

PA RESPONSE TO EEAC RESOLUTION ADOPTED ON 7-21-15

	Resolution Language	PA Response	Plan Section
Introduction			
1.	<p>It is the EEAC's expectation that the PAs will work with the EEAC and its consultants to continue to refine and improve the Draft Plan, through timely interim updates on program design that respond to this resolution with a Revised Plan to the Council no later than September 18th, leading to filing a Final Plan with the Department in October.</p>	<p>The PAs have worked intensively with EEAC members (with a special focus on work with DOER and the Attorney General) and the Council's consultants during the summer and into this month to refine and improve the 2016-2018 Plan in response to the Council's July resolution. In addition, the PAs, the Council's consultants, DOER, and the AG have engaged in extensive discussions, data sharing and analysis to refine assumptions, close the gaps, and come to agreement on appropriate budget, savings, and performance incentive levels for 2016-2018. These discussions have resulted in the Term Sheet being filed herewith, which provides for the highest savings goals ever put forward in the Commonwealth (and, to the PAs' knowledge, in the United States), at costs-to-achieve that are materially lower than the costs in the April 30, 2015 draft plan. To finalize productive discussions, the parties agreed that the PAs should push back submission of the September 18 draft until the week of September 21. The PAs express their appreciation and respect for the extensive efforts of DOER, the Attorney General, the Council's consultants and the EEA in developing and finalizing the historic commitment to energy efficiency. The PAs hope the Council will support unanimously the Term Sheet and the 2016-2018 Plan and look forward to reviewing the Plan with Councilors.</p>	Appendix (Term Sheet)
Savings Goals and Program Costs			
2.	<p>The EEAC supports savings goals higher than proposed in the Draft Plan and in line with the Consultants' estimate of savings, as updated July 13th, in which they recommended savings goals (on average across the 3 years of the 2016 - 2018 Plan) of 3.09% of annual savings as a percentage of retail sales for electric; 1.44% of annual savings as a percentage of retail sales for gas; with 44,696,836 megawatt hours (MWh) of lifetime electric savings and 1,321,607,043 therms of lifetime gas savings.</p> <p>The EEAC sees many indications that the PAs can pursue and achieve additional energy savings and benefits, beyond those reflected in the Draft Plan. Among the more significant indications are:</p>	<p>The PAs engage in a collaborative and iterative planning process for setting savings goals and budgets. As part of this process, the PAs engaged in extensive, productive, and collaborative discussions with the Council's consultants, as well as DOER and the Attorney General, in an effort to resolve differences and narrow gaps. These discussions resulted in adjustments on the part of both PAs and other parties as they shared, reviewed and analyzed different data sets and assumptions.</p> <p>The PAs necessarily employ a multi-faceted approach and consider and weigh multiple reference points, including the following three distinct analyses: (1) bottom-up; (2) evaluation; and (3) top-down. The bottom-up process involves building plan goals and budgets from the measure level up whereas the top-down process looks at the portfolio as a whole, evaluating the potential for achieving higher goals given markets in which the programs are operating. The impact of evaluation results are considered in both bottom-up and top-down planning and may drive other adjustments. The process to determine goals must be and is fluid, flexible and iterative because PAs receive information throughout the planning process relating to program design, evaluation, costs, and other factors. As discussed in more detail in the Plan, in developing goals for 2016-2018, the PAs conducted a comprehensive assessment of the energy efficiency landscape, including considering changes in baselines, codes, and standards, evaluation studies, PA potential studies, consultant assessments, and other market factors. As a result, the 2016-2018 Plan takes into account many competing considerations to set goals that</p>	II.D; IV; V

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		<p>satisfy the GCA's mandate to achieve all available cost-effective energy efficiency and the Department's directive to do so at a sustainable pace.</p> <p>As a result of this process, the PAs are submitting savings goals for 2016-2018 that are at the highest level ever for the Commonwealth, and to the PAs' knowledge, in the United States. See Term Sheet being filed herewith.</p>	
3.	<ul style="list-style-type: none"> The historical PA achievements, including the evaluated level of savings in 2014 (for electric: 2.76% of annual savings as a percentage of retail sales, and 13,554,964 MWh of lifetime savings; and for gas: 1.35% of annual savings as a percentage of retail sales, and 382,857,716 therms of lifetime savings); 	<p>See above response. The 2016-2018 Plan is expected to deliver more lifetime MWh and therm savings than the 2013-2015 Plan. Looking at the PAs' performance in terms of percent of sales does not always provide an accurate comparison of actual savings levels because forecasted sales change from one three-year plan to the next based on factors including weather, economic activity and other factors outside the PAs' control. For example, if savings levels stayed the same or increased, the percent of sales could decline if sales increased. Additionally, other factors outside the PAs' control affect the PAs' ability to achieve savings, including updates to codes, baselines, and standards.</p>	II.D; IV; V
4.	<ul style="list-style-type: none"> The EEAC Consultants' March 10th Assessment of Potential for energy efficiency savings (3% of annual sales for electric and 1.5% for gas); 	<p>See above two responses.</p>	II.D; IV; V
5.	<ul style="list-style-type: none"> The energy efficiency savings goals in line with the Massachusetts Clean Energy and Climate Plan for 2020; and 	<p>The 2016-2018 Plan delivers more GHG emissions reductions than prior plans, and has major environmental benefits for the Commonwealth that support the goals of the GWSA. In order to maximize environmental benefits, a goal of the GCA, the PAs, with the support of the Council's independent EM&V expert, propose to conduct a new EM&V study to better quantify the full suite of GHG reductions and benefits that result from energy efficiency efforts.</p>	IV.G.4.d.
6.	<ul style="list-style-type: none"> The robust benefit/cost ratios for the electric programs in the PAs' Draft Plan (2.38 overall and increasing across the three years). 	<p>In accordance with the GCA and the directives of the Department, the PAs seek to acquire all available cost-effective energy efficiency through a sustained statewide effort. The 2016-2018 Plan provides a strategic plan for acquiring all cost-effective energy efficiency resources at a reasonable pace during this three-year period.</p>	II.B; II.D; IV; V.A
7.	<p>Where budget increases are proposed above 2014 actual levels, the EEAC requires a detailed and reasonable justification of any higher costs in the Revised Plan, with factual support linked to program redesign, specific baseline changes, new initiatives, deeper savings, incorporation of the EEAC's informed recommendations, or other rationale(s).</p>	<p>As discussed above, the PAs engage in a collaborative and iterative planning process for setting budgets. As part of this process, the PAs engaged in extensive, productive, and collaborative discussions with the Council's consultants, as well as DOER and the Attorney General, in an effort to resolve differences and narrow gaps. These discussions resulted in adjustments on the part of both PAs and other parties as they shared, reviewed and analyzed different data sets and assumptions. In developing budgets, the PAs took into account changes in the cost of program delivery, baselines, codes, and standards, evaluation studies, potential studies, consultant assessments, and other market factors.</p>	II.D; III, IV; V
8.	<p>The EEAC expects that the Revised Plan will provide significantly higher savings goals at similar or lower program costs, while clearly demonstrating that the PAs seek to achieve all available cost - effective energy efficiency consistent with GCA.</p>	<p>As noted above, the Plan adopts higher savings goals than the April 30, 2015 draft at reduced costs, consistent with the EEAC's recommendations in the July Resolution.</p>	IV, Appendix (Data Tables)

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9.	The EEAC requires that the next draft provide more specificity and back - up data for the proposed goals in general, and, more specifically, complete and updated cost-benefit screening tool data by PA.	As they did with the April draft, PAs will provide benefit cost screening tools, with detailed assumptions on costs, savings, and benefits (with measure level data) to the DOER, Attorney General and the Council's consultants for the September draft Plan. Final BCR models will be provided to the EEAC and the DPU at the time of the PAs' final October Plan filing. The September Plan includes significant discussion of key drivers of the savings and costs proposed in the Plan.	IV; Appendix (Data Tables)
10.	If any PAs propose goals below 2014 evaluated levels of lifetime savings in MWh, therms, gallons of oil, or British thermal units (BTUs) of propane achieved by any sector for any year within 2016 - 2018, the Revised Plan must include detailed and specific relevant data that informed the decision to reduce the savings goal, including any independent market assessments of achievable savings goals.	See Term Sheet for individual PA goals. All goals have been calibrated based upon Term Sheet negotiations supported by an extensive array of data and associated analysis. Please also refer to the potential studies discussed in the Plan and included as an Appendix, as well as discussion on unique service area characteristics in the Plan and in the Appendices.	IV.A.5.f, V.A.4, Appendices (Term Sheet, Potential Studies, Unique PA Materials)
Other EEAC Priorities			
11.	In refining the plan, the EEAC encourages the PAs to maintain an emphasis on lifetime savings and benefits.	The PAs report both annual and lifetime savings and benefits.	
12.	The Council further supports greater integration of gas and electric programs and additional winter and summer peak demand savings.	The PAs have integrated electric and gas programs throughout the program design process. For example, the Residential Heating and Cooling - Electric core initiative will continue to work with the Residential Heating and Cooling – Natural Gas core initiative (GasNetworks®) on joint offerings, and co-promote through marketing, contractor training, and trade ally outreach including circuit rider. By collaborating, the PAs offer a near seamless integration of the gas and electric energy efficiency programs. PAs explore electric and gas technologies through MTAC, participate in management committees, and cross-promote between programs and initiatives.	III
13.	The Council encourages additional efforts to realize electric demand savings.	Achievement of demand savings in 2016-2018 is a key goal shared by the PAs and the Council. PA representatives will work with a small Demand Savings Group that includes the DOER, the Attorney General's Office, the Low-Income Energy Affordability Network, and the Council's consultants to explore demand savings opportunities such as demand savings from traditional energy efficiency, demand response, load shifting, and geo-targeting.	III.H.3
14.	The EEAC also appreciates the PAs' creation in the Draft Plan of offerings that target historically underserved segments of businesses and residents statewide, such as renters, moderate income customers, and small businesses. These efforts are the type of market segmentation and targeting that will enable the programs to continue to grow, capture further savings, and equitably serve ratepayers throughout the Commonwealth. The Council expects the PAs to include much	Please refer to the program specific recommendations and Plan sections for additional detail on new and improved efforts, such as the renter-specific visit, moderate income customer enhancements, and optimization of the Multi-Family Initiative. Like its predecessors, the 2016-2018 Plan includes multiple parts that taken together as an integrated whole describe the PAs' strategy for acquiring all cost-effective energy efficiency resources through a sustained effort. While detailed, a Three-Year Plan is a statewide strategic plan and not a detailed implementation guideline. A statewide strategic plan provides the PAs with the flexibility necessary to make implementation changes to meet changing circumstances in order to deliver on their Plan goals and satisfy the GCA.	II.D.1, III

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	<p>more detail in the Revised Plan about these offerings and additional offerings that target other customer segments.</p>		
15.	<p>The EEAC thinks that the Mass Save Data website is a useful tool and greatly appreciates the PAs' continual improvement to this website. However, the Council continues to request a comprehensive statewide database with sufficiently granular inputs and this website should not be framed as such. Instead, the Revised Plan should more accurately reference the status of the EEAC stakeholder process, including the Department's December 2014 decision. A comprehensive database is still seen by the Council as a significant aid in: identifying untapped opportunities for savings, enabling better comparisons between PAs and incorporating best practices across territories, streamlining and reducing costs of EM&V, and addressing many of the EEAC's requests for additional reporting.</p>	<p>The PAs appreciate the Council's positive comment on Mass Save Data and know that access to data is important to all. In addition, the PAs recognize that competing needs to protect confidential customer data, manage costs, and provide detailed and transparent information must be considered and weighed.</p> <p>The PAs submit that they have developed a publicly accessible statewide energy efficiency database with Mass Save Data, but appreciate that even more information and enhancements may be appropriate. In this spirit and as part of ongoing improvements to Mass Save Data, the PAs are working to provide geographic information, with appropriate aggregation to protect customer privacy. The PAs are also working on providing measure level information on Mass Save Data for 2016-2018. These important new enhancements, which are directly responsive to specific Councilor requests, are under development by the PAs. The PAs remain willing to engage in discussions and review other requests for data and/or enhancements to Mass Save Data, understanding the shared goals of transparency, cost-effectiveness, and protection of confidential information. The PAs have also updated the plan narrative to accurately reference the status of the EEAC stakeholder process, including the Department's December 2014 decision and different stakeholder views during the EEAC process. Finally, the PAs will also carefully review and follow up on any directives of the Department of Public Utilities on the database matters currently pending before it.</p>	VII.C and related appendices.
Major Overarching Comments			
16.	<p>The Draft Plan describes in detail the existing programs already established and underway, but provides little specificity regarding changes or enhancements proposed by the PAs to these programs for 2016 - 2018. The EEAC requires that the Revised Plan include additional detail and clarity regarding the program elements being newly introduced for the 2016 - 2018 timeframe, elements being continued from previous years, and elements the PAs propose to continue with specific improvements. The Council expects additional details in the Revised Plan including implementation strategies, budgets, and timelines for all substantial changes the PAs plan to introduce relative to the 2013 - 2015 Plan.</p>	<p>Please refer to the program specific recommendations below and program descriptions in the plan for additional detail. This 2016-2018 Plan builds on many successful and nationally emulated programs that the PAs have developed over years of implementing energy efficiency in the Commonwealth. The PAs seek continued innovation, but also seek to continue implementing successful strategies. The program specific materials detail many new innovations for 2016-2018, such as providing a streamlined customer experience, increased use of technology (and automation), leveraging and protecting the energy efficiency workforce, a single-point-of-contact experience for the multi-family customer, increased adoption of LEDs, continued review and expansion of upstream market models, encouragement of net-zero buildings, a renter initiative, enhanced services for moderate income customers, expanded segment-based delivery approaches, and many more.</p> <p>Like its predecessors, the 2016-2018 Plan includes multiple parts that taken together as an integrated whole describe the PAs' strategy for acquiring all cost-effective energy efficiency resources through a sustained effort. While detailed, a Three-Year Plan is a statewide strategic plan and not a detailed implementation guideline. A statewide strategic plan provides the PAs with the flexibility necessary to make implementation changes to meet changing circumstances in order to deliver on their Plan goals and satisfy the GCA.</p>	II.D.1; III.E.3 (details Residential new and innovative); III.G.4. (Highlights C&I enhancements)

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17.	The Draft Plan provides few firm commitments, specifics, or dates by which program enhancements and new initiatives will be introduced. Similarly there are only rarely descriptions of action plans or timeframes for deciding on and implementing the various options the PAs are exploring. Taken as a whole, the lack of specificity in the Draft Plan is such that the EEAC cannot, at this stage, determine whether it can support the programmatic changes the PAs propose. The EEAC requests that dates, milestones and additional detail for all changes to programs and initiatives be included in the Revised Plan.	See above response.	II.D.1
18.	The EEAC encourages more innovation by the PAs through pilots and/or demonstration projects, as well as through programmatic changes. The Council urges the PAs to take advantage of opportunities to introduce new approaches to advance the energy efficiency market further. In particular, the PAs have the opportunity to continue driving the light emitting diode (LED lighting) market and the related phase-out of compact fluorescent lightbulbs (CFLs), rather than simply reacting to current market trends as described in the Draft Plan.	The PAs actively seek innovation and consistently work on demonstration projects within different programs. The PAs have also included separate budgets for R&D and Demonstration Projects in both residential and C&I sectors. The PAs are committed to technology innovations, through the MTAC as well as through other PA-specific and statewide efforts. Many PAs have in-house staff of technical and engineering professionals with expertise in such areas as energy codes and standards, building energy simulation tools, lighting technology and controls, assessment of energy efficiency products, and product development, who are dedicated to new technology research and, in collaboration with their evaluation colleagues, savings verification. The PAs have driven the market in energy efficiency technologies, such as LEDs, and will seek increased penetration through award-winning marketing campaigns and national leadership. Additionally, the PA programs are tightly coordinated to ensure that innovations in technology and market dynamics are shared and leveraged.	III
19.	The EEAC recognizes that lighting baselines and certain building code provisions are changing in the coming years, and that these changes will affect the level of claimed savings. However, the EEAC remains confident that the PAs can deliver new and improved programs that continue to grow cost-effective and deeper savings by leveraging increasing customer awareness, reaching historically underserved sectors, and taking advantage of rapid changes in technologies such as lighting, controls, and heat pumps, aligned with decreasing capital and installation costs of these and other technologies.	The PAs engage in a collaborative and iterative planning process for setting savings goals, taking into account changes to baselines that affect the level of claimed savings, as well as innovations and new programming, evaluation studies, and performing a detailed review of market conditions. This Plan is designed as a strategic guiding document to provide the PAs with flexibility to make implementation changes to meet changing market conditions and other circumstances in order to deliver on their Plan goals and satisfy the GCA.	II.D; III; IV; V
Cross-Cutting			
20.	a. The PAs, in coordination with the	The residential and C&I customer profile studies were designed to provide geographic	VII.C

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		<p>EEAC, should develop a methodology for reporting accurate program penetration and participation numbers that will be reported regularly to the EEAC. The EEAC appreciates the difficulty of reporting on upstream programs. As such, it is appropriate for the PAs to develop building-level tracking with zip-code level reporting for building level measures and to report on upstream programs at a measure level by PA territory.</p>	<p>information, program penetration and participation through the EM&V process. The draft <i>Residential Customer Profile Study</i> found that the PAs served 200,523 premises through their Residential and Low-Income offerings in 2013, which represents 7% of all premises in the state. This data does not include customers who may have participated in upstream programs or those who received a Home Energy Report through a behavioral initiative.</p> <p>Due to the difficulty of tracking unique customer program participation across PAs, and concerns with customer privacy, the EM&V process was the most appropriate means to gather this information. As discussed in more detail in the statewide database section, two separate databases have been developed to support the customer profile studies. The PAs plan to perform customer profile studies on an ongoing basis so that this type of information can be regularly tracked. Direct access by stakeholders to these databases is not possible because of the need for customer consent for access to sensitive customer account and usage information. The PAs will accept Council requests to query the data in these databases and will prioritize these requests based on the cost of providing answers, the purpose and benefit of the data query and the timing of the request relative to study cycles. For additional information, please see Section VII.C.4.</p> <p>The PAs are also planning to use the Mass Save Data (www.MassSaveData.com) platform to provide geographic information. The PAs are developing a geographic tab that will include electric and gas incentives, usage, and savings. The geographic tab will be populated from the EM&V databases used to support the customer profile studies. In order to protect customer privacy, the PAs must ensure that the data in the geographic tab is sufficiently aggregated to avoid reverse engineering. This tab is still under development and the PAs' aggregation standards are still under discussion. Nevertheless, the PAs expect that they will be able to display C&I data at the town level and are reviewing whether this data can be displayed at the zip code level for Boston. The PAs are waiting for the residential customer profile study to be finalized and will then explore if it is feasible to present data at the zip code level.</p>	
21.	b.	<p>The PAs should support products and practices that reduce winter and summer peak demand by taking the following actions:</p>	<p>The PAs will assess new technologies and demand reduction strategies as they become available and commercially viable. Additionally, the PAs will support products and practices that reduce winter and summer peak demand where appropriate and cost-effective.</p>	III.H.3
22.	i.	<p>Design, implement, and evaluate a demand reduction or demand response offering in each PA's service territory.</p>	<p>The PAs are committed to working together with the Council's consultants to develop alternative efforts focused on creating demand savings during the 2016-2018 Plan. The PAs are currently focused on strategy identification and quantification of demand savings values. To that the end, the PAs have engaged in an expanded AESC study to develop avoided costs during seasonal "super peaks". This is a first step towards identifying benefits and costs of alternative strategies, assessing customer response to alternative strategies, and leveraging smart grid investments.</p>	III.H.3
23.	ii.	<p>Detail the results of the PAs' ad hoc group that is exploring demand</p>	<p>See above.</p>	

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		reduction strategies, including a description of subsequent actions to be taken, and a timeline for implementation of such strategies in the Revised Plan.		
24.	iii.	Collaborate with the EEAC consultants in investigating the potential impact on efficiency savings from a greater emphasis in program design on demand savings or peak demand savings, including reviewing whether changes to the cost-benefit screening tools are appropriate.	See above. This work is in progress but is unlikely to be completed prior to the statutory filing date for this Plan.	
25.	c.	The PAs should work with the Department of Energy Resources (DOER) to identify appropriate incentives in the Mass Save programs for renewable thermal technologies.	The PAs remain committed to working with the EEAC consultants to explore addressing renewable thermal savings in 2016-2018. PAs are seeking to better understand exactly what technologies are contemplated by Councilors and their applicability in a three-year energy efficiency plan under the GCA and whether implementation of some of these efforts is better handled in other contexts or proceedings, such as grid modernization. In reviewing these matters, PAs will work with the Council's consultants to discuss and determine if there are cost-effective measures/strategies that can be appropriately delivered as energy efficiency measures, as opposed to renewable supply side measures, what funding sources are available, what energy savings and other quantifiable benefits can be claimed for incentivizing these measures, and what, if any, are the most promising potential technologies and, if applicable, choosing a set of them to prioritize. The PAs also suggest that any additional efforts beyond ongoing energy efficiency efforts should be supported with an appropriate performance incentive to better align PA and public policy interests as has been done with traditional energy efficiency efforts.	
26.	i.	DOER and the PAs shall jointly develop a methodology to claim savings associated with the installation of renewable thermal equipment and fully account for savings where appropriate associated with the reduction in use of the prior fuel source.	See above	
27.	ii.	The PAs should provide rebates and incentives for renewable thermal	See above	

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	technologies, where deemed appropriate and cost-effective at the sector level pursuant to the above methodology, not later than Q3 2016.		
28.	iii. The PAs should continue to coordinate with the Massachusetts Clean Energy Center and DOER to provide information to customers and promote coordinated rebates and incentives for renewable thermal technologies.	The PAs will continue working with the CEC and cross-promoting incentives where there is overlap with PA programs, as appropriate. PAs can work to direct customers to the CEC website for CEC offerings related to renewable thermal technologies.	
C&I Recommendations			
A. Segment Specific Approaches			
29.	The Draft Plan includes several examples of existing segment - specific approaches such as coordination with municipalities, and it is clear that these are an important part of the PAs' C&I strategies. a. The PAs should provide more specifics about segment - specific approaches in the Revised Plan, including:	The Plan provides an expanded discussion of segment-specific approaches, including a visual representation of the drivers, barriers and metrics the PAs take into consideration, along with information about purchasing behavior and procurement practices, supply chain dynamics and past efficiency investment patterns, when developing a customized strategic approach to a variety of high-priority C&I customer segments, as identified by the Council and/or the PAs. These factors underpin the PAs choices regarding a wide range of design and implementation elements such as product/technology offerings, incentive levels and structure, marketing and messaging mix, channel selection and engagement, staffing, etc.	
30.	i.. Which segments will be and are being served with segment - specific approaches, and the timeframes and strategies for introducing new approaches.	See table referenced above and accompanying narrative discussion, as well as a chart on the immediately following page entitled " <i>Current & Planned Segment-based Approaches</i> ", which illustrates the customer segmented approaches that are deployed by the PAs now, or are in active development for deployment in the 2016-2018 Plan period.	
31.	ii. The PAs' forthcoming on - line application and energy conservation measure portal.	A full discussion of both can be found in a subsection entitled " <i>More Tools for Customer Engagement</i> " within the C&I Retrofit section of the Plan.	
32.	iii. How the PAs are leveraging industry, professional and Councilor	A section in the Plan entitled " <i>Mechanisms for Program Collaboration, Continuous Improvement, Incorporating Emerging Technologies, and Sharing and Incorporating Best Practices Information</i> " contains an explanation, along with examples, of the PA's current and future efforts	

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	associations and networks.	to leverage relationships with a wide variety of important stakeholders including peer PAs around the country, professional and industry organizations and associations, etc. all of which are extremely important resources upon which the PAs rely for information, program performance feedback, ideas for program enhancements, improved delivery and marketing approaches, and other learnings.	
33.	iv. More details and timeframes on staff and vendor training to better communicate with customers the value proposition of energy efficiency, address concerns, and stimulate interest in moving forward with recommendations.	The Plan contains a subsection entitled <i>“Education and Training for Customers, Trade Allies, and PA Staff and Contractors”</i> within the C&I Retrofit section. This section provides a full discussion of the variety of ways in which the PAs already offer regular specialized training sessions for all their trade allies, other energy professionals who support or participate in the programs, and for their own program and technical staff as well. Common formats include webinars and live presentations at multiple sites around the service territory, including on site at vendor facilities. In addition, every year the PAs sponsor and participate in hundreds of training or educational events around the Commonwealth to reach and influence all the parties who own, manage, or operate and staff buildings in Massachusetts. Some of these events provide customers with a broad exposure to a number of energy-savings technologies and service providers, such as the annual PA-sponsored Vendor Open Houses, while others are more focused and specialized, such as presentations to business associations, chambers of commerce, and meetings of local ASHRAE and IES chapters.	
34.	v. How the PAs are addressing demand and peak load reduction through segment-specific approaches.	Each Plan initiative with potential to reduce demand while reducing consumption is now described in the Plan with language that notes the dual potential. In addition, the PAs will be exploring the potential to adapt elements of the <i>California Advanced Lighting Controls Training Program</i> (CALCTP) to Massachusetts. (See full discussion under the above-referenced training section.) CALCTP provides electrical contractors and electricians with training and a certification in Advanced Lighting Controls (ALC). The curriculum covers the proper programming, testing, installation, commissioning and maintenance of advanced lighting control systems, including dimmers, occupancy sensors, photo-sensors, relay modules and communication-based control devices. The PAs view this model has having the potential to capture significant KW as well as KWh savings. Additionally, the PAs plan to continue advancing new “smart” technologies and energy efficiency measures that directly or indirectly impact demand and peak load reduction in a cost effective manner.	
35.	vi. How the PAs are addressing the topic of statewide consistency and best practice sharing for segment - specific approaches	The C&I Management Committee (C&IMC) serves as the ongoing venue for sharing individual PA innovations in program design, marketing, and delivery. The C&IMC regularly reviews its processes and operations in order to continuously optimize the balance between innovation and consistency and will continue these efforts throughout 2016-2018. For example, the PAs respond to the variations of local markets and market conditions through experimentation in program design, product promotion, or a unique focus on distinct customer segments of local importance. This localized testing allows concepts that might have statewide applicability to be tested and evaluated in a limited low-risk/low-cost environment, with the results then shared and scaled up statewide as appropriate and practicable. In addition, the PAs have a variety of other mechanisms to ensure that a robust process to identify and screen candidate technologies is maintained. Full discussions can be found in the	

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			sections entitled “ <i>Mechanisms for Program Collaboration, Continuous Improvement, Incorporating Emerging Technologies, and Sharing and Incorporating Best Practices Information</i> ” and “ <i>The Massachusetts Technology Assessment Committee (MTAC)</i> .”	
36.	vii.	More information about targeted communication materials for sectors as well as improvements to the Mass Save website to provide these materials.	The Plan includes an expanded discussion of PA plans to reorganize and refresh the Mass Save® website to better direct customers to information specific to their needs in their business segment. As referenced in the Plan, the new design will focus less on technologies and programs and more on customers and their end uses along with available services. It will also feature new materials directed to specific segments and their needs. In addition, the redesign will also provide improved organization, navigation, and more customer-oriented language.	
37.	b.	The EEAC requests that the PAs report regularly on progress and innovations with respect to how the PAs are implementing segment specific approaches. The PAs should propose a format and schedule in the Revised Plan for these less formal updates.	<p>The PAs will continue to report on segment-specific approaches, either as part of annual EM&V studies (primarily the C&I Customer Profile Report), or on a one-off basis to the Council as a whole, or to individual members as has been the practice for a number of years.</p> <p>Also, the PAs have discussed various approaches to providing more frequent and transparent communication to the Council regarding a variety of C&I related efforts and initiatives, including segment-specific approaches, and will work with the DOER early in the plan period to develop a process for enabling that to happen.</p>	
38.	c.	Healthcare - The PAs shall provide information about how recommendations from the joint PA/EEAC Consultant Healthcare Best Practices study, or other segment strategy, will be implemented, including commitments to specific timelines for adoption.	<p>As referenced in the section entitled “<i>Segments of Special Interest/Large Customers</i>”, the Plan describes how the PAs invest significant staff and third party resources, as well as financial incentives, to serving the highest use customers, which are heavily represented by hospitals.</p> <p>The Health Care Best Practices studies was directed by the EEAC Consultants, and despite its methodological shortcomings, largely confirmed that the PAs’ approaches to serving these customers constituted best practices – support for comprehensive audits, use of MOUs, providing educational support for facility managers, collaboration with industry organizations and associations, etc. For quite some time these have been, and will continue to be, foundational elements in the PAs approach to serving this strategically critical segment of customers.</p>	
39.	d.	Mid - Size Customers - The PAs shall provide a timeline and details for new mid - size customer strategies.	<p>All of the PAs have developed streamlined approaches to encourage comprehensiveness in the new construction/major renovation market for smaller and mid-sized buildings, a segment that accounts for 95% of the US non-residential building stock. National Grid and Cape Light Compact use the Advanced Buildings (“AB”) approach in this market and Eversource has developed its own approach using engineering assumptions, building modeling, and an analysis approach that are very similar to those used by NBI. Under both models, the customer receives a set of recommendations that guides them to a more comprehensive approach to their building project without the necessity of a complex and often expensive modeling process.</p> <p>For existing Mid-Size Customers, the often cited <i>Mid-size Customer Needs Assessment</i> which looked at a single program year has been followed by the <i>2013 Customer Profile Study</i> which looks at customer trends longitudinally and largely shows Mid-size Customers are equitably served. The PAs have identified sections in the Plan that will specifically impact Mid-size</p>	

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			<p>customers. See the sections entitled “<i>Highlights of 2016-2018 Enhancements</i>” and “<i>Further Market Segment Delivery</i>”.</p> <p>To this end, the PAs plan to continue offering program services and initiatives, through various delivery mechanisms, which will provide mid-sized customers a diverse portfolio of cost effective energy efficiency strategies to further participation in these programs.</p>	
40.	e.	<p>Non - Profits - The PAs shall provide a timeline and details of strategic outreach, for serving non - profits beyond what is included in the Draft Plan.</p>	<p>In a section entitled “<i>Commercial Non-Profits</i>”, the Plan describes how, drawing on delivery models from other programs and initiatives such as multi-family and the residential home energy services effort, as well as experiences of other PAs around the country, National Grid is developing a prototype approach for serving a particular subset of non-profit commercial customers – houses of worship. That prototype will be developed and tested within National Grid’s service territory using a phased approach over a number of months. The results of that effort will be analyzed and shared, as are all such efforts, with the other PAs. This will provide the basis for a collective determination as to whether such an approach could successfully be extended and adopted statewide. The plan is to have this prototype launched before the start of the Three-Year Plan and learnings developed and reviewed with other PAs once sufficient data exist upon which to draw reasonable conclusions and inferences, likely within 6-9 months of launch. Also, the reexamination of the Small Business initiative will include a review of how effectively it currently provides services to non-profits, as many, if not most, non-profits access the programs through the Small Business Core Initiative pathway.</p>	
41.	f.	<p>Commercial Real Estate (CRE) - The CRE sections were not included in the Draft Plan. The EEAC requests that the PAs develop a CRE section of the Plan, informed by the findings of the CRE Working Group before August 1st, if not sooner. i. This section should include the following information:</p>	<p>A section entitled “<i>Further Engage the Commercial Real Estate Sector</i>” has been included in the Plan document. This section details the PA response to each of the recommendations contained in the report of the Commercial Real Estate Working Group. The discussion also incorporates similar findings from a study of the CRE market in the Pacific Northwest that was issued at about the same time as the CRE Working Group report. The PAs also note that during 2016-2018 NYSERDA will develop and conduct a set of studies of efficiency packages in key CRE building types and market segments. The objective of these pilots will be to acquire building data for analysis and to conduct M&V studies to provide insights into the actual performance of these packages. Results will be used to produce case studies that will be shared with the efficiency industry. Also in 2016-2018, NYSERDA will partner with large portfolio owners in key building segments (CRE, medical centers, colleges/universities, etc.) and providers of various Real Time Energy Management (RTEM) service providers to conduct a set of replicable pilots using a variety of these tools that monitor data and use analytics to identify where, when, and how energy is being used in a building. NYSERDA will acquire building data for analysis and will conduct M&V and persistence studies “to provide insights into the technical/operational underpinnings of RTEM and to develop credible models and case studies to support a clear value proposition for owners of similar buildings.”</p> <p>The PAs will discuss with NYSERDA management the potential for collaboration in these test areas, and potentially others as well. These discussions will be led by National Grid, as the PA whose operations span both jurisdictions. At a minimum, the PAs own test designs can be informed by NYSERDA experience.</p>	

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42.	1.	Plans for evaluating sub-metering for the CRE sector, including whether it will be considered as part of PAs' offerings, and a date by which that determination will be made or implementation will occur.	<p>A section of the Plan entitled "Further Engage the Commercial Real Estate Sector" provides great detail about PA plans for working with CRE customers. Additionally, the Plan notes that, as has long been the case, submetering is incorporated into MOU agreements when, in the judgment of the principals, it will help identify and prioritize opportunities at the outset of the relationship and it will lead to customer action; that is, lead to savings. Submetering is also integral to the EM&V process, particularly when attribution and verification of behavior-based savings must be established. To the extent that CRE customers engage in MOU related agreements, the above would apply.</p> <p>While it is important to recognize that submeters in and of themselves do not produce savings, the PAs have and will continue to use submetering as a tool to support their "Pay for Performance" offering in which customers are rewarded for actual gas and/or electric usage reductions relative to a pre-established baseline which is determined by the prior installation of submeters.</p>	
43.	2.	An assessment of all recommendations for CRE from the EEAC's March resolution, and a specific response to each.	See above.	
B. Continuous Technology Improvement				
44.		The PAs did not propose in the Draft Plan any pilot programs, as the EEAC recommended in March, but note that they will undertake a "consolidated research and development ('R&D') effort to (a) support the work of the Massachusetts Technology Assessment Committee (MTAC), and (b) pursue technologies of interest in order to remain at the top of the 'innovation curve.'" However, there is little detail on how this work will be undertaken. New for the Draft Plan is the PA inclusion of a budget line item for "C&I R&D and Demonstration". The Revised Plan should include:	The Plan contains a section entitled " <i>Mechanisms for Program Collaboration, Continuous Improvement, Incorporating Emerging Technologies, and Sharing and Incorporating Best Practices Information</i> " which discusses in detail how the PAs identify and vet new technologies and new delivery approaches. Among the areas discussed are: in-house R&D (particularly among the PAs with multi-state operations); outcomes from partnerships with MOU Customers; and cooperative relationships with other program administrators or other regional efforts. There is also a full discussion of how the Massachusetts Technology Assessment Committee (MTAC) operates to identify and qualify technologies.	
45.	a.	More details about the scope and operation of R&D projects, including work performed at the MTAC and PA innovations outside the MTAC.	See above.	
46.	b.	Commitment to implement	See above.	

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		demonstration projects that advance innovation, especially as it relates to products that reflect rapid innovations in the marketplace, are of high customer interest, and/or have dependence on the customer for persistent savings.		
47.	c.	Regular updates to the EEAC on R&D and demonstration projects. The PAs should propose a format and schedule for these less formal updates in the Revised Plan.	The PAs have committed to provide quarterly status updates to internal stakeholders such as the C&I and Residential Management Committees as well as the Energy Efficiency Advisory Council along with semiannual updates to other external stakeholders. Documentation of recently reviewed technologies is always posted on the Mass Save® website at: http://www.masssave.com/en/professionals/business-opportunities/assessment-of-new-efficiency-technologies .	
C. C&I Reporting				
48.		The PA Draft Plan has included more initiatives in the C&I programs, largely in line with the Council recommendations. These initiatives will have their own goals and budgets associated with them and will be part of the regular PA tracking data. In the Revised Plan, the PAs should:	The PAs share the Council's desire for increased transparency and the Plan has separated out elements of the programs for budget/planning/reporting purposes. Within the New Construction Program, the PAs created a Core Initiative for "New Buildings & Major Renovations" and another for "Initial Purchase & End of Useful Life" thereby increasing the granularity with which the Program, and its component elements, will be tracked during the course of the 2016-2018 Plan period.	
49.	a.	Establish a three - year Combined Heat and Power (CHP) goal (not necessarily as a separate initiative in C&I Retrofit) and track/report on this CHP - specific goal as part of the PAs' annual reports to the EEAC/Department.	After careful consideration, the PAs have decided not to separately plan, establish goals and budgets, and report on CHP. CHP results are, by nature of the complexity, relative risk, and long lead times of projects, highly variable and exhibit large fluctuations year to year, usually due to both the size and unpredictability of individual projects. It should be noted, however, that CHP measure level information is available in the electric PAs' BCR screening models, which are made available with the annual reports to the EEAC/Department and with the Plan.	
50.	b.	Consider adding an Upstream Products break - out for New Construction that includes products beyond lighting, such as water heaters.	Given the relative infancy of the upstream delivery model as it relates to products other than lighting, the PAs do not believe it is a significant driver of overall C&I savings and or expenditures which would make it worthy of a separate Program and/or Core Initiative. However, during these early stages in their lifecycle, just as has previously been done very successfully with lighting, the PAs will be tracking the progress of any new upstream offerings on a nearly continuous basis, working collaboratively across PAs as well as with the PAs' contracted third party program implementation vendors. As with lighting, during these relatively early stages, evaluation studies are often undertaken and can provide valuable and comprehensive insights about progress to date and associated learnings. Should the Council so	

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			desire, they could review the findings of these studies, which are found on the Council's website, or could ask for, and the PAs would provide, a high level summary, of such progress.	
51.	c.	Commit to continuing to report annually on C&I segment - specific approaches (e.g. CRE, healthcare, mid - size, industrial, etc.).	The PAs will continue to report on segment-specific approaches, either as part of annual EM&V studies (primarily the C&I Customer Profile Report), or on a one-off basis to the Council as a whole or individual member as has been the practice for a number of years.	
52.	d.	Increase goals for LED lighting, and C&I Retrofit in accordance with the results of the key drivers analysis.	The PAs have included in their goals significant increases in lighting in general and LED lighting specifically. In order to achieve these higher savings, the PA recognize that LED lighting technology offerings require careful positioning through the various program delivery mechanisms to maximize program impact, achieve savings goals and meet both short and long term customer energy savings requirements.	
53.	e.	Commit to semi - annual reporting to the EEAC on LED streetlight conversions.	As municipal budgeting and decision making is relatively slow paced, the conversion of streetlights to LED is likely to take place over quite a number of years – it has at times taken multiple years for a single community to move from consideration to installation. The PAs will collaborate with the DOER early in the Plan period to develop an appropriate structure and timeline for providing updates regarding progress in conversion of streetlights to LED.	
D. C&I Updates				
54.	The PAs deliver significant energy savings and benefits through the programs through hard work and innovation. Updates from the PAs help inform the EEAC of these efforts and innovations. In the March 31, 2015 resolution, the EEAC asked for regular PA updates on a number of topics. For some topics, like the CHP potential analysis, these requests will require formal reports. Other areas, like the updates on sector - specific approaches or small business program innovations, will not necessarily require regular formal written reports. For topics not needing a formal written report, the EEAC would like the PAs to commit to a less formal reporting method to keep the Council informed of these and other efforts through means such as presentations to the EEAC or periodic (quarterly) PA C&I webinars. The PAs should propose a format and schedule for these updates in the Revised Plan. The Council thinks these less formal program		The PAs have discussed various approaches to providing more frequent and transparent communication to the Council regarding a variety of C&I related efforts and initiatives. The PAs agree that focused reporting on mutually-agreed topics can be very beneficial to increase Council understanding of program specifics, and will work with the DOER early in the plan period to develop a process for enabling that to happen. Alternative communication vehicles, such as webinars or workshops, might be useful approaches that would respect the time and logistical constraints of all parties.	

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	updates will also provide checkpoints for the PAs to share program success.		
E. Retro-Commissioning, Building Controls, and Sub-metering			
55.	The Draft Plan notes that the PAs will align the PAs’ retro - commissioning (RCx) programs with the recommendations from the “Retro - commissioning Best Practices Study” completed by the PAs and the EEAC Consultants. Existing building operator training programs are discussed, but no new training programs are proposed. The Draft Plan does not address benchmarking in the context of commissioning or legacy controls. In the Revised Plan, the PAs should:	See below.	
56.	a. Address issues of persistence of savings from RCx projects. Monitoring - based commissioning can increase and ensure persistence of savings and should be further explored and demonstrated.	The PAs will continue to support and facilitate the implementation of RCx strategies, building systems optimization, and advanced controls operations wherever appropriate and consistent with energy efficiency program guidelines. To this end, the PAs will proactively implement the recommendations of the recently completed Retro-Commissioning Best Practice Study to streamline the RCx offerings and to achieve greater implementation of these strategies. For example, the PAs have already tested some of the RCx Best Practices recommendations by developing and implementing customized approaches to providing targeted RCx services to hospitals with a similar approach for labs currently in development. In addition, the PAs are committed to developing a common tool for RCx measures and expanding training for RCx for providers.	
57.	b. Address how legacy controls will be included in the PAs’ retrofit and RCx programs.	The PAs will continue to implement cost-effective energy efficiency measures and strategies consistent with program guidelines. As energy efficiency savings opportunities to existing advance building systems controls are identified through the retrofit program, or a component of that program such as RCx, the PAs plan to support measures in accordance with program guidelines and practices.	
58.	c. Address how the use of benchmarking, sub - metering and pre/post metering will be integrated into programs.	The PAs will continue to implement Energy Star® Benchmarking and will fully consider implementing additional cost effective benchmarking strategies on a case by case basis. Pre- and Post-metering has been integrated in the programs for the past several years, typically utilized during the consideration of complex projects and for the verification of energy savings. Sub-metering and pre and post metering devices alone do not result in energy savings. Whenever practical and cost effective, the PAs will continue to consider the use of appropriate pre/post metering, and sub-metering devices included in energy efficiency projects or strategies that lead to cost effective and quantifiable energy savings that are consistent with program guidelines and practices.	

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59.	d.	Commit to a strategy that expands building operator training programs, beyond the Draft Plan and traditional Building Operator Certification (BOC) offerings, including soliciting input from customers.	<p>The Plan includes a greatly expanded discussion of the training opportunities currently provided by the PAs, as well options that will be considered and assessed during the coming plan period. Included are examples of local organizations and customer trade groups with which the PAs have regularly partnered and collaborated in the past, and expect to continue to do so in the future, to deliver educational and training content that fits the unique energy concerns of their members and constituencies.</p> <p>The Plan also discusses significant updates to the BOC training modules made by the BOC sponsors in recent years. Almost 40% of the content has been updated or replaced since 2013. The new curriculum focuses on low-cost opportunities to improve energy performance, building scoping and tune up, retro-commissioning, high performance HVAC systems, energy diagnostics using data loggers and BAS, selling efficiency projects, occupant engagement, and water conservation. Additional new BOC products include a continuing education webinar series to help BOC graduates maintain their certification; one day MOC events provided in partnership with sponsoring PAs for BOC graduates in their service areas; and a blended, online Level I course offering a mix of classroom and online training.</p> <p>The Plan also discusses several other new educational offerings that the PAs are considering.</p>	
60.	e.	Commit to specific program enhancements and timelines for adoption of best practices identified in the RCx Best Practices Study.	The RCx subsection specifically addresses each of the five recommendations from the Best Practices Study report.	
61.	f.	Commit to increasing the availability of qualified RCx providers.	In discussions with program managers at identified “best practices” RCx programs, the PAs learned that no special effort was required to develop the supply of qualified RCx providers to meet program demands. Given consistent and clear direction as to program requirements and outcome expectations, and a commitment to funding availability, the local markets responded in a timely manner to take advantage of the business opportunity. As a result, there is no need to commit to increasing the availability of qualified RCx providers.	
F. Behavioral and Engagement				
62.		The PAs note that they engage in Strategic Energy Management (SEM) in the context of existing programs and will consider expanding SEM offerings by engaging with early SEM adopters from the Pacific Northwest. The Draft Plan contains little information about behavioral programs and does not commit to deliver reports on either SEM or behavioral programs as requested by the Council. The PAs should include	<p>The concept of Strategic Energy Management is fluid and evolving, and can encompass a number of interconnected and mutually reinforcing activities. A common definition of SEM is that it is “a comprehensive set of business practices that establish energy management as a standard operating procedure”. While there are different variations in SEM programs, they all focus on business practice change - shifting how organizations get things done, improving their capacity to reduce energy waste, and reducing energy intensity throughout the entire organization.</p> <p>The PAs plan to support behavior type initiatives that lead to cost effective, quantifiable, and persistent energy savings. To this end, the PA offerings may vary by service territory to support</p>	

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	the following information in the Revised Plan:	customer energy efficiency efforts within that service territory.	
63.	a. Commitment to assess cost effectiveness of SEM projects in line with the EEAC March 31, 2015 Resolution and, if deemed cost-effective at the sector level, a commitment to develop and evaluate an SEM demonstration project.	When considering expanding SEM efforts, much as with retro-commissioning, it will be critical for the success of recruitment efforts to understand what individual customer characteristics or categories of customers can be identified that will identify them as those who are most likely to see a value proposition in SEM. As the PAs consider SEM expansion opportunities (both in number and in kind) they will integrate the growing body of knowledge from their own local MOU/SEMP experiences and engage with SEM early adopter jurisdictions and their allies (such as the Pacific Northwest and the Northwest Industrial Strategic Energy Management Collaborative), and incorporate the results of their research activities and field experience.	
64.	b. More detail on behavior approaches outside of memoranda of understanding (MOUs) and on whether and how savings are claimed from customer behavior changes.	See above.	
65.	c. More detail on direct load control and methods for how the PAs could engage customers in demand response.	Efforts such as direct load control, and demand response more generally, are being, and will continue to be, considered by a collaborative working group comprised of the PAs and the Council consultants.	
66.	d. Commitment to using the Consortium for Energy Efficiency (CEE) Minimum Elements document as a reference when discussing SEM programs, in order to ensure a common understanding of what is included.	See above.	
67.	e. Commitment to implement and evaluate behavioral demonstration projects for small and medium C&I customers.	See above.	
G. Small Business			

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68.	<p>The Council appreciates the PAs' commitment to the Small Business program. The Draft Plan addresses a number of Council recommendations including realizing deeper savings, expanding gas measures, and expanded sector - specific approaches. The PAs intend to make program enhancements through a series of incremental improvements. Using building analytics is under consideration by the PAs and web - based customer engagement portals will be implemented by the PAs. The PAs should include the following information in the Revised Plan:</p>		<p>The PAs are very committed to serving Small Business customers through diverse offerings and delivery mechanisms available in the energy efficiency programs, particularly through the Small Business Core Initiative, and have included a detailed description of their on-going efforts and future plans for advancing that program to meet the customer's ever changing energy efficiency requirements, thereby improving upon their long-standing success with this important and large subset of C&I customers. As the Plan describes, the PAs have already embarked on an aggressive effort to test a wide range of potential improvements the results of which, once collected and synthesized, could form the basis of future improvements. Until such time as this process is complete, it is unclear and inappropriate to speculate whether improvements will be implemented incrementally, in phases, comprehensively, or at all.</p>	
69.	a.	<p>Specific commitments to program enhancements for the Small Business program, and a timeline for these enhancements. Some of the enhancements the EEAC thinks are important include: expanding offerings for gas measures, more comprehensive marketing/outreach/awareness programs, and more customized approaches for Small Business customers (by size and segment).</p>	<p>The <i>Small Business Core Initiative</i> subsection discusses the variety of tests which will be undertaken to explore concepts or approaches which show potential to expand the variety of gas measures available, reach more customers and/or hard to reach customers, as well more customized approaches for Small Business customers.</p>	
70.	b.	<p>A timeline for evaluating potential and cost effectiveness of building analytics and portals for small business customers (EEAC Councilors discussed a Q3 2016 deadline).</p>	<p>See above.</p>	
71.	c.	<p>An action plan, including timelines, for using the data collected by online portals to analyze and benchmark energy use to effectively target small businesses.</p>	<p>By its very nature, the Three Year Plan is not an operational or implementation- focused document and thus is not an appropriate vehicle in which to include an action plan. Instead, the PAs have described in great detail their on-going efforts and future plans to improve upon their already industry-leading efforts to effectively serve the energy efficiency needs of small business customers in the Commonwealth.</p>	
<p>H. Combined Heat and Power</p>				

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72.	The PA Commitment to CHP is clear and the PAs largely incorporated the Council's recommendations. The PAs should include the following information in the Revised Plan:		See below.	
73.	a.	A firm commitment to complete the CHP potential report and implement findings including:	<p>The PAs have included a lengthy description of CHP in their Plan and plan to aggressively target CHP opportunities during the 2016-2018 period, including a commitment to increase education and outreach as well as a commitment to commission a best practices review of CHP programs nationally and a reassessment of CHP opportunities in Massachusetts.</p> <p>While sharing the Council's commitment to excellence with regard to CHP delivery and the undertaking of research to enhance performance, the PAs do not feel it appropriate to adopt a specific time line for reporting on CHP activities or the results of any related research.</p>	
74.	i.	Deliverable dates for a best practices review and potential study (EEAC suggested end of 2016)	The PAs are not planning to impose artificial deadlines or require additional reporting that would risk diverting the focus from providing customers with the highest quality information and greatest access to efficiency opportunities, a strategic commitment shared by both the PAs and the Council.	
75.	ii.	Specific mention of pre - packaged and third party CHP options	The PA's CHP Guidebook, referenced in the Plan, identifies the many alternatives available to customers considering CHP and discusses key considerations for customers or third parties to achieve the appropriate, cost-effective CHP plants.	
76.	b.	A clear CHP goal and a schedule for annual reporting on the progress toward the three - year goal, even if this is not a separate initiative outside of C&I Retrofit.	See C(a) above.	
77.	c.	Higher goals for CHP, in accordance with the results of the key drivers analysis.	Since the April 30 th draft, the PAs have increased the savings contribution to goal expected to come from CHP. It is important to recognize that increased goals adds plan risk and uncertainty, as CHP savings are dependent on a relatively small number of large projects with relatively lost cost of savings which are difficult to replace at a comparable cost. Substitute savings will almost always be higher cost.	
I. LED Streetlights				
78.	LED Streetlights represent a significant source of savings in the Commonwealth. The Draft Plan notes success with streetlight retrofits by Cape Light Compact and other PAs. However the Draft Plan does not commit to any innovations around streetlights, or to the EEAC - requested goal of retrofitting the majority of utility owned streetlights		See below.	

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	and all municipal owned streetlights by 2018. The PAs should include the following information in the Revised Plan:			
79.	a.	An action plan for stimulating rapid conversion for municipally - owned street lights; for example:	The PAs remain committed to providing their municipal customers with the most up-to-date street lighting technology, including both lighting and controls. Local conditions and priorities of the local governing body in each unique city or town will control the rate at which the conversion can be accomplished.	
80.	i.	Cape Light Compact managed a joint conversion process for all of its municipalities, providing technical assistance and project management through the entire process.	See above.	
81.	ii.	Upstream or bulk purchase pricing for municipalities.	See above.	
82.	b.	A strategy and timeline to retrofit the majority of utility - owned street lights to LEDs within this Plan's timeframe (including a timeframe and commitment for filing of an appropriate tariff for utility-owned LED streetlights at the Department). The EEAC intends to support such a tariff at the Department, to aid in removing this barrier for the PAs.	The PAs are also committed to supporting the conversion of utility-owned streetlights to LED technology once the electric utilities in the state have developed, filed, and had approved the necessary tariffs. The PAs have identified a viable pathway to address an energy efficiency incentive structure that addresses utility owned streetlights conversion to LED technology and the manner by which it may be applied in the energy efficiency project implementation process.	
83.	c.	Higher savings goals attributable to LED streetlights in accordance with the results of the key drivers analysis.	The PAs savings goals do assume higher than previously planned savings to be derived from LED lighting in general, including street lighting, in part as a result of the key drivers analysis. LED streetlighting savings that are achievable is limited to the number of customer owned systems that have not yet converted to LED technology, which varies by PA.	
J. Zero Net Energy (ZNE) Ready Buildings				
84.	In the Draft Plan, the PAs propose to establish a basis of technical knowledge and expertise, and a framework for program support for ZNE ready buildings. However there is no timeline or commitment to implement a Zero Net Energy		The PAs will continue to provide, as they have historically, technical and modeling assistance and incentives for all the efficiency measures towards Net Zero Ready that are cost-effective through the Whole Building Path of the New Construction Program. This path is explicitly designed for the purpose of promoting high performance buildings with lower energy use intensities (EUIs) and ongoing operational costs than code compliant buildings and is specifically	

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	Buildings (ZNEB) program. The PAs should commit to assessing a ZNE ready building tier and include a timeline for a new construction offering in the Revised Plan.	<p>motivated through the programs using a performance based incentive basis (i.e., greater savings beyond code compliance the greater the incentive). Indeed, the PAs view a Net Zero Ready (NZR) Building as the ultimate expression of this path – driving the energy use intensity of the building to the lowest practical and cost-effective level before considering renewables. The PAs will also help customers with the necessary coordination with the Clean Energy Center in order to qualify for renewables incentives and inform them of the interconnection process to move the final step to Net Zero.</p> <p>However, the PAs underscore the importance of weighing NZE efforts in the context of overall savings potential and efforts to reduce greenhouse gas emissions in the Commonwealth. If the recent uptake of this concept serves as a guide, the actual number of market-based and cost-effective non-residential Net Zero buildings constructed in the Commonwealth over the coming three years is likely to be very, very small, and those that are undertaken are likely to be very modest in size. However, a somewhat larger cohort may be interested in pursuing Near Net Zero, or highly efficient, status.</p> <p>Energy Efficiency program support is but one area necessary to implement a NZE vision in the Commonwealth. It will take policy support, code support, grid integration, and more for Massachusetts to realize a NZE future and the PAs will continue to contribute where practical.</p>		
K. Delivered Fuels and Thermal Efficiency				
85.		<p>There is no mention of the PAs’ marketing comprehensive assessments to non - gas C&I customers. The PAs should include the following information in the Revised Plan:</p>	<p>While detailed, a Three-Year Plan is meant to serve as a statewide strategic plan and not an implementation or operational plan. A statewide strategic plan provides the PAs with the flexibility necessary to make implementation changes to meet changing circumstances based on evolving market dynamics in order to deliver on their Plan goals and satisfy the requirements and objectives of the Green Communities Act.</p> <p>The PAs have been and remain actively engaged in the RCS regulatory process. PAs have planned for treatment of oil heated multi-family properties, but await further development of the current RCS regulations. The PAs will continue to follow the regulatory process and when C&I tariff customers are eligible we will promote delivered fuel opportunities.</p> <p>The PAs will continue to consider cost effective C&I custom measures which save at least one utility-delivered fuel whether through a delivered fuel or renewable thermal equipment.</p>	
86.	a.	<p>A strategic plan for marketing, in-print, online, and in-person, a non-gas customer’s ability to self-fund the thermal portion of a comprehensive energy assessment using a PA auditor.</p>	See above.	
87.	b.	<p>A timeline for assessing any barriers</p>	See above.	

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	or limitations to implementing the strategic plan, and a commitment to work with the EEAC to seek ways to address any barriers/limitations.		
Residential Recommendations			
A. New Initiatives			
88.	<i>Moderate Income Initiative</i> - The EEAC supports the Draft Plan proposals to develop a new moderate income offering within the Home Energy Services (HES) core initiative and the PAs' proposal to initially focus on households earning 61 -80% of state median income (SMI). This initial offering should be developed further into an initiative to attract new participants to the HES and multi-family retrofit programs, as well as support follow-through of existing customers with deeper savings opportunities. Therefore, the Revised Plan should include:	<p>The PAs are including a moderate income offer in the 2016-2018 Plan, with deployment in Q1 2016. Additional details of the program's design have been included in the Whole House residential program description under the Home Energy Services Initiative. As the moderate income offer is implemented, PAs will closely monitor, test, and refine.</p> <p>PAs have worked with the LEAN network to develop a triage system to examine cases of buildings which may not achieve a majority of units under 60% SMI, but do achieve a majority of units under 80% SMI, to determine if these can be enrolled through the LI Multi-family Initiative.</p>	III.E.4.c (Detail within New Enhancements and Core Initiative Design sections)
89.	a. Detail on the proposed scope of measures and program marketing plan, including plans to leverage partnerships with community groups, possible points of entry, and qualification for eligible customers.	<p>The moderate income offer is an opportunity to be "qualified" for an increased incentive(s) when income is a barrier. The initial enhanced incentive is planned for insulation, covering 90% of costs up to \$3000. PAs continue to evaluate enhancements to measures, including enhancements that may target moderate income customers.</p> <p>The moderate income offer is specifically designed to be offered when opportunities for deeper savings have been identified and recommendations have been made. This ensures that the additional administrative costs, including income verification, are tied tightly to actionable savings opportunities. This approach maximizes cost-effective savings and ensures equal access for all moderate income customers. It also allows HES to use cost-effective marketing techniques to drive customers to the initiative, preserve the Mass Save® brand awareness, and leverage the current penetration success of the Home Energy Assessment (HEA) channel.</p> <p>HES vendors will be given program collateral and support to enable them to have conversations with HEA participants who have identified savings opportunities. Vendors will provide these customers with further direction on how to submit for income verification.</p> <p>Customers who have completed income verification prior to assessment through the low-income program, will be triaged into HES for an HEA, and the income verification completed by the low-income agency will go with the customer into the HES program.</p>	Detail in HES Initiative, Residential Whole House program section.

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		<p>PAs remain enthusiastic about the ideas discussed in workshops regarding existing municipal efforts and local community organizations that currently serve this target market of moderate income customers. PAs have noted in the Plan their commitment to learn more and to leverage opportunities to use such connections to increase access for moderate income customers to Mass Save® incentives, with an emphasis on increasing installations. These opportunities and relationships are inherently service-area based and are evolving, with different implementation opportunities available for each PA.</p>		
90.	b.	<p>Detail about the customers in this income range, including number and proportion of residential customers in the 61-80% SMI in each PA territory and the number of those customers that the PAs expect to serve.</p>	<p>Based upon data from previous evaluation work for Efficient Neighborhoods+® (EN+), the population of residential customers that own and live in 1-4 family homes is estimated to be less than 10% statewide with some variation by PA service territory. Please note that renters have been identified as a separate target market.</p> <p>During implementation, PAs will monitor participation, the impact on budgets, and cost of savings, and will seek to understand the extent to which the offer successfully secures additional savings from a population who may not be currently participating due to financial barriers.</p>	
91.	c.	<p>Commitment to provide and incorporate, as appropriate, lessons learned from the Efficient Neighborhoods +® (EN+) evaluation and other pilots, demonstrations, or applicable programs by Q1 2016.</p>	<p>The PAs are committed to incorporating lessons learned from the EN+ evaluation and other pilots, demonstrations, and applicable programs and program evaluations by Q1 2016. Preliminary lessons learned from EN+ and other applicable programs were taken into account when designing the moderate income offer.</p> <p>The EN+ evaluation demonstrated that a proxy method of geographic targeting, paired with targeted outreach, has a very high cost per opportunity secured. The PAs designed the moderate income process with a more targeted enrollment process. The moderate income offer appears as a result of the HEA, with income verification. This puts more program dollars directly to work benefiting customers and securing identified opportunities.</p>	
92.	d.	<p>Commitment to assess by Q2 2017 the potential for serving customers at 81-100% and 101- 120% of state median income as part of an expanded moderate income offering.</p>	<p>The PAs will be closely monitoring the rollout of the moderate income offer and will assess impacts, both positive and negative, providing regular updates at EEAC meetings, as information is available (and to the extent updates are requested and placed on the meeting agenda).</p>	
93.	<p><i>Renter Specific Initiative</i> - The EEAC supports the PAs' inclusion of a renter-specific initiative in the Draft Plan that recognizes a large and relatively underserved customer base. In order for the EEAC to fully comment on and understand this initiative, the PAs should include the following clarifying details in the Revised Plan:</p>		<p>The PAs are including a renter-specific visit as an enhancement of the HES core initiative.</p>	<p>III.E.4.c (Detail within New Enhancements and Core Initiative Design sections)</p>
94.	a.	<p>The implementation strategy and</p>	<p>By Q1 2016 the HES renter visit will be available to all HES customers. The renter visit is an</p>	

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	<p>schedule for the renter-specific offering, providing dates, milestones, and a date in 2016 by which the offering will be available to qualified HES and multi-family customers. The PAs should provide details on program marketing, including plans to leverage partnerships with community groups.</p>	<p>enhancement of the HES core initiative available to 1-4 unit buildings on a single property. The PAs will maintain a single call to action through the statewide phone line. PAs are planning to update the on-line audit tool to include a renter scenario to support both renters and landlords enrolling in the HES program. PAs, as appropriate, will work with existing community resources, such as Renew Boston, to ensure that trusted community allies that serve high populations of renters are aware of the program and offer specialized materials for landlords.</p> <p>Customers will continue to be screened at the time of intake. If it is determined that a customer would be best served with a renter visit they will be scheduled for this, rather than a full HEA.</p> <p>PAs plan to offer a Whole Building incentive for 2-4 unit buildings, modeled on the Renew Boston Whole Building incentive, as extra support to engage landlords.</p>	
95.	<p>b. The PAs' proposed engagement strategy to ensure immediate benefits to renters, with a plan for securing landlord buy-in and follow-through with whole-house/building measures.</p>	<p>At the time of intake, PAs plan to request contact information for landlords for additional follow-up. The potential adjustments to the on-line audit tool would ideally allow renters to share information about their landlord and other interested tenants in the same building.</p> <p>The renter visit will include the installation of no-cost instant-savings measures as listed below.</p> <p>The renter visit will also include a refrigerator screening, high-level visual inspection of possible weatherization opportunities, and review the heating system for potential rebates.</p> <p>The customer will also receive materials noting deeper measures that could be installed with landlord approval. PAs plan to develop marketing materials specifically tailored to renters.</p> <p>The Energy Specialist will attempt to collect the landlord information for follow-up (if not already received during intake).</p> <p>The Energy Specialist will leave door hangers on other renter units, noting the benefits of the visit and encouraging the other tenants to call.</p> <p>The Lead Vendor will then send follow-up information to landlords, including information on the Whole Building incentive.</p>	
96.	<p>c. The savings measures that will be offered to renters and how such measures compare to the measures currently provided under the HES and multi-family retrofit initiatives.</p>	<p>No-cost instant savings measures for renters will parallel the HES gas and electric instant savings measures, including:</p> <ul style="list-style-type: none"> • High efficiency lighting (LEDs & CFLs) • Low-flow showerheads • Faucet aerators • Smart strips • Programmable or wireless-enabled thermostats, if applicable and allowed by the landlord <p>As mentioned, PAs plan to develop marketing materials tailored to renters. As the effort evolves</p>	

	Resolution Language	PA Response	Plan Section
		PAs will continue to explore other potential renter-specific rebates.	
B. Whole House Program			
97.	<p>a. A commitment to household-level tracking of all non-upstream measures, where technically feasible.</p>	<p>The term “household-level tracking” has not been defined. To the extent this term is synonymous with customer or account level tracking, disclosure of this information would require written customer consent. For a discussion of customer privacy issues, please see the statewide database section (VII.C); the PAs’ April 2, 2014 Comments in Appendix [x]; An Act Establishing the Massachusetts Residential Conservation Service, Chapter 465, Acts of 1980 (“No person shall disclose the name of a customer or the contents of an energy audit report prepared for such customer to any person other than the customer, a subsequent purchaser of the audited building, the utility serving such customer, the secretary of energy resources, or their designees, unless the customer or subsequent purchaser waives his right to confidentiality with respect to such information”). Furthermore, customer privacy and data access issues are the subject of a pending docket with the Department: D.P.U. 14-141.</p> <p>Notwithstanding customer privacy concerns, tracking data at the customer level across programs and PAs at the zip code level is not technically feasible. Due to integrated gas and electric audits, which PAs believe customers greatly prefer, measures recommended by one PA may be installed by another, and the installation cannot be tracked in a cost-efficient manner from audit directly to customer. The residential and C&I customer profile studies were designed to provide geographic information on customers through the EM&V process. Finally, careful consideration of the purpose, costs and benefits of collecting and reporting this additional data, which may not increase savings or assist the PAs in meeting their goals, is necessary before spending customer funds.</p> <p>While providing details at the individual customer or account level is not technically or economically feasible, the HES Activity tab on Mass Save Data provides information about how customers are utilizing the programs. The HES tab shows a breakdown of measure-specific information, including the total number of Home Energy Assessments performed, quantity of bulbs installed, and the number of unique customers who received weatherization measures. In addition, the PAs are working on providing measure level information on Mass Save Data for 2016-2018 and expect to display quantity, total incentives, savings, and total benefits by measure.</p>	
98.	<p>i. Include a proposal, with dates and milestones, for linking rebates and incentives provided to the same household across programs and PAs, together with a plan for reporting this whole house coordinated information at a zip-code level.</p>	See above response.	

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99.	b.	Dates for: completion of the extensive review of the HES program, development of a plan for implementation of identified opportunities, and a report back to Council.	<p>The plan references a “review of customer experience to identify opportunities for increased streamlining, simplifying and better targeting time and content of customer information to maximize the opportunity to influence customers taking action.” Considerable work is currently in process with outside expert consultants to adjust the collateral materials provided to HES participants.</p> <p>The PAs are not planning to impose artificial deadlines or require additional reporting that would risk diverting the focus from providing customers with the highest quality information and greatest access to efficiency opportunities, a strategic commitment shared by both the PAs and the Council.</p>	
100.	c.	Details, dates, and milestones regarding improvement of the integrated “one-stop shop” customer experience, including providing customers with both Mass Save and non-Mass Save incentive/rebate information, regardless of heating fuel source, consistent with the proposed Residential Conservation Services (RCS) regulations.	<p>As discussed above, PAs are committed to continuous improvement of the customer experience.</p> <p>The current design and implementation of the initiative features a one-stop-shop approach and provides comprehensive information to customers on Mass Save® opportunities. The HES and LI single family initiatives serve all customers regardless of fuel type. The Multi-family and LI Multi-family initiatives are preparing to transition to a parallel approach when RCS regulations are final. The Mass Save® website has become a critical focal point in the comprehensive marketing program, providing a consolidated one-stop shop for residents and businesses to learn about energy efficiency offerings and opportunities. The Mass Save® website and strategies that drive customers to it will continue to be refined to ensure the highest quality customer experience. A majority of residential customers are aware of the website, and 30 percent of those surveyed report using it more than once in the past year. The Mass Save® assessment materials link customers to a federal website with updated information on tax credits and additional incentives.</p> <p>If the Commonwealth would like to provide a link to a URL that is updated on a regular basis and encompasses all available state incentives, the PAs would be pleased to link to that as well.</p> <p>The HEAT Loan initiative enabled over 11,000 loans in 2014, including financing for several fuel blind measures and provides another avenue for customers to access cross-initiative incentive opportunities.</p>	
101.	d.	Details of the expected oil and propane savings by PA, based on an analysis of their service territory.	The current versions of the BCR models include measures for serving oil and propane customers. The April versions of the electric models are available on the EEAC website, and the PAs expect that the September versions will be added shortly after September 18th.	
102.	e.	Commitment to collaborating with DOER and the EEAC consultants to identify the actions and implementation steps needed to provide customers with an asset-based “home energy scorecard”, including cost estimates for each	The deployment of the online assessment tool speaks to the ongoing commitment of PAs to reach out broadly and provide an effective and creative entry point for customers. PAs thoroughly researched tools to provide customers with clear insight on their energy use, including conducting an RFQ process to identify the best in class technology. The online assessment provides customers with a no-cost home energy scorecard tied directly to customer-specific, actionable Mass Save® energy efficiency opportunities, based on the resident’s unique circumstances, all from the comfort of the customer’s keyboard and at their	

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		step.	<p>leisure. Each user can be tracked and followed up with, regardless of whether they move on to an HEA or are better suited for another Mass Save® opportunity. The existing online assessment tool and resulting scorecard, provides a cost-effective, customer-centric approach, and already addresses the Council’s interest in ensuring that customers have access to actionable home energy scorecards.</p> <p>PAs will continue to monitor DOE’s ongoing research in neighboring states on alternative scorecards. Several PAs serve territories beyond Massachusetts where ongoing DOE research and program testing of scorecards is being conducted. These PAs will bring what they learn elsewhere to their Massachusetts customers and partner PAs as applicable. Currently the alternative models under review increase administrative overhead without connecting to energy savings.</p>	
103.	f.	Strategies (including continuation of existing strategies) tailored to specific customer groups or segments, such as targeted approaches, technical assistance, or offerings (e.g., homes undergoing remodeling work, high energy users, and customers using electric resistance heat).	<p>Each program and initiative description includes a description of the target market and a section detailing marketing strategies and targeted approaches for the targeted market.</p> <p>PAs have and will continue to segment and target market to customers with high energy use and electric resistance heat to support their adoption of energy savings offers. As discussed under behavior, high energy users are a primary target for the Home Energy Report. The Home Energy Report frequently promotes Residential core initiatives and is a valuable tool to spark participation from customers who have been identified through behavioral program efforts as high energy users.</p> <p>The deployment of the on-line assessment tool also allows PAs to learn more about customers, prior to a home visit, and connects customers to offerings targeted to their needs. The success of the Mass Save Facebook and other social media platforms has further supported PAs ability to target message to key consumer groups as well as leverage seasonal and other factors influencing customer interest and readiness to engage on specific energy efficiency opportunities.</p>	
104.	g.	A description of efforts to ensure equitable treatment of Home Performance Contractors (HPCs) compared to lead vendors, including 3rd party quality control inspections and regular opportunities to engage and present to the Residential Management Committee (RMC).	<p>Over 7,000 companies/contractors interact with MA energy efficiency initiatives through a multitude of participation paths (direct contract, open market rebate submittals, contracted to lead vendors, etc.). The approximately 20 Home Performance Contractors (HPCs) play an important role in the HES initiative and are therefore engaged through several channels including direct interaction with PAs through the BPWG, quarterly meetings, and an elected EEAC member. In fact, the Best Practices Working Group (BPWG) was established as an official conduit for formal feedback to the PAs for HPCs and IICs participating in the HES Initiative. A minimum of one RMC representative always attends the BPWG meetings. Through the BPWG meetings the RMC has effectively been made aware of HPC concerns.</p> <p>Based on the April Council recommendation, PAs reviewed the current composition of the BPWG and determined that it currently provides a higher representation of HPCs as a proportion of participating contractors statewide. HPCs hold 30% of the contractor seats while representing</p>	III.E.4.c (Detail within Delivery Mechanism section)

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			<p>approximately 18% of the contractors in the HES core initiative.</p> <p>The BPWG remains a critical and equal forum for interaction. The PAs have agreed to also participate in a new Contractor Performance and Engagement Forum to be convened by the DOER (not in replacement of or in lieu of the ongoing BPWG), which will review topics of relevance to the residential energy efficiency contractor community and the PAs. Topics may include how residential program contractors can be most effectively engaged in the programs, optimization of contractor performance, and suggestions from the contractor community for enhancements and improvements. This Contractor Performance and Engagement Forum will be convened by the DOER and will be an advisory forum and not an adjudicatory, regulatory, or dispute resolution body.</p> <p>Both lead vendors and HPCs are subject to 3rd party quality control (QC) inspections by a vendor competitively procured by the PAs. The QC vendor and program evaluations also provide valuable, external information and feedback to the PAs on HES successes, its vendors and subcontractors, and identifies areas of possible improvement.</p>	
C. HEAT Loans and Financing				
105.	a.	<p>Strategy, dates, and milestones to assess how moderate income customers are currently served and could be better served by the HEAT Loan program, including assessment of the cost and effectiveness of a loan loss reserve, taking due account for the economic vulnerability of some customers.</p>	<p>Data presented at the Residential Workshops demonstrated that 87% of loans are approved. At this time, a loan loss reserve is not being considered.</p> <p>The Mass Save® HEAT Loan initiative is the most successful initiative of its kind in the nation, growing from 532 loans in 2006 to over 11,000 loans in 2014 (annual). Since inception, the Mass Save® HEAT Loan has made over \$250 million available to thousands of homeowners implementing home energy efficiency improvements. With over \$250 million financed (residential) - more than other leading states, <u>combined</u>- the Mass Save® HEAT Loan initiative has the largest volume of loans. It also has the broadest lender participation, with over 60 local banks and credit unions across the Commonwealth offering this product. Since 2011, the initiative has incorporated a broad FICO score acceptance, well into the sub-prime category. Approximately 45% of households taking the HEAT Loan in 2014 had incomes between \$40,000 and \$80,000, and banks indicate that income is not a major barrier for HEAT loan approval (detail found on page 229 of the DRAFT 2016-2018 Plan).</p> <p>The current HEAT Loan developed, deployed, and offered to customers by the PAs, in conjunction with the Massachusetts Bankers Association and Credit Unions, has low costs to the Programs, a very attractive interest rate, no credit enhancements, and no loan administrative costs passed back to PAs. Lenders bear the principal risks. PAs will continue this successful program working closely with our partners in the lending community who are best positioned to offer advice on loan application and approval processes.</p> <p>All customers of electric PAs receive HEAT Loan collateral with an indication of applicable measure opportunities identified in their home. Gas PAs that have municipal electric companies within their territories will offer the HEAT Loan to natural gas and municipal electric customers as</p>	

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			<p>well. In this way, all customers that pay into the funds are able to access the HEAT Loan. This universal access and common 0% interest rate has tremendous marketing and brand value for energy efficiency and the PAs' energy efficiency programs.</p> <p>The Mass Save® HEAT Loan is a major success story. The PAs have given the Council's recommendation serious attention. At this time the current structure, including the single 0% interest rate, is working well, both in terms of costs to administer and results in broadly serving the Massachusetts market place by leveraging the expertise and capital of the existing lending community. Similarly it does not appear at this time that there is reasonable justification for a loan loss reserve given the programs current success in serving moderate income customers and current broad FICO score acceptance. The PAs will continue their efforts to identify the nature of barriers for different customer segments, which may be related to accessing capital, and will explore financing products/solutions to address them. The PAs will also continue to review the cost to administer the HEAT Loan offer and seek out efficiencies and cost savings.</p>	
106.	b.	A date by which the PAs will finalize additional measures to be financed through the HEAT loan, including those currently funded through DOER's Expanded HEAT Loan Program.	<p>Two of the "additional measures" offered under the DOER expanded program are grant offers, not financing, and are therefore not appropriate to add to the HEAT Loan.</p> <p>PAs would consider allowing the highly successful HEAT Loan process to be leveraged by DOER and other partners for additional energy measures where the partner entity provides the supporting funding. However, PAs cannot commit to add measures that are not clearly consistent with current efficiency program savings goals and aligned with efficiency program incentives.</p>	
D. Multifamily Retrofit				
107.	a.	Provide detail on the PAs' proposed single point of contact and commit to assessing what changes are necessary to integrate commercial and residential rate codes into a whole building approach.	<p>Under the enhanced program design, customers will have a designated project point of contact ("PPC"). The PPC will be the designated agent or lead vendor identified by the PA responsible for the efficiency measures for the primary heating fuel.</p> <p>For example, if the primary heating fuel for the building is natural gas, the gas PA will designate the PPC who is responsible for providing the customer with a seamless project-level experience. Conversely, if the primary heating fuel is electric, (and as the proposed RCS regulations would allow oil and other fuels), the electric PA will designate the PPC who is responsible for providing the customer with a seamless project-level experience.</p> <p>The PPC is envisioned to be responsible for managing the full program delivery path once assigned to a project, coordinating efficient delivery of applicable measures. The plan is for the PPC to be responsible for clearly tracking all measures and incentives by meter type, i.e. residential and commercial meters, electric, and gas, at each stage from initial assessment through final reporting and billing.</p> <p>PAs have already identified and broken out for tracking measures both by meter type (Commercial/Residential) and fuel type (Gas/Electric) in the planning documents.</p>	III.E.4.b (Detail within New Enhancements and Core Initiative Design sections)

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108.	b.	Commit to developing and providing targeted offerings to different segments of the multifamily building market.	<p>PAs will continue to deploy segmentation strategies in all programs.</p> <p>The Whole Building approach utilized in the Multi-Family Initiative already allows tailoring based on the unique characteristics of the building, such as mixed use, construction type, and variations in ownership and occupancy.</p>	
109.	c.	Provide plans for improving the integration of efficiency into refinancing events, such as through a proposed partnership with the state's housing finance agencies or commercial lending institutions.	<p>The PAs are engaged in ongoing discussions with the State's housing finance agencies.</p> <p>The PAs will not be providing plans or other details as part of the three-year plan. This is not a program, or even an implementation detail, but a conversation between PAs and their customers about optimal ways and potential partnerships to provide energy efficiency services.</p>	
110.	d.	Commit to providing multi-family customers with user-friendly benchmarking tools to track unit-level energy usage and comparisons against peers.	<p>The PAs currently offer, and will continue to offer, support for Multi-Family properties to benchmark their properties through the EPA Benchmarking tool (Portfolio Manager). The link to this nationally recognized tool is included on the website page(s) associated with the Multi-Family Retrofit core initiative. EPA Portfolio Manager is a free tool available to all property owners that represents a gold standard for benchmarking. The PAs have supported data upload through the Green Button Initiative and have extensively coordinated with disclosure efforts such as the Boston Energy Reporting and Disclosure Ordinance to support customers' ease of access to benchmarking and compliance with reporting requirements.</p> <p>It should be noted there are no savings associated with benchmarking itself.</p> <p>Unit-level energy usage is not a common element of multi-family benchmarking. The PAs behavioral program does serve multi-family units and provides those units with unit-level energy information and comparison against peers (i.e. other multi-family units).</p>	
111.	e.	Implement a pay-for-performance demonstration program.	<p>The Multi-Family Initiative already includes a comprehensive Energy Action Plan with incentive levels based on the extent of energy savings (i.e. performance). Customers choosing higher performance options or more/all measures will achieve high performance and the highest available incentive. In addition, PAs offer building-operator training to support customers in maintaining their efficiency gains through proper operations and maintenance.</p>	
E. Behavior				
112.	a.	Commit to expand behavior program participation and include dates and milestones to implement this expansion. PAs not implementing behavior programs should document why these measures are not cost-effective and why the PA is not partnering with other PAs that are	<p>The request to expand participation in behavioral programs fails to acknowledge critical elements of behavioral program design and evaluation. The current behavioral program design and evaluation are based upon the highest industry standard, specifically, the SEE Action Evaluation, Measurement, and Verification (EM&V) of Residential Behavior-Based Energy Efficiency Programs: Issues and Recommendations (https://www4.eere.energy.gov/seeaction/system/files/documents/emv_behaviorbased_eeprograms.pdf.) Based on this standard, PAs are maintaining the planning assumptions for projected participation and initiative savings.</p>	

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		implementing behavior programs.	<p>Behavioral program savings per household are very small. Program design must therefore include a very large control group to clearly pick up the signal of savings. Program design must also include a buffer for participant attrition, i.e. you must leave some customers available to fill in for customers who opt-out of the program. This is necessary just to maintain current levels of savings but further limits the number of customers who can be assigned to the treatment group. If the program “steals” participants from the control group to add to treatment group (i.e. expand treatment participants), we risk losing statistical precision on savings estimates and possibly not conforming to industry best practices.</p> <p>In addition, there is not a direct relationship between increasing the size of the program and increasing the amount of savings (i.e. you cannot increase the program size by 10% and expect a 10% increase in savings). The treatment group, by design, includes the highest kWh/therm users first, as they are most likely to save more per household. As customers with lower usage per household are added to the treatment group we will begin to see lower absolute savings per household. Because the cost to treat each customer remains constant but we would secure less savings per customer, program cost effectiveness would decline.</p>	
F. New Construction				
113.	a.	By Q4 2016, commit to working with the EEAC consultants to explore how to claim savings for renewable energy systems in the cost/benefit analysis.	The PAs remain committed to working with the EEAC consultants to explore addressing renewable thermal savings in 2016-2018. PAs are seeking to better understand exactly what technologies are contemplated by Councilors and their applicability in a three-year energy efficiency plan under the GCA and whether implementation of some of these efforts is better handled in other contexts or proceedings, such as grid modernization. In reviewing these matters, PAs will work with the consultants to discuss and determine if there are cost-effective measures/strategies that are appropriately delivered as energy efficiency measures, as opposed to renewable supply side measures, what funding sources are available, what energy savings and other quantifiable benefits can be claimed for incentivizing these measures, and what, if any, are the most promising potential technologies and, if applicable, choosing a set of them to prioritize.	
114.	b.	Add a performance path for multi-family housing.	A performance path for the multi-family high rise program will be implemented in 2016. PAs are currently reviewing several modeling products to achieve this goal.	
115.	c.	Implement a renewable-ready requirement in the highest two performance tiers and the top prescriptive tier.	For 2016-2018 the PAs are exploring a “Path to Zero” option for the top tiers of the performance path. The enhancement would recognize new construction home builders for achieving both a high energy efficiency standard as well as the incorporation of renewable energy building features. Key components of the “Path to Zero” option would likely include renewable-ready requirements and key energy efficiency measures. Proposed PA Zero Net Energy education and marketing will communicate how builders can use the RNC initiative and the “Path to Zero” enhancement to reach net zero or net zero ready.	
116.	d.	By Q4 2016, commit to working with the EEAC consultants to assess the	In late 2017, PAs will assess how the Zero Net Energy Builder trainings and “Path to Zero” options are affecting Zero Net Energy residential building practices in Massachusetts. PAs will	

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		impact of creating a ZNE incentive top performance tier and report findings to the Council. Use findings to inform implementation of a ZNE top performance tier.	make adjustments to the new construction initiative, if necessary, to continue driving the market toward Zero Net Energy residential new construction.	
G. Renewable Thermal				
117.	a.	The PAs should actively collaborate with DOER on the development and implementation of RCS guidelines, and by Q4 2016, update and maintain the cost-benefit screening tools for renewable thermal technologies.	<p>The PAs have been and remain actively engaged in the RCS regulatory process. PAs have planned for treatment of oil heated multi-family properties, but await movement on the current RCS regulations. PAs continue to work with EEAC consultants and request pertinent updates, to date no updates have been provided.</p> <p>The PAs will continue to update and maintain screening tools for all qualifying measures.</p>	
H. Products Program				
118.		<i>Lighting</i> - The EEAC supports the commitment in the Draft Plan to phase out incentives for specialty CFLs by 2016. However, the Draft Plan does not fully address the Council's recommendations on LEDs and appears to use inconsistent and overly conservative volume and cost projections for 2016-2018.	Since the April Draft, the PAs have revised volumes and incentives per bulb, as referenced in conversation with the Consultants.	
119.	a.	Increase savings projections to reflect a growing market share of LEDs and increasing sales volumes for retail lighting.	The PAs have revised LED/CFL volumes. The PAs are committed to using the best data available for projection.	
120.	b.	Commit to quarterly reporting to the EEAC on progress of LEDs during Plan implementation.	The PAs will share updates at regular EEAC meetings when new information is available and requested.	
121.		<i>Heating and Hot Water</i> - The PAs did not propose residential upstream incentives for hot water heaters in the Draft Plan, although this is being implemented for C&I customers. The Council recognizes that the PAs need to understand the market potential for this incentive and the effects		

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	of implementing an upstream program on savings.		
122.	a. Include an assessment of implementing upstream incentives for residential tankless water heaters and other potential HVAC measures and report back to the Council by Q3 2016.	<p>With pending evaluations in the 2016-2018 Plan, the PAs are still awaiting the best information to adjust their initiatives. As mentioned in a past EEAC meeting by the EEAC EM&V Consultants, there could be some impacts that will need to be addressed.</p> <p>The residential group will assess potential savings impacts of DHW measures moving upstream. The PAs will watch the implementation of upstream incentives in C&I and evaluation results as part of this assessment.</p>	
Low-Income Recommendations			
123.	The EEAC acknowledges the establishment of the income guideline for Low Income programs at 60% of state median income (SMI) in the Green Communities Act, and the PAs' inclusion of a moderate income offering within the residential Whole House programs in the Draft Plan. The Council recognizes the need for flexibility in programs that serve buildings with high tenant turnover or families living on the margin of eligibility in the Low Income programs. In addition, the Council recognizes the variety of organizations that hold nonprofit status and that some of those organizations own buildings that serve low income populations and may have opportunities for energy savings. The Revised Plan should commit to:		
124.	a. Explore ways to flexibly serve low - income multi - family buildings with at least 50% of residents earning up to 80% SMI.	The PAs have established a process to work with LEAN to identify and flexibly serve buildings with a majority of residents at or under 80% (SMI) residents. The PAs and LEAN will be addressing these situations on a case-by-case basis.	
125.	b. Explore alternative incentives or service approaches for non - profit organizations that primarily serve low income customers.	PAs and LEAN will work together to explore providing alternate funding or enhanced incentives to certain non-profit organizations that primarily service low-income customers where appropriate. PAs and LEAN have discussed this group of customers, noting that it is not likely a large group, and have determine that they will review these situations on a case-by-case basis. Each PA will provide LEAN with a point of contact; when a customer is identified, the PA and LEAN will review the situation and determine an appropriate solution for that customer.	