufacturers.
    b. Reassess the measure life for Strategic Energy Management operational savings.
    c. Support Energy Management Information Systems through financial cost sharing.
3. **Identify customer segments where there are still appreciable non-lighting savings opportunities and construct targeted initiatives to address these markets. Examples include:**
    - Smaller/distributed telecom sites, including cabinets and other unoccupied structures.
    - Cannabis cultivators with substantial process savings from dehumidification

CHP

1. **Assess incentives for natural gas fueled CHP**
    a. **Analyze lifetime greenhouse gas impacts of CHP in the context of the Global Warming Solutions Act climate goals**
    b. **Complete a dedicated CHP impact and net to gross evaluation no later than 2022.** Ensure this report differentiates between new CHP systems and retrofit/replacement of existing systems. Cover all eligible CHP technologies including reciprocating engines, turbines, and fuel cells with thermal output.
2. **For all CHP projects, conduct detailed lifetime emissions analysis** using an impartial and agreed upon forecast of ISO New England's emissions intensity. Prioritize and offer enhanced incentives for lower carbon systems such as renewable fuel CHP systems that run on anaerobic digester gas.

Residential Existing Building Market Rate Recommendations

1. **Establish separate, higher heat pump unit goals to reflect EEAC priorities and report progress within the PA quarterly reports. Goals should be broken out by all heat pumps, whole house conversions, partial displacement, and heat pump water heaters.**

2. **Bolster program support and market promotion of heat pump technologies for primary heating including the addition of incentives and HEAT Loan eligibility for ground-source heat pumps by January 2022:**
    - Enhance HVAC contractor technical competencies for heat pump system selection, design, installation and maintenance
    - Enhance customer education efforts
    - Develop program design and incentives to encourage weatherization prior to heat pump installation when feasible and practical
    - Co-deliver with other energy efficiency and active demand management measures

3. **Recognizing climate goals and the market transformation that has occurred with respect to fossil fuel systems, update current fossil fuel space heating incentives to limit incentives only to technologies and installations where clear cost-effective savings remain.**
    a. By January 2022, for market rate customers with existing gas or propane equipment: remove incentives for customers replacing existing condensing systems and maintain incentives for customers replacing non-condensing with condensing systems ,
    b. For market rate customers, cease incentives and HEAT loans for oil-fired heating equipment as of January 2022; handle as custom measure, especially for multifamily buildings.
    c. Study low and moderate income customer impacts and needs to determine appropriateness of the application of A and B for these customer groups.
4. **Phase out fossil fuel water heating incentives.**
    a. Cease incentives and HEAT Loans for oil and propane water heating equipment by January 2023, using a phased approach if necessary to support an orderly market transition.
    b. Cease incentives and HEAT Loans for storage and indirect natural gas water heaters as of January 2022, but retain for more efficient tankless and condensing gas systems.
    c. Study low and moderate income customer impacts and needs to determine the appropriateness of the application of A and B for these customer groups.

5. **Supplement RCD with new, custom performance-based offer modeled after DOER's**

Home MVP pilot that incentivizes customers to both weatherize and install heat pumps.

6. **Implement state of art communication and data management practices to increase effectiveness of customer interactions, including but not limited to:**
    - Review/refresh Mass Save and PA websites
    - Carry through updated messaging strategies to customer emails, social media, and other communication channels
    - Improve the home energy audit report
    - Improve behavior reports
    - Enhance use of technology
    - Enhance sales training to program contractors, including call center staff, who interact with customers

7. **Increase participation and conversion rate in RCD :**

- Increase savings and participation from weatherization measures.
- Improve customer access through simplified customer experience such as reduction in number of steps to participate, increased opportunities for immediate action, additional facilitated support, and single point of contact for customers.
- Increase data-driven targeted marketing and outreach efforts.
- More seamlessly integrate already available storage, EV-charger, and PV incentives into the program.
- Reassess Home Performance Contractor compensation models as needed to reflect changes in lighting measures offered during home energy assessments.

Consultant Team Workforce Development Recommendations

NOTE: The Equity Working Group (EWG) Workforce recommendations will be included with the full list of EWG recommendations in a separate document.

1. **Deliver targeted training for emerging and/or critically important technologies including building automation systems and heat pumps.**
   - Expand investment in targeted trainings for field assessment, installation, and commissioning of various heat pump technologies for residential, income eligible, and commercial sectors.
   - Fund efforts that grow the field of qualified building automation system technicians and commissioning specialists in the commercial and multifamily sectors.
   - Expand building operator training for large, complex facilities to ensure that investments made in new technologies deliver on their full savings potential.

2. Complete an independent Mass Save workforce study with a first report to be completed by September 2022. Report on jobs resulting from Mass Save Program investments, statistics on workforce demographics prioritized by the Equity Working Group, and ongoing identification of areas for strategic workforce investments that drive future program success. Coordinate with MassCEC on its annual Clean Energy Industry Report.
   - Assess the overall quality and quantity of the workforce that directly and indirectly deliver the Mass Save program (PA staff, PA contracted vendors, and firms that operate through the PAs open market programs).
   - Include demographic information on workforce outlined in the recommendations from the Equity Working Group.
   - Continually identify deficiencies and needs for greater investment for various programs and technologies.

3. **Expand investments in workforce development including but not limited to funding apprenticeships and internships, training and upskilling for incumbent workers, and outreach to draw new and diverse workers into the Mass Save ecosystem. Develop a budget to support significant expansion of workforce development efforts based on Equity Working Group Recommendations and Recommendation 10 above.**
   - Encourage significant, steady and sustained ramp-up of spending incrementally throughout the 2022-2024 plan (for example, 0.8% in 2022, 1.6% in 2023, 2% in 2024).
   - Develop a bottom-up budget that includes workforce development initiatives including trainings and continuing education for existing workers, certification programs, direct investment in trade school and community college programs, stipends for internships, outreach to new/diverse prospective EE workers, support for trade ally diversity, equity and inclusion policy development, and tracking and reporting on EE workforce demographics.
   - Expand the level of detail included in quarterly reporting to the Council on workforce development spending to ensure investments are effectively delivering on objectives developed by all stakeholders.

Workshop 5: Proposed Recommendations

Updated EWG Recommendations 2/19/2021

PARTNERSHIPS

Enhance Community Partnerships

1. Ensure incentives and other means of support are adequate to meet partners' needs
    - Provide guaranteed financial support at the beginning of the program year to support CBO and municipal staff capacity both internally and through their external partners
2. Tie partnership goals specifically to increases in participation by renters, moderate income customers, and language isolated customers, which is not currently the case for the Municipal Partnership Program
3. Enable more different and innovative pathways that partnerships could follow
    - Flexible, customized, and targeted approaches to better meet needs of individual communities and priorities within a community
4. Create goal-setting and evaluation mechanisms in collaboration with partners
5. Increase the number of participating municipalities and allow municipalities to submit multi-year applications
6. Increase access to, transparency around, and granularity of data by:
    - Standardizing data collection and reporting across all PAs
    - Developing data sharing agreements between program partners and PAs
    - Providing regular trainings to interested stakeholders on the Mass Save Data
    - Providing support and technical assistance to smaller community based organizations and municipalities as they navigate data
7. Streamline process and give program partners more flexibility to develop marketing materials that will resonate with their community

Develop Additional Pathways for Community Partnerships

8. Expand approach to partnerships to include entities other than municipalities such as,
    - Community-based and culturally based organizations (see next section of recommendations)
    - Statewide and regional organizations representing underserved communities and populations
    - Consider expansions beyond populations Equity Working Group has been focusing on
9. Ensure partnerships go beyond just outreach and lead to program participation
    - E.g., partners could serve as savings aggregators, project openers or closers, implementers

Invest in Community-based Partnerships

10. Identify and connect with local groups that work within underserved communities
11. Listen to community-identified needs
12. Include leaders in goal-setting and program planning
13. Identify and work with community leaders, with compensation for their time, experience, and knowledge
14. Provide resources on a sustained basis to achieve mutual energy efficiency objectives
15. Create regular mechanisms for two-way communication between partners and PAs

Prioritize Underserved Communities

16. Use quantitative information where available to determine geographic areas and population groups that should be targeted with partnerships
    - History of underservice
    - Income / energy burden
    - Language
    - Race or ethnicity
    - Environmental burdens

WORKFORCE DEVELOPMENT

Increase the Diversity of the Workforce Supporting Mass Save

1. Assess and revise vendor solicitation processes
    - Minimize use of invite-only procurements
    - Include certified DBEs in all RFP, RFQ, and RFI distribution lists
    - Require bidders to make measurable financial commitments to do business with one or more diverse businesses on all procurement opportunities with a value greater than $150,000
        - Require lead vendors to partner with DBEs on all Mass Save contracts
    - Make selection criteria objective and transparent to avoid implicit bias
    - Host webinars and trainings, and provide technical assistance to help vendors navigate the procurement process

2. Identify and remove barriers to increase Disadvantaged Business Enterprise (DBE) participation
    - Identify new DBE firms; support eligible vendors to pursue diversity certification or small business certification

3. Set minimum standards for formal diversity, equity, and inclusion policies for all Mass Save contracted vendors

- Provide detailed technical assistance to vendors as they develop formal diversity, equity, and inclusion policies

4. Create and keep up-to-date a detailed list of all training opportunities available through or supported by Mass Save and make that list easily available to stakeholders and on the Mass Save website
    - Make a concerted effort to identify key upskilling opportunities for the incumbent workforce and develop new training opportunities where there are gaps
    - Coordinate with the trade ally network and training providers to ensure that graduates of training programs have direct access to job opportunities with Mass Save contracted vendors
    - Expand geographic access to training opportunities by providing virtual and in-person trainings throughout the Commonwealth

5. Create targeted support for workforce and contractor development efforts in Environmental Justice communities with historically low participation in Mass Save
    - Engage with community-based organizations and industry groups / associations that focus on diverse businesses

Attract and Train Young and Diverse Persons for Participation in the Energy Efficiency Workforce

6. Expand outreach & education about career opportunities to include stronger partnerships with vocational and technical high schools and community colleges
    - Create multiple viable career pathways to illustrate career opportunities available to new entrants in the workforce
    - Establish energy efficiency career days where students can learn firsthand from energy efficiency workers
    - Make direct connections between careers in energy efficiency and climate and the environment

7. Fund internships, apprenticeships, pre-apprenticeships, and externships
    - Partner with employers to offer partial wage subsidies for a limited time for new entrants into the energy efficiency workforce
    - Include mentorship and networking opportunities as a component of all internship, apprenticeship, pre-apprenticeship, and externship opportunities
    - Track and report the number of internships, pre-apprenticeships, apprenticeships, and externships that translate into full-time job offers

MODERATE-INCOME

Improve Qualification Process

1. Revise the income verification process to improve ease of access for moderate-income customers
    - Examples the EWG has discussed, but are not yet in agreement on how to proceed, include:
        - Multiple options for income verification, such as automatic qualification in certain EJ communities/geographic areas (community level verification) or using self-verification with audits (household level verification)
        - Establishing eligibility through documented participation in other state income-qualified programs

Enhance Incentives

2. Provide no-cost incentives for weatherization, heating system replacements and appliance replacements to moderate-income customers[2]
    - Increase incentives to support electrification
    - Prioritize whole-building services to incentivize weatherization at the time of heating system replacement
3. Increase and allocate sufficient funding for pre-weatherization barrier mitigation for moderate-income customers

RENTERS and LANDLORDS

Enhance Marketing and Outreach

1. Target municipalities with high numbers of rentals
2. Use multiple strategies to reach rental property owners and residents
    - Develop alternative sales and/or delivery models for rental property segment (e.g. landlord association, other third party)
3. Develop compelling case for participation by developing case studies when new program offerings become available

Improve Whole Building Services

4. Collaborate with rental owners on program design
5. Address pre-weatherization barriers

[2] The EWG continues to discuss this recommendation and plans to review budget, benefits, and participation data projections for increased incentives for moderate income customers.

6. Continue and enhance efforts to provide integrated service delivery with one point of contact for owner
7. Enhance incentives for measure bundles and / or for higher savings levels
8. Employ "closers" who get paid to close projects and / or revise Mass Save sales compensation model
9. Provide referral incentives to landlords and tenants who refer their landlords
10. Develop a marketing offer that combines energy efficiency and other building upgrades to attract new program participants

SMALL BUSINESS

Enhance Marketing and Outreach

1. Commit to prioritizing Main Streets programs in EJ communities in addition to and separate from efforts in business parks
2. Develop marketing and outreach strategies for commercial landlords to help commercial renters participate
3. Provide dedicated account managers for a subset of small business customers to allow for more personalized service
    - Consider grouping small business accounts by industry
4. Allow eligible customers to sign up online for turnkey small business audits
5. Expand pool of small business turnkey vendors that employ diverse staff

Prioritize Small Business Turnkey Program

6. Improve incentives and financing and standardize offering of turnkey services across PAs
7. Reduce reliance on upstream programs for small business
8. Enhance opportunities for deeper savings for underserved customers
9. Provide concierge services to guide customers through audit and installation

Emphasize Co-delivery of Lighting and Non-lighting Measures

10. Bundle lighting and non-lighting measures to deliver comprehensive solutions and deeper savings
11. Deliver more small business weatherization and address pre-weatherization barriers
    - Incorporate non-energy impacts in measure screening
12. Deliver more custom measures and compress the level of effort required to design a custom measure

LANGUAGE ISOLATED POPULATIONS

Understand the Customer Journeys of Language Isolated Populations

1. Create detailed customer journey maps

- Illustrate individual journeys for each program within IES, Residential, and C&I, and for different customer types, including owners, tenants, property owners and managers
- Identify all points of contact requiring translation and / or interpretation
- Catalog language assets available within the Mass Save program administrators and contractor network
- Use customer journey maps to establish appropriate expectations among contractors and customers

2. Identify gaps in resources and develop plan to bridge them through program outreach, design, delivery, and workforce development efforts

Facilitate Ease of Participation

3. Reduce number of steps required to access offers—participation should be seamless
4. Provide immediate pathways to action
5. Provide direct connections to services (e.g., utility supplies electrician to remedy issue) and energy concierge services
6. Collaborate with community-based organizations serving language isolated communities to standardize and socialize common industry terms

Develop Community-based Connections

7. Enhance connections with community-based groups
    - Identify and connect with statewide, regional, and local groups that work within language isolated communities
    - Create regular mechanisms for two-way communication
    - Listen to community-identified needs
    - Identify and work with community leaders, with compensation for their time, experience, and knowledge
    - Include community leaders in program planning
    - Provide resources on a sustained basis to achieve mutual energy efficiency objectives including financial incentives for lead generation and conversion

8. Leverage community networks to develop necessary cultural competence and build trust with language isolated communities
    - Support and use inclusive and multi-lingual media
    - Provide feedback on cultural aspects of marketing
    - Help with intersectional approaches

Focus on Multi-Lingual Workforce Development

9. Address gaps identified in language cataloging
10. Focus recruitment efforts to develop multilingual workforce for all levels
11. Recruit through community-based organizations

12. Create career ladders for multilingual staff; include pay differentials for language / cultural experience
13. Adapt to cultural differences within language groups, based on ethnicity, age, etc.

Develop Language Access

14. Establish written language access policy, preferably in common across all PAs and vendors, and provide regular training on language access
15. Maintain catalog of language capabilities of workforce, including PA staff and vendors
16. Create mechanisms for easy and equitable sharing of language support, including an MOU across PAs, lead vendors, subcontractors and regularly updated template for PA and vendor access language support

CROSS-CUTTING

Reporting

More frequent and detailed reporting of participation by underserved customer groups as described below.

1. ***Small business***
   - Separate small business from C&I existing building retrofit reporting
   - Expand reporting on small business participation
2. ***Language Isolated Populations***
   - Gather, track, and report customer language preference and language of program participants
3. ***Renters and Landlords***
   - Report renter participation quarterly
   - Report on program participation in small rental buildings (5-25 units)
   - Number of property owners/landlords receiving enhanced insulation incentive
   - Participation, savings, and costs for multifamily program, including # of affected projects and units
4. ***Moderate Income***
   - Provide regular information on barriers to weatherization
   - Number of heating equipment installations for moderate income customers, by type

Targeting and Rewarding PA Performance

9. Designate PA budget and savings goals for rental properties, with targets for small buildings (5-25 units)
10. Establish numerical goals for increased participation among underserved customer groups such as moderate-income customers, renters and landlords, language isolated customers, and small businesses
11. Craft performance incentive mechanism that DPU can approve and that will emphasize equity and serving underserved customer groups

Section III: Workshop by Workshop Recap

Workshop 1

Workshop 1: Agenda

MA ENERGY EFFICIENCY ADVISORY COUNCIL

EEAC First Workshop: New Construction & Active Demand

Agenda

November 5, 2020 - 9:00 AM - 1:00 PM

Facilitators: Dr. Jonathan Raab & Katie Abrams, Raab Associates

9:00 Welcome – Maggie McCarey, DOER Energy Efficiency Division Director and EEAC Chair

Agenda Review/Goals/Ground-rules/Virtual Meeting Procedures--Facilitator

9:10 New Construction (Residential and C&I) Potential Recommendations

- **Residential New Construction**
  Brief background presentations by Amanda Formica (PA, NGRID) and Glenn Reed (Consultant)

- **C&I New Construction**
  Brief background presentations by Kimberly Cullinane (PAs, Eversource) and Jennifer Chiodo (Consultant

11:15 Break

11:30 Active Demand Management Potential Recommendations

Brief background presentations by Jeff Schlegel (Consultant) and Christopher Porter (PA, NGRID

12:50 Wrap-up & Next Steps

1:00 Adjourn

Workshop 1: Meeting Summary

Link to Workshop #1 Meeting Summary, which includes suggested changes to recommendations:

EEAC Workshop #1 Summary

Workshop 1: Attendees

Over 100 people attended the workshop including 18 Councilors. Participating attendees (not including the public) are listed below.

Attendance: Nov. 5, 2020 EEAC First Workshop: New Construction & Active Demand	
Voting Councilors	
Maggie McCarey	DOER
Cindy Arcate	Non-Profit Network
Jo Ann Bodemer	AGO
Amy Boyd	Acadia Center
Tim Costa	ISO-NE
Fran Cummings (for Paul Gromer)	Peregrine Energy
Mike Ferrante	MEMA
Elliott Jacobson	Action Inc.
Paul Johnson	Greentek
Cammy Peterson	MAPC
Bob Rio	Associated Industries of MA
Dennis Villanueva	Mass General Brigham
Mary Wambui	Planning Office for Urban Affairs
Sharon Weber	DEP
PA Non-Voting Councilors	
Maggie Downey	Cape Light Compact
Cindy Carroll	Unitil
Frank Gundal	Eversource
Stephanie Terach	Liberty Utilities
Presenters (Consultants and PAs)	
Jennifer Chiodo	EEAC Consultant Team
Glenn Reed	EEAC Consultant Team
Jeff Schlegel	EEAC Consultant Team
Kimberly Cullinane	Eversource - PA - Lead C&I NC
Amanda Formica	National Grid - PA - Lead Res NC
Chris Porter	National Grid, PA-Lead ADM

Workshop 2
Workshop 2: Agenda

MA ENERGY EFFICIENCY ADVISORY COUNCIL

EEAC Second Workshop: Income Eligible

Agenda

November 10, 2020, 1:00 PM - 5:00 PM

Facilitators: Dr. Scott McCreary, CONCUR Inc. & Katie Abrams, Raab Associates

1:00 Welcome and Roll Call – Maggie McCarey, DOER Energy Efficiency Division Director and EEAC Chair

1:05 Agenda Review/Meeting Objectives/Ground-rules/Virtual Meeting Procedures – Facilitator

1:15 Overview of Income Eligible Services Recommendations – Consultants, PAs, and LEAN

1:40 TOPIC 1: Measures: Increasing Heat Pump Installations and Introducing New Measures

2:00 TOPICS 2 AND 3: Adequate Budgets and Equitable Service

- **Ensuring Adequate Budgets**
- **Ensuring Equitable Service**

  Breakout brainstorm then plenary debrief on the adequacy of budgets, equity of service, and heat pumps

3:10 Break

3:25 TOPIC 4: Strengthening Multifamily Pipelines and Protocols

3:50 TOPIC 5: Improving Data and Systems for Program Assessment and Improvement

4:15 TOPIC 6: Additional Recommendations from Councilors

4:50 Wrap-up & Next Steps

5:00 Adjourn

Workshop 2: Meeting Summary

Link to Workshop #2 Meeting Summary, which includes suggested changes to recommendations:

EEAC Workshop #2 Summary

Workshop 2: Attendees

Over 100 people attended the workshop including 21 Councilors. Participating attendees (not including the public) are listed below.

Nov 10, 2020 Attendance - EEAC Workshop #2		
Voting Councilors		
Maggie	McCarey	DOER
Greg	Abbe	DHCD
Joann	Bodemer	AGO
Amy	Boyd	Acadia Center
Tim	Costa	ISO-NE
Steve	Cowell	E4theFuture/Peregrine Energy
Justin	Davidson	MA Association of Realtors
Mike	Ferrante	MEMA
Charlie	Harak	NCLC
Elliott	Jacobson	Action Inc.
Paul	Johnson	Greentek
Cammy	Peterson	MAPC
Bob	Rio	Associated Industries of MA
Dennis	Villanueva	Partners MGH
Mary	Wambui	Planning Office for Urban Affairs
Sharon	Weber	DEP
PAs – Non-Voting Councilors		
Cindy	Carroll	Unitil
Maggie	Downey	Cape Light Compact
Frank	Gundal	Eversource
Jane	Lano	Berkshire Gas
Stephanie	Terach	Liberty Utilities
Presenters (Consultants and PAs)		
Elizabeth	Chant	EEAC Consultant Team
Margie	Lynch	EEAC Consultant Team
Marie	Abdou	National Grid
Brandy	Chambers	Eversource
Kim	Dragoo	Liberty Utilities
Amanda	Formica	National Grid
Ruth	Georges	Eversource
Riley	Hastings	Eversource
Shane	Henegan	Liberty Utilities
Marge	Kelly	Eversource
Steve	Menges	National Grid

Meredith	Miller	Cape Light Compact
Kevin	Parse	Unitil
Mike	Rossacci	National Grid
Linda	Soucy	Eversource
Liz	Anderson	Rich May
Audrey	Eidelman	BCK Law, PC
Rachel	Evans	DOER
Jodi	Hanover	Rich May
Emmett	Lyne	Rich May
Ashley	Wagner	Keegan Werlin
LEAN/ABCD		
Jerry	Oppenheim	LEAN
John	Wells	ABCD, Inc./LEAN
Brian	Beote	Action Inc.
Rita	Carvalho	Action Inc.
James	Collins	ABCD, Inc./LEAN
Jonathan	Daley	Action Inc.
Brendan	Delaney	Action Inc.
Billierae	Engelman	ABCD
Orest	Manzi	ABCD

Workshop 3

Workshop 3: Agenda

MA ENERGY EFFICIENCY ADVISORY COUNCIL

EEAC Third Workshop: Existing Buildings #1—Commercial and Industrial[3]

December 1, 2020—9 AM to 1 PM

Facilitators: Dr. Jonathan Raab & Katie Abrams, Raab Associates

Agenda

9:00 **Welcome/Roll Call (Maggie); Agenda/Protocols & Groundrule Review (Jonathan)**

9:10 **Lighting Controls**
[Adam Jacobs present Consultant recommendations]

9:50 **HVAC**
[*Jen Chiodo present Consultant recommendations]*

11:00 **Other Councilor high-level HVAC or Lighting Control recommendations?**

11:10 **Break**

11:20 **Industrial/Process Savings**
[*Adam Jacobs present Consultant recommendations]*

12:00 **CHP**
[*Adam Jacobs present Consultant recommendations]*

12:40 **Other Councilor high-level CHP, Industrial/Process or Other C&I recommendations?**

12:50 **Wrap-Up, Feedback, Next Steps**

1:00 **Adjourn**

[3] Small C&I covered in workshop #5 on 1/12/2021

Workshop 3: Meeting Summary

Link to Workshop #3 Meeting Summary, which includes suggested changes to recommendations:

EEAC Workshop #3 Summary

Workshop 3: Attendees

Over 114 people attended the workshop, including 20 Councilors. Participating attendees (not including the public) are listed below.

Dec 1, 2020 Attendance – EEAC Workshop #3	
Voting Councilors	
Greg Abbe	DHCD
Maggie McCarey	DOER
Cindy Arcate	Non-Profit Network
Jo Ann Bodemer	AGO
Amy Boyd	Acadia Center
Justin Davidson	MA Association of Realtors
Charlie Harak	NCLC
Paul Johnson	Greentek
Cammy Peterson	MAPC
Bob Rio	Associated Industries of MA
Dennis Villanueva	Mass General Brigham
Mary Wambui	Planning Office for Urban Affairs
Sharon Weber	DEP
Patrick Woodcock	DOER Commissioner
PA Non-Voting Councilors	
Tim Costa	ISO-NE
Steve Cowell (for Paul Gromer)	Peregrine Energy
Maggie Downey	Cape Light Compact
Mike Ferrante	MEMA
Frank Gundal	Eversource
Audrey Penna	Berkshire Gas
Presenters (Consultants)	
Jennifer Chiodo	EEAC Consultant Team
Adams Jacobs	EEAC Consultant Team
PA Respondents	
Dave Gibbons	National Grid
Zack Lippert	National Grid
Grayson Bryant	National Grid
Amit Kulkarni	Eversource
Maryette Haggerty Perrault	Eversource
Margaret Song	Cape Light Compact

Workshop 4

Workshop 4: Agenda

MA ENERGY EFFICIENCY ADVISORY COUNCIL

EEAC Fourth Workshop: Workforce Development and Residential Existing Buildings

December 15, 2020—1 PM to 5 PM

Facilitators: Dr. Scott McCreary and Jasmin Muñoz, CONCUR, Inc.

Agenda

1:00 **Welcome/Roll Call** (Maggie McCarey); **Agenda & Ground Rule Review** (Scott McCreary)

WORKFORCE DEVELOPMENT

1:10 **Introductory Presentation of Equity Working Group Workforce Development Recommendations**
Recommendations by Cammy Peterson, Mary Wambui, and Maggie McCarey

1:25 **Equity Working Group: Workforce Development Recommendations**
[Councilors and EWG Co-Chairs Cammy Peterson and Mary Wambui present recommendations]
Increase Tracking and Reporting
Increase the Diversity of the Workforce Supporting Mass Save
Attract and Train Young and Diverse Persons for Participation in the Energy Efficiency Workforce

2:35 **Consultant Team: Workforce Development Recommendations**
[Adam Jacobs presents a slide about budget as a preface]

RESIDENTIAL EXISTING BUILDINGS
[Brief intro by EEAC Consultant Margie Lynch]

3:10 **Heat Pumps and Electrification**
[Glenn Reed presents Consultant recommendations]

3:40 **Fossil Fuel Heating Incentives**
[Glenn Reed presents Consultant recommendations]

4:10 **Residential Coordinated Delivery (RCD)**
[Presentations by Ian Finlayson on DOER's HomeMVP Program, and Caroline Hazard on Consultant recommendation]

4:40 **Other Potential Recommendations**

4:55 **Wrap-Up, Feedback, Next Steps**

5:00 **Adjourn**

Workshop 4: Meeting Summary

Link to Workshop #4 Meeting Summary, which includes suggested changes to recommendations:

EEAC Workshop #4 Summary

Workshop 4: Attendees

Over 140 people attended the workshop including 20 Councilors. Participating attendees (not including the public) are listed below.

Dec 15, 2020 Attendance – EEAC Workshop #4	
Voting Councilors	
Greg Abbe	DHCD
Maggie McCarey	DOER
Cindy Arcate	Non-Profit Network
Jo Ann Bodemer	AGO
Amy Boyd	Acadia Center
Justin Davidson	MA Association of Realtors
Charlie Harak	NCLC
Paul Johnson	Greentek
Cammy Peterson	MAPC
Bob Rio	Associated Industries of MA
Dennis Villanueva	Mass General Brigham
Mary Wambui	Planning Office for Urban Affairs
Sharon Weber	DEP
Patrick Woodcock	DOER Commissioner
Elliot Jacobson	Action Inc.
PA Non-Voting Councilors	
Tim Costa	ISO-NE
Steve Cowell (for Paul Gromer)	Peregrine Energy
Maggie Downey	Cape Light Compact
Mike Ferrante	MEMA
Frank Gundal	Eversource
Stephanie Terach	Liberties Utilities
Presenters (Consultants & DOER)	
Glenn Reed	EEAC Consultant Team
Adams Jacobs	EEAC Consultant Team
Ian Finlayson	DOER
Caroline Hazard	EEAC Consultant Team
Margie Lynch	EEAC Consultant Team
PA Respondents	
Marie Abdou	National Grid
Melanie Cohen	National Grid
Amanda Formica	National Grid
Ruth Georges	Eversource
Stephan Wollenburg	National Grid

MA ENERGY EFFICIENCY ADVISORY COUNCIL

EEAC Fifth Workshop: Existing Buildings #3—Equity[4]

January 12, 2021—1 PM to 5 PM

Facilitators: Dr. Jonathan Raab & Katie Abrams, Raab Associates

Agenda

1:00 **Welcome/Roll Call (**Maggie McCarey**); Agenda & Groundrule Review (**Jonathan Raab**)**

1:10 **EEAC Equity Working Group—Recommendation Development Process/Background**
[DOER-- Alexis Washburn *presents***]**

1:20 **Themes and Barriers**
[EWG Co-Chairs & EEA Councilors Mary Wambui and Cammy Peterson *present***]**

1:40 **Moderate Income**
[Caitlin Peale-Sloan, CLF/EWG Member *presents recommendations]*

2:15 **Renters/Landlords**
[Councilor Mary Wambui *presents recommendations*]

2:45 **Small Business**
[Councilor Cindy Arcate *presents recommendations]*

3:10 **Break**

3:20 **Limited English Proficiency**
[Ruth Georges, Eversource, *presents recommendations]*

3:45 **Partnerships**
[Councilor Cammy Peterson *presents recommendations]*

4:20 **Cross-cutting Recommendations**
[Councilor Joann Bodemer *presents recommendations, followed by Council discussion*]

4:45 **Other Recommendations?**

4:55 **Wrap-Up, Feedback, Next Steps**

5:00 **Adjourn**

[4] Note: Workforce development issues were addressed in Workshop #4

Workshop 5: Meeting Summary

Link to Workshop #5 Meeting Summary, which includes suggested changes to recommendations:

EEAC Workshop #5 Summary

Workshop 5: Attendees

Over 130 people attended the workshop including 22 Councilors. Participating attendees (not including the public) are listed below.

January 12, 2021 Attendance -EEAC Workshop #5		
Voting Councilors		
Greg	Abbe	DHCD
Cindy	Arcate	Non-Profit Network
Joann	Bodemer	AGO
Amy	Boyd	Acadia Center
Justin	Davidson	MA Association of Realtors
Charlie	Harak	NCLC
Elliott	Jacobson	Action Inc.
Paul	Johnson	Greentek
Deirdre	Manning	NA
Maggie	McCarey	DOER
Cammy	Peterson	MAPC
Bob	Rio	Associated Industries of MA
Sharon	Weber	DEP
Dennis	Villanueva	Partners MGH
Mary	Wambui	Planning Office for Urban Affairs
Patrick	Woodcock	DOER
PAs – Non-Voting Councilors		
Tim	Costa	ISO-NE
Steve	Cowell	Councilor Designee-E4theFuture
Cindy	Carroll	Unitil
Maggie	Downey	Cape Light Compact
Mike	Ferrante	MEMA
Amanda	Formica	National Grid
Frank	Gundal	Eversource
Jane	Lano	Berkshire Gas
Chris	Porter	National Grid
Stephanie	Terach	Liberty Utilities
Presenters (Consultants and PAs)		
Ruth	Georges	Eversource
Caitlin	Peale Sloane	CLF
Alexis	Washburn	DOER

Workshop 6

Workshop 6: Agenda

MA ENERGY EFFICIENCY ADVISORY COUNCIL

EEAC Sixth Workshop: Finalize Draft Recommendations (from Workshops 1-4)

January 20, 2021—1 PM to 5 PM

Facilitators: Dr. Jonathan Raab, Raab Associates, Dr. Scott McCreary & Jasmin Muñoz, CONCUR

Agenda

1:00 **Welcome/Roll Call** (Maggie McCarey, DOER**); Agenda/Protocols & Groundrule Review** (Facilitators: Dr. Jonathan Raab and Dr. Scott McCreary)

1:10 **Approval of Workshops #1-4 Summaries**

1:30 **New Construction & Active Demand Recommendations** (from Workshop #1)
- Residential
- Commercial & Industrial
- Active Demand Management

2:15 **Income Eligible Program Recommendations** (from Workshop #2)
- Heat pumps & new measures
- Equitable budgets and services
- Multi-family pipelines & protocols
- Data and systems

3:00 **Break**

3:10 **Existing Buildings: Commercial & Industrial Recommendations** (from Workshop #3)
- Lighting Controls
- HVAC
- Industrial/Process Savings
- CHP

3:50 **Existing Buildings: Residential Recommendations** (from Workshop #4)
- Heat pumps & electrification
- Fossil fuel heating incentives
- Residential coordinated development

4:25 **Workforce Development** (Consultant, not EWG recommendations from Workshop #4)

4:45 **Wrap-Up, Feedback, Next Steps**

5:00 **Adjourn**

Workshop 6: Meeting Summary

Link to Workshop #6 Meeting Summary, which includes suggested changes to recommendations:

EEAC Workshop #6 Summary

Workshop 6: Attendees

Over 100 people attended the workshop including 22 Councilors. Participating attendees (not including the public) are listed below.

January 20, 2021 Attendance -EEAC Workshop #6		
Voting Councilors		
Greg	Abbe	DHCD
Cindy	Arcate	Non-Profit Network
Joann	Bodemer	AGO
Amy	Boyd	Acadia Center
Justin	Davidson	MA Association of Realtors
Charlie	Harak	NCLC
Elliott	Jacobson	Action Inc.
Paul	Johnson	Greentek
Maggie	McCarey	DOER
Cammy	Peterson	MAPC
Bob	Rio	Associated Industries of MA
Dennis	Villanueva	Partners MGH
Sharon	Weber	DEP
Patrick	Woodcock	DOER Commissioner
Non-Voting Councilors		
Cindy	Carroll	Unitil
Tim	Costa	ISO-NE
Steve	Cowell	Councilor Designee-E4theFuture
Maggie	Downey	Cape Light Compact
Mike	Ferrante	MEMA
Frank	Gundal	Eversource
Chris	Porter	National Grid
Stephanie	Terach	Liberty Utilities
Presenters		
Elizabeth	Chant	EEAC Consultant Team
Adam	Jacobs	EEAC Consultant Team
Margie	Lynch	EEAC Consultant Team
Glenn	Reed	EEAC Consultant Team
Jeff	Schlegel	EEAC Consultant Team
PA Respondents		
Marie	Abdou	National Grid
Melanie	Coen	National Grid
Amanda	Formica	National Grid
Ruth	Georges	Eversource
Stephan	Wollenburg	National Grid

Appendix A: EWG Members

Equity Working Group Members		
Brian	Beote	Action Inc.
James	Collins	ABCD
Caitlin	Peale Sloane	CLF
Cammie	Peterson	Chair/EEAC Advisory Council/MAPC
Mary	Wambui	Chair/EEAC Advisory Council/POUA
Elizabeth	Chant	EEAC Consultant Team
Margie	Lynch	EEAC Consultant Team
Alexis	Washburn	DOER
JoAnn	Bodemer	EEAC Advisory Council/AGO
Maggie	McCarey	EEAC Advisory Council/DOER
Charlie	Harak	EEAC Advisory Council/NCLC
Cindy	Arcate	EEAC Advisory Council/Non-Profit Network
Eugenia	Gibbons	GJC
Cindy	Luppi	GJC/Clean Water Action
Maggie	Downey	PA/Cape Light Compact
Ruth	Georges	PA/Eversource
Stephanie	Terach	PA/Liberty Utilities
Amanda	Formica	PA/National Grid