

*Residential Programs Descriptions*

**Residential High Efficiency Heating, Water Heating & Controls Program**

<p><b>Primary Objective</b></p>	<p>The objective of the program is to overcome market barriers to energy efficient heating equipment and to increase program awareness among consumers, plumbing/heating contractors, and home builders/developers, through rebates, incentives, education, and training opportunities.</p> <p>The Residential High Efficiency Heating, Water Heating, and Controls Program is designed to promote the install in residential applications of high efficiency gas furnaces and hot water boilers, energy efficient steam boilers; energy efficient indirect, tankless on demand, and stand alone water heating equipment; programmable thermostats and boiler reset controls. The program offers rebates for equipment in both new construction and the replacement/retrofit market.</p> <p>Incentives and rebates are administered via the GasNetworks collaborative and coordinated with the electric Heating, Ventilation and Air Conditioning Program (HVAC) Program.</p> <p>The objective of the program is to encourage consumers to install the most efficient gas heating technologies available when replacing older, less efficient equipment and when considering equipment in new construction. The program seeks to overcome market barriers and increase program awareness among consumers, plumbing/heating contractors, and home builders/developers, through rebates, incentives, education, and training opportunities.</p>
<p><b>Program Inception</b></p>	<p>The program was initially offered in 1997.</p> <p>GasNetworks is a nationally-recognized, award-winning collaborative of local natural gas companies serving nearly 2 million residential and C&amp;I customers throughout New England. It has been promoting energy efficiency and the use of high efficiency natural gas technologies since 1997. The mission of this unique award-winning collaborative of natural gas utilities is to work with governmental agencies, trade allies, and consumers,</p>

	<p>in order to promote energy-efficient technologies. Successful strategies include the creation of common energy efficiency programs, education of consumers, and promotion and sponsorship of quality contractor training and equipment awareness programs of ever-changing natural gas technologies. Massachusetts members include Bay State Gas, Berkshire Gas, National Grid, New England Gas, NSTAR Gas, and Unitil.</p>
<b>Joint vs. Sponsor-Specific Offering</b>	<p>Joint</p>
<b>Program Design</b>	<p>The Residential High Efficiency Heating, Water Heating, and Controls Program is designed to promote the installation of high efficiency gas furnaces and hot water boilers, energy efficient steam boilers, energy efficient indirect, tankless on demand, and stand alone water heating equipment, thermostats, and boiler reset controls in residential applications. The program offers rebates for equipment with input ratings of 300,000 BTU or less in the new construction and replacement market (<i>i.e.</i>, lost-opportunity applications).</p> <p>In collaboration with the Cool Smart electric efficiency program, GasNetworks also offers a dual electric/natural gas rebate program for high-efficiency furnaces equipped with Electronically Commutated Motor (“ECM”) or equivalent advanced furnace fan systems. This program was launched on May 1, 2003, and represents the first dual-rebate program of its kind in the country. Going forward, the two programs will work together to coordinate common training and communication efforts with trade allies.</p>
<b>Target Market</b>	<p>Residential Target Markets include:</p> <ul style="list-style-type: none"> <li>• New Construction - Heating Equipment / Systems</li> <li>• Existing Homes - Replacement of Existing Heating Equipment (new equipment/old systems)</li> </ul> <p>The program targets these market segments:</p> <ul style="list-style-type: none"> <li>• Residential Home Owners with natural gas heating equipment</li> </ul>

	<ul style="list-style-type: none"> <li>• Home Designers and Architects</li> <li>• Engineers</li> <li>• Plumbing and HVAC Contractors and Technicians</li> <li>• Suppliers of High Efficiency Heating equipment and related parts/accessories</li> <li>• Manufacturers and Distributors of High Efficiency Heating equipment</li> <li>• New Home Builders and Remodeling Contractors</li> </ul>
<p><b>Marketing Strategy/Approach</b></p>	<p>The program is jointly marketed by GasNetworks member companies. The program will be promoted through a variety of marketing and educational campaigns including, but not limited to: upstream outreach, direct mail, radio and print media, bill inserts, trade ally events, sponsorships, and program brochures.</p> <p>The program will also be promoted via individual Program Administrator websites, and the GasNetworks collaborative website, (<a href="http://www.gasnetworks.com">www.gasnetworks.com</a>), where consumers and contractors can learn about the programs, download rebate applications, and obtain other valuable energy efficiency information. All of these functions will be integrated into the unified, statewide website scheduled to be completed by the first quarter of 2010.</p> <p>In addition to PA-specific marketing activities, the Program Administrators have learned over the years that trade ally events and training sessions prove to be a very critical and effective means of promoting these types of programs. Thus, the Program Administrators will promote this program through various PA-sponsored plumbing and heating training events, trade shows, and trade ally events in conjunction with the GasNetworks training seminars. In addition, the Program Administrators will promote program education and awareness utilizing manufacturer/distributor level marketing and training infrastructure as a platform to educate contractors and wholesalers at a regional level. These activities will be well coordinated with electric programs, where possible.</p> <p>Program marketing will be supplemented by direct vendor outreach to equipment suppliers and installation contractors. This will provide direct communication on programs and qualifying equipment, as well as</p>

	<p>maximize exposure to the contractor base.</p> <p>In addition to customer rebates, installation contractors may also receive incentives for the installation of high-efficiency heating equipment to incentivize both parties involved in the decision making process and further encourage the installation of high-efficiency heating equipment.</p> <p>The Program Administrators will also market and leverage all available federal tax credits where applicable, as well as all supplemental consumer incentives (<i>e.g.</i>, equipment manufacturers) as a means to increase consumer adoption of high efficiency heating equipment.</p> <p>Additionally, the Program Administrators plan to provide continued support and promotion of the Statewide branding efforts and strategic marketing plans to establish common branding themes across programs that will leverage program integration opportunities and broad-based outreach efforts to promote broader and deeper energy savings.</p>				
<b>Target End Uses</b>	Residential space and water heating fueled by natural gas.				
<b>Recommended Technologies</b>	<ul style="list-style-type: none"> <li>▪ Condensing furnaces and boilers where feasible</li> <li>▪ Electronically commutated fan motors, which provide higher electric efficiency for warm air distribution</li> </ul>				
<b>Financial Incentives</b>	<p>The equipment criteria and incentive levels proposed for residential heating customers who participate in this program are as follows:</p> <table data-bbox="485 1209 1285 1317"> <tr> <td>Furnace, 92%AFUE or greater</td> <td>\$400</td> </tr> <tr> <td>Furnace, 92%AFUE or greater w/ECM*</td> <td>\$500</td> </tr> </table>	Furnace, 92%AFUE or greater	\$400	Furnace, 92%AFUE or greater w/ECM*	\$500
Furnace, 92%AFUE or greater	\$400				
Furnace, 92%AFUE or greater w/ECM*	\$500				

Furnace, 94% AFUE or greater w/ECM*	\$650
Boiler, 85% AFUE or greater	\$500
Boiler, 90% AFUE or greater	\$1,000
Combo Boiler-On Demand condensing unit	\$1600
Combo Boiler-On Demand non-condensing unit	\$1000
Steam boiler, minimum 82% AFUE with electronic ignition	\$200
Indirect Water Heater	\$500
Tankless On-Demand Water Heater, with an Energy Factor of 0.82 or greater and electronic ignition	\$700
Stand Alone Water Heater with an Energy Factor of 0.62 or greater	\$50
Condensing Gas Water Heater	\$500
Programmable Thermostats	\$25
Boiler Reset Controls	\$200
<p>* \$200 of this rebate is funded by electric Program Administrators as part of an integrated approach that promotes high efficiency gas furnaces that are also electrically efficient.</p>	

<p><b>Delivery Mechanism</b></p>	<p>The program is administered by each gas Program Administrator and coordinated regionally through GasNetworks collaborative. GasNetworks utilizes a third-party administrative contractor, secured through a competitive bid process, to administer the rebates to customers. This contractor is responsible for tracking and reporting program activity to gas Program Administrators.</p> <p>The Program Administrators plan to take advantage of additional delivery mechanisms such as MassSave to promote high efficiency equipment installations as part of a comprehensive whole house approach to achieve broader and deeper energy savings. This scenario also supports seamless integration opportunities as well as the ability to develop “packaged” incentive offerings to drive consumer participation and adoption of new technologies.</p>
<p><b>Joint Program Administrator Enhancements Planned for 2010-2012</b></p>	<p>The Program Administrators, and GasNetworks as a group, will strive towards creating a seamless integration of the gas energy efficiency programs and the electric energy efficiency programs as Program Administrators and energy providers continue to educate residential customers and market actors such as contractors, suppliers, builders, and engineers about the benefits of using high efficiency heating, water heating, and cooling equipment.</p> <p>The Program Administrators also plan to support development of workforce and contractor training efforts that provide increased educational opportunities as a means to insure that new and existing contractors acquire the necessary skill sets to promote and install high efficiency heating equipment. Training will concentrate on raising the bar for quality installations and development of certification standards (<i>e.g.</i>, Building Performance Institute) and licensing where appropriate. The Program Administrators plan to utilize all publicly available institutional resources such as community colleges, vocational schools, and state licensing boards as well as independent and national organizations dedicated to quality installation standards and practices.</p>

<p><b>Three Year Deployment</b></p>	<p>The gas Program Administrators believe that increases in equipment incentive levels may be required to address market barriers and achieve higher levels of participation and savings goals during 2010-2012. Indeed, rebate levels approaching full system incremental cost may be required to address certain market barriers including the recent down turn in the economy.</p> <p>The depressed economy may dramatically reduce consumer spending towards the replacement of functional as well as old, broken, but repairable heating equipment. In order to address this structural barrier, the Program Administrators have proposed an “early replacement” incentive that will target old, inefficient--but still operating--heating equipment for replacement with high efficiency equipment, which will require an energy audit through the Residential Conservation Services/MassSAVE program.</p> <p>The gas Program Administrators will also work to progressively expand attic duct sealing offerings, preferably integrated with the electric Program Administrators via the MassSAVE and CoolSmart programs.</p> <p>In addition, GasNetworks will continue to:</p> <ul style="list-style-type: none"> <li>• Make customers aware of high-efficiency gas heating equipment and the energy savings that can be achieved</li> <li>• Increase market sector awareness and demand for high-efficiency gas heating equipment</li> <li>• Facilitate the purchase of high efficiency gas heating equipment</li> <li>• Provide high-quality training to trade allies such as plumbing and heating contractors</li> <li>• Increase trade ally awareness of the benefits of high-efficiency gas heating equipment</li> <li>• Work with regional groups to support research on and adoption of building code and appliance standards</li> <li>• Work with the electric HVAC programs to integrate the circuit rider function and jointly promote both programs.</li> <li>• Jointly promote brushless fan motors as well as attic duct sealing.</li> </ul> <p>Further, the gas Program Administrators will also strive to identify and support gas and electric program integration opportunities where appropriate as a means to increase consumer participation, gain economies of scale, create consumer-focused transparency across programs, and achieve broader and deeper energy savings.</p>
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	<p>As is standard practice, gas Program Administrators will continue to evaluate emerging natural gas- related technologies (<i>e.g.</i>, micro combined heat and power – MCHP units) that provide opportunities to either pilot or introduce on a broad scale that maximize the Program Administrator’s ability to achieve greater savings and increased market penetration.</p>
<p><b>Special Notes</b></p>	<p>The preceding program description is designed to support the successful attainment of the Green Communities Act’s energy efficiency investment goals and environmental benefits. Further, it is the intent of the Program Administrators to support the Council and its Consultants through a recognized ongoing iterative planning process to develop and implement plans that meet the objectives of the Council’s Priorities Resolution document. This program design is intended to addresses a number of applicable Council priorities including:</p> <ul style="list-style-type: none"> <li>• Providing program consistency through this program.</li> <li>• Focusing on maximizing incentive values and minimizing overhead costs in this program.</li> <li>• Striving to provide all customers with an opportunity to lower energy bills through the purchase and installation of energy efficient products.</li> <li>• Striving to provide seamless delivery and integration of incentives with other program delivery mechanisms such as the MassSave, CoolSmart, New Construction, and Multi-family programs.</li> </ul>



- Providing user-friendly programs by offering multiple paths/opportunities for participation
- Coordinating with other programs for outreach communication and marketing strategy.
- Addressing elements such as a focus on upper tier equipment, emerging technologies, and the integration with other programs where potential bundling of consumer incentives may generate deeper and broader energy savings.
- Coordinating with other programs on an integrated website.
- Coordinating of contractor training programs to support a sufficient and quality installation focused workforce.

Also, the Program Administrators are working on an integrated gas and electric initiative (across customer classes) to support progressive building codes and appliance efficiency standards. The Program Administrators are reviewing a very recent draft proposed description of these efforts that they are working on collaboratively with the Consultants. The Program Administrators will share this description with the Council when it is finalized.

**Residential Conservation Services / MassSAVE**

<p><b>Primary Objective</b></p>	<p>To provide residential customers with energy efficiency recommendations that enable them to identify and initiate the process of installing cost-effective energy efficiency upgrades. The Residential Conservation Services (RCS)/MassSAVE Program makes it easy, clear, and compelling for customers to participate in all comprehensive energy efficiency programs by providing information through bold outreach mechanisms, incentives, and multiple financing options. The program exemplifies a program-as-a-system approach where all components work together to support the success of achieving deeper energy savings per customer. The Program Administrators plan to increase the number of energy efficiency vendors and contractors while raising the level of quality control.</p>
<p><b>Program Inception</b></p>	<p>During the period 1980-2000, the RCS/MassSAVE program was an educational program encouraging customers to upgrade the efficiency of their homes.</p> <p>Beginning in 2001, the RCS/MassSAVE program began to change its emphasis from education only to education and measure implementation. Customers are now offered incentives to implement energy saving measures in their homes. The program has continued to increase cost effective incentive packages each year leading to greater energy savings and increased implementation.</p>
<p><b>Joint vs. Program Administrator-Specific Offering</b></p>	<p>Joint</p>

<p><b>Program Design</b></p>	<p>The program is committed to a comprehensive whole-house approach and seeks to maximize both electric and gas energy savings (including fuel-neutral incentives). The program plans to fully integrate the RCS/MassSAVE and gas weatherization programs, so that customers experience “one program” as opposed to multiple offerings. Through the intake process, the customer’s primary heat source will be identified. The purpose of the screening is to steer customers using natural gas for space heating to the gas Program Administrators, and customers using electric, oil or propane for space heating to the electric Program Administrators. It is also recognized that exceptions to this guideline may occur (<i>e.g.</i>, specialized high bill complaints, community outreach programs, etc.). In these cases, and unless there are prior mutual agreements between the gas and electric Program Administrators, the electric Program Administrator(s) will seek to negotiate in good faith with the gas Program Administrator(s) to achieve a resolution that serves the common interests of both Program Administrators and the interests of the consumer, while maximizing savings opportunities on a fuel-neutral basis. The program is essential to achieving maximum program success and deeper energy savings. This is a significant leap forward, making distinctions between programs indiscernible to consumers. The program clearly defines the process and expectations of the customers up front and identifies those customers interested in investing in controlling their future energy costs.</p>
<p><b>Program Design</b> <b>(cont.)</b></p>	<p>The level of service is intended to be flexible, providing information to a broad group of customers, with information regarding deeper retrofit services and renewable opportunities supplied to interested parties. All customers who call the MassSAVE toll-free number to learn about the program are asked several questions to determine their need for and general interest in making energy-efficient improvements. The Program Administrators are dedicated to providing prompt customer service; the goal is to limit the response time between the initial customer call and the first visit to thirty days or less. The Program Administrators wish to provide an even quicker response time and will strive to achieve that outcome while recognizing factors outside of the Program Administrators control that create a demand for services. Customers are guided to appropriate program services provided by energy efficiency vendors including targeted energy efficiency information, advanced diagnostics, efficiency rebates, and deep energy retrofit support. (Low-income customers are referred to appropriate low-income programs.) When appropriate, a series of home visits are offered to further engage the customer and proceed in a logical and methodical process of identifying and informing customers of all available energy savings opportunities.</p>

The home visits include:

- The first visit, referred to as the Screening Visit, is scheduled by a PA-approved vendor promptly after the initial customer phone call and is available at a variety of times to encourage maximum customer participation. This is an in-home visit designed to provide general information and education a energy efficiency and identify opportunities and challenges for energy saving installations. Identification of opportunities may include estimating time and labor needs for subsequent direct installation measures and a solar site assessment during the second or Diagnostic Visit. The Screening Visit will identify customers' specific needs and direct them to other energy-efficiency resources as appropriate. Should a customer choose not to proceed with the Diagnostic Visit, the initial assessment allows Program Administrators to collect customer data for future targeted marketing efforts. Instant energy savings are realized during the Screening Visit. With the customer's permission, CFLs and, when applicable, Light Emitting Diodes ("LEDs") are installed for free in all appropriate locations, as are low-flow shower heads and faucet aerators. The instant savings measures installed during the Screening Visit are intended, on average, to exceed the expected average cost to deliver this initial visit.
- The Diagnostic Visit includes a comprehensive energy assessment including a variety of diagnostic techniques such as blower door tests, infrared scanning, and duct leakage testing (based on vendor determination). Wherever feasible, full installation of air sealing, duct sealing, and programmable thermostats are provided at no cost to the customer. The savings derived from the direct install measures are designed to cover the cost of the visit. This visit will also identify and recommend specific energy-efficient upgrades that require professional contractors, as well as, a customer contribution. The energy advisor explains the contractor services required to install recommended measures, as well as all available energy efficiency financial incentives.
- The Quality Assurance Visit allows all work to be inspected through a combination of methods including phone survey, postcard, e-mail or actual site visit by a third-party PA-approved vendor to ensure that contractor-installed measures are accurate, professional, and safely installed based on program standards and to ensure program savings.

<p><b>Program Design</b> <b>(cont.)</b></p>	<ul style="list-style-type: none"> <li>• Program Administrators strive to maximize energy savings by promoting and supporting contractor training and education in an effort to establish a broader workforce knowledgeable of proper installation techniques. The goal is to have a sustainable and experienced workforce that is focused on achievable maximum energy savings ready and able to meet customer demand.</li> </ul>
<p><b>Target Market</b></p>	<p>All non-low-income residential customers living in single-family houses or one- to four-unit multi-family buildings, regardless of heating fuel, who are committed to making their homes more energy efficient. Program Administrators plan to shift more attention toward targeting trades that influence homeowners' decisions. The Program Administrators are currently discussing and addressing the major program design modifications needed to bring in new contractors and plan to have a structure in place for bringing new contractors into the program by January 1, 2010. Program Administrators are also exploring ways to identify and reach landlords to make them aware of the program benefits that increase property value and provide energy savings to tenants.</p>
<p><b>Marketing Approach</b></p>	<p>The Program Administrators will collaborate to proactively drive the demand needed to support the 2010 – 2012 increase savings goals. Marketing efforts will focus on single-family homeowners, developing leads for identifying owners of 2-4 family homes (decision makers) and recruiting and training contractors. Efforts will include:</p> <ul style="list-style-type: none"> <li>• Designing a comprehensive education package to get customers thinking about ways to optimize their home's energy performance with a consistent statewide marketing message.</li> <li>• Creating a tool that informs customers how far they could go over the long-term that could put them on the path to Zero Net Energy. The tool will lay out steps customers can take this year, next year and over the years as they make home improvements.</li> <li>• Providing a statewide audit package that ensures customers are given consistent energy efficiency data</li> </ul>

<p><b>Marketing Approach</b> (cont.)</p>	<p>and recommendations.</p> <p>Outreach and marketing efforts will be expanded to include building relationships with realtors, home improvement contractors, architects and others involved in renovations of one-to-four family homes. Marketing efforts will be designed to meet the objectives of reaching more customers (going broader into the customer base) and maximizing energy savings opportunities (going deeper into each home to find ways to save energy). The program’s multi-media outreach campaign will focus on strategic television partnerships with local affiliate or cable programming providers, radio, print advertising, web-based marketing through various social media sites, and through part of a new consolidated website planned for the first quarter of 2010 that integrates all the Massachusetts energy efficiency programs and websites into a single portal.</p> <p>Current forms of multi-media outreach include:</p> <ul style="list-style-type: none"> <li>• MassSAVE website (enhanced via the Statewide Integrated Energy Efficiency Website)</li> <li>• Bill inserts</li> <li>• Radio, print and visual media advertising</li> <li>• New media advertising (advanced online options)</li> <li>• Targeted marketing through community outreach initiatives such as Cambridge Energy Alliance, Marshfield Energy Challenge, and the Energy Smack-Down program.</li> <li>• Targeted marketing through the use of data collected during the screening visits</li> </ul> <p>Individual Program Administrators may conduct additional marketing and may ramp their marketing up or down as needed to meet participation and budget goals.</p>
<p><b>Target End Uses</b></p>	<p>The program targets any cost-effective energy-saving improvement using a comprehensive whole house approach including but not limited to:</p> <ul style="list-style-type: none"> <li>• Building Envelope</li> </ul>

	<ul style="list-style-type: none"> <li>• HVAC/Mechanical systems</li> <li>• Water heating</li> <li>• Energy saving appliances and lighting</li> <li>• Deeper retrofit measures</li> <li>• New technologies and renewables</li> </ul>
<p><b>Recommended Technologies</b></p>	<p>Recommended technologies include air sealing, duct sealing, insulation, refrigerators, thermostats, ventilation, and heating/cooling systems. The program also provides general information about energy efficiency and solar domestic hot water systems (“DHW”) to consumers on request. Other measures may include heating system controls, super-insulation, CHP technologies, solar DHW systems and opportunities for piloting “deep energy retrofit” enhancements of major renovation projects. Customers will see these offerings as an integrated program.</p>
<p><b>Financial Incentives</b></p>	<p>The RCS/MassSAVE program provides on site customer-specific information at no cost to the customer, free installation of instant savings measures, as well as an educational experience including information regarding all statewide program incentives, financing options, and where to find information about Federal and State tax credits. The Program currently offers free direct installation measures; and incentives of 75 percent of the installed cost of contractor-installed measures, up to \$2,000. The Program Administrators are exploring the possibility of increasing or eliminating the \$2,000 cap.</p> <p>The Technical Evaluation Working Group is in the process of conducting a cost-effectiveness evaluation of new measures, measures packages, and a “pay for savings” rebate approach to go after deeper savings per house. This program will coordinate with other programs such as GasNetworks and Cool Smart by educating customers about rebates and financial incentives available to them through the Comprehensive Education Package and marketing materials providing a roadmap to achieving whole-house energy savings.</p> <p>The HEAT Loan program, offered by electric utilities, provides qualified customers with 0 percent interest loans up to \$15,000 with terms up to seven years and can be applied towards the following energy efficiency</p>

<p><b>Financial Incentives (cont.)</b></p>	<p>upgrades:</p> <ul style="list-style-type: none"> <li>• Insulation</li> <li>• Duct System Improvements</li> <li>• High-efficiency heating systems</li> <li>• High-efficiency DHW systems</li> <li>• Solar DHW systems (standardized incentive amount across all Program Administrators.)</li> <li>• ENERGY STAR-labeled thermostats</li> <li>• ENERGY STAR-labeled windows</li> <li>• ENERGY STAR-labeled water heaters</li> <li>• Other renewable technologies on a pre-approved basis</li> </ul> <p>A portion of the HEAT Loan may be used to finance the mitigation of barriers preventing the installation of energy efficient measures. In the past, safety barriers have been a significant obstacle in maximizing energy savings. Using HEAT Loan funds to manage safety issues will allow Program Administrators to access a broader spectrum of efficiency in the future. To address renewables, Program Administrators may look towards possibly expanding the HEAT Loan to allow for installation of renewables.</p> <p>Additional customer financing options like the “Pay &amp; Save Pilot” are also being explored and their effectiveness will be evaluated at the end of the pilot for possible inclusion as a program financing option. A long term financing option that might also be explored is to work with all stakeholders to potentially include the cost of upgrades on property tax bills. The Program Administrators will continually look to address “new” financing options that would allow customers the ability to go deeper.</p>
<p><b>Delivery</b></p>	<p>The program is administered within each service territory by its Program Administrator and is coordinated statewide through the Residential Management Committee (“RMC”) that actively manages and steers the</p>



<p><b>Mechanism</b></p>	<p>statewide MassSAVE program. The program is delivered by program vendors selected through a competitive bidding process. The Program Administrators are discussing how the structure and relationships will work as new vendors are brought into the Program. The Program Administrators will explore developing a comprehensive “Scope of Work” to be included in the RFP used statewide to ensure vendors adhere to:</p> <ul style="list-style-type: none"> <li>• Consistent statewide training</li> <li>• Data reporting</li> <li>• Achieving aggressive savings</li> <li>• Customer satisfaction</li> <li>• Quality Control standards</li> <li>• Scheduling requirements</li> <li>• Technical Assistance</li> <li>• Maintain and report health and safety information</li> </ul> <p>Vendors capable of serving large numbers of customers and that have appropriate resources and experience will be included in the bidders list. Work completed by MassSAVE energy service providers and their subcontractors must meet Building Performance Institute standards or similar standards set by the individual Program Administrators. These standards require a systematic approach to home improvement that addresses all aspects of building systems.</p> <p>In order to increase the number of energy efficiency contractors, the program offers an incentive/rebate to contractors who are installing retrofit weatherization measures such as insulation and air sealing. Once approval/certification criteria are determined, a statewide marketing campaign to recruit contractors will begin and a central database of authorized (certified) contractors will be established. Customers are required to have an RCS Site Visit through the Program Administrator’s vendor to identify and prioritize all cost effective energy efficiency upgrades in order to receive an incentives or program rebate. All insulation work, whether performed by an authorized independent contractor or a vendor’s subcontractor, will have a quality control inspection performed by the Program Administrator vendor when the work is complete. This will ensure that,</p>
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<p><b>Delivery Mechanism (cont.)</b></p>	<p>either through an authorized installer or the Program Administrator’s RCS vendor, installations meet BPI standards or similar standards set by the Program Administrators.</p> <p>The RMC members are working together toward a “best practices” approach and to provide a more coordinated statewide training as a means to ensure correct installation techniques for the RCS/MassSAVE Program. It is expected that training requirements will increase over time in order for contractors to retain their status as an authorized program contractor. Contractors must maintain a high level of customer satisfaction to continue in the program.</p> <p>RMC will apply a “best practices” approach and work together to make quality control an integral part of the RCS/MassSAVE Program. The Program Administrators plan to issue an RFP for a third-party Quality Control (“QC”) vendor responsible for performing QC inspections of program implementation vendors, subcontractors, and contractors. The QC vendor will provide valuable information and feedback to the RMC on the program successes and areas that can be improved upon.</p>
<p><b>Joint Program Administrator Enhancements Planned for 2010-2012</b></p>	<p>In an effort to further penetrate the residential market, the RCS/MassSAVE program will evaluate the success of pilot programs such as the Marshfield Energy Challenge, the Cambridge Energy Alliance and the Energy Smack-Down and will explore offering similar initiatives within other communities. Also, the Program Administrators, in their efforts to enhance the current services provided, will look to incorporate infrared and blower door testing where applicable.</p>

<p><b>Three-Year Deployment /Road Map</b></p>	<p>The RCS/MassSAVE program design is undergoing an effort to significantly increase the number of properties serviced by the program, which will also lead to higher energy savings potential. The design will also allow Program Administrators to better capture and utilize property data for the purpose of identifying all available energy efficient measures, as well as targeting marketing efforts. Program Administrators will continue to explore new technologies in conjunction with significantly increasing the implementation of known cost effective measures. Program Administrators intend to increase the number of qualified major measure installers through establishing qualification/training guidelines using the BPI or its equivalent as a benchmark.</p> <p>The RCS/MassSAVE program will undergo an evolutionary redesign with emphasis being placed on reaching more customers while achieving deeper energy savings. Program design issues that are currently being addressed:</p> <ul style="list-style-type: none"> <li>• The Marketing Evaluation working group is collecting and reviewing marketing data to further promote the program effectively.</li> <li>• The Technical Evaluation working group is determining the cost-effectiveness of new MassSAVE measures, and is screening packages that strategically group measures that leverage customer interest and provide deeper energy savings per home and potentially offer higher incentives.</li> <li>• Developing a Home Energy Use Index that shows in a single number or grade, how the home is performing relative to comparable homes. This is a 2009 metric (Existing Homes Rating) and the Program Administrators are partnering with NEEP to research and develop a rating system for potential incorporation into the MassSAVE program as a pilot in 2010.</li> <li>• Investigate custom incentive approach based on projected savings for the individual home (\$ per MMBtu, \$ per Kwh)</li> <li>• Identify alternative/new technologies and approaches (<i>e.g.</i>, spray foam in attics) as eligible for program rebates</li> <li>• Work to connect additional complementary contractors with the program, find ways to address contractors' "What's in it for us?" concerns</li> <li>• The program is currently funding training that addresses the program workforce needs and will</li> </ul>
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<p><b>Three-Year Deployment/Road Map (cont.)</b></p>	<p>continue to explore how specific technical training requirements can be introduced to training programs across the state</p> <ul style="list-style-type: none"> <li>• Evaluate other financing options such as on-bill financing and work with all stakeholders to potentially include cost of upgrades on property tax bills</li> <li>• Consider increasing or eliminating the \$2,000 incentive/rebate</li> <li>• Evaluate a higher incentive/rebate for landlords</li> <li>• Investigate funding sources to help eliminate health and safety barriers (<i>e.g.</i>, knob &amp; tube wiring and other construction related repairs, subject to acceptable cost-effective levels, to increase the installation of energy efficient measures)</li> </ul>
<p><b>Special Notes</b></p>	<p>The preceding program description is designed to support the successful attainment of the Green Communities Act’s energy efficiency investment goals and environmental benefits. Further, it is the intent of the Program Administrators to support the Council and its Consultants through a recognized ongoing iterative planning process to develop and implement plans that meet the objectives of the Council’s Priorities Resolution document. This program design is intended to address a number of applicable Council priorities including:</p> <ul style="list-style-type: none"> <li>• Coordinating with other programs for outreach communication and marketing strategy</li> <li>• Reducing program differences across the Program Administrators</li> <li>• Engaging in open, transparent and competitive solicitation and maintaining high standards of performance and accountability.</li> <li>• Developing an iterative process where learning and improvement is achieved over time. Phasing in new</li> </ul>

	<p>programs, with ongoing re-evaluation and improvement throughout the three-year plan</p> <ul style="list-style-type: none"><li>• Ensuring new service providers are trained, achieving quality control, and creating benefits for the Commonwealth from associated job creation and economic growth</li><li>• Striving to provide customer rebate/incentives that encourage deeper energy savings by modifying customer incentives/rebate levels and incentive caps to encourage the best energy savings. Consider performance-based incentives structure. Add customer incentives for low-tech solutions such as air sealing that result in energy savings.</li><li>• Striving to maximize seamless delivery to the customer.</li><li>• Exploring a single number or grade for how the home is performing relative to comparable homes.</li><li>• Through development of a marketing tool that informs the customer of how far they go over the long-term, putting them on the path to Zero Net Energy, the RCS/MassSAVE will look to further promote near zero energy homes</li><li>• Coordinating with other programs on integrated website</li><li>• Continued coordination of trainings to support a sufficient workforce.</li></ul>
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### Deep Retrofit Single and Multi Family Pilot

<b>Primary objective</b>	To investigate the potential for energy savings of at least 50 percent of total on-site energy use through deep retrofits of existing residential buildings and to identify how to reduce the costs and challenges associated with deep retrofits.
<b>Initially offered</b>	This pilot was originally offered as a pilot in the electric Program Administrators' 2009 plans.
<b>Joint vs. Program Administrator-specific offering</b>	<p>Jointly offered program integrated gas and electric including single family and multi-family by 2010.</p> <p>Incentive levels and outreach and program support vendors may vary by program administrator.</p>
<b>Program Design</b>	<p>The “deep energy efficiency” pilot will be consistent with the Governor’s Zero Energy Task Force recommendations and will at a minimum explore 1) a new Deep Energy Retrofit Pilot Program of existing buildings achieving 50% energy reductions or more as compared to baseline energy usage, and 2) a Zero Energy Pilot Program that encourages diverse paths to Zero Energy, including Passive House or similar programs. This will include a wide range of projects such as single family homes, affordable housing, mid to large multifamily and include a substantial amount of square footage.</p> <p>The design includes a plan to support deep retrofits and to gather information on customer satisfaction, behavior modification, and energy savings. The pilot will help the Commonwealth continue to develop information on appropriate measures for deep retrofits, the correct way to model potential energy savings for deep retrofits, approaches for different housing types, training energy-retrofit contractors, customer education and marketing</p>

<p><b>Program Design (cont.)</b></p>	<p>materials, and financing and incentive levels.</p> <p>Budget permitting, gas utilities will pay incentives for eligible project if primary source of heat is gas. For 1-4 unit homes the electric program administrators will pay incentives for eligible project for non gas-heated homes, and for multifamily (5+ unit) buildings as well, if primary source of heat is electric. There is currently exploration by DOER into the possibility of the electric Program Administrators paying incentives for multi-family (5+ unit) projects whose primary heating fuel is oil or propane. Based on the results of this exploration, the electric Program Administrators will consider paying incentives for multi-family projects on a fuel blind basis.</p> <p>In order to achieve the targeted depth of energy savings in these projects it will be necessary to carefully consider the projects' HVAC systems with regard to size, efficiency, air intake and venting mechanisms, overall health and safety issues, and other 'house as a system' considerations. In some cases, in order to reach the highest efficiency levels a complete redesign out of the project's HVAC system may be necessary.</p> <p>On-going program evaluation and case study review of the homes treated will substantially inform the expanded effort in subsequent years.</p> <p>The Program Administrators will coordinate with the RCS/MassSAVE working group on making Deep Energy Retrofit information, including energy and other benefits, available through RCS/MassSAVE educational materials, statewide web content, and through home energy assessments.</p>
<p><b>Target market</b></p>	<ul style="list-style-type: none"> <li>• Home owners, property owners, and property managers considering renovations and willing to invest in extensive carbon reductions</li> </ul>

	<ul style="list-style-type: none"> <li>• Advanced Remodelers and Builder Remodelers</li> <li>• Architects</li> <li>• Designers</li> <li>• Trade allies</li> <li>• Others involved in renovation or restoration of residential buildings</li> </ul>
<p><b>Marketing approach</b></p>	<p>Outreach and marketing to identify and interest potential pilot candidates will be performed through internet research, targeted media outreach, contractor outreach through new homes program, multi-family audit program and potentially through home energy raters and other professionals with appropriate skills. Successful outreach and marketing are essential to the success of the pilot, and so a marketing strategy will be developed to ensure that customers who have the greatest likelihood of pursuing a Deep Energy Retrofit are systematically identified and approached about pilot participation.</p> <p>Project selection will be by the sponsoring Program Administrator, based on property owner proposals to participate utilizing a qualified project team with a design that meets program defined criteria for optimal energy performance, health, safety and durability, and other criteria.</p> <p>A listing of contractors and designers with appropriate pre-requisite deep energy retrofit related experience as per criteria defined by the Program Administrator working group will be maintained to assist building owners in forming project teams to propose projects.</p> <p>Homes and apartment buildings on which renovations are planned (<i>e.g.</i>, siding and/or window replacements) will be targeted. Homeowner investments will be leveraged to maximize the effectiveness of the deep energy retrofits.</p>



<b>Target end uses</b>	To dramatically reduce the amount of energy used in existing residences
<b>Recommended technologies</b>	<ul style="list-style-type: none"> <li>• Exterior wall super-insulation build-outs</li> <li>• Attic insulation enhancements</li> <li>• Foundation wall/slab insulation</li> <li>• Extensive whole-house air sealing</li> <li>• High-performance windows and storm windows</li> <li>• High-performance lighting, including the use of CFL and light-emitting diode (“LED”) technologies</li> <li>• High-efficiency heating and cooling systems</li> <li>• Advanced thermostatic controls</li> <li>• High-efficiency appliances and products</li> <li>• Advanced energy use feedback and monitoring technology</li> <li>• Mechanical ventilation</li> <li>• Solar photovoltaic systems</li> <li>• Solar thermal systems</li> </ul>
<b>Financial incentives</b>	<p>High levels of incentives will be offered to ensure that deep retrofits are completed on the targeted number of existing homes and to achieve the desired mix of multifamily and single family demonstrations.</p> <p>Incentives may be tiered based on the number of units in a building.</p> <p>Basic incentives to move the market, based on pilot experience to date, will be a maximum of \$42,000 per unit. A higher tier of incentive levels up to an additional \$10,000 may be offered for deep energy retrofit projects that approach the highest energy performance standards, for example Net Zero energy, Passive House or Thousand Home</p>

	<p>Challenge standards.</p> <p>Staged and partial projects will be considered for inclusion in the pilot, and incentives will be scaled accordingly. A ‘staged’ project is one in which the participant plans to pursue deep energy retrofit levels (over 50% energy use reduction) in stages over a period of time. A ‘partial’ project is one in which the participant will pursue a substantial energy retrofit but which will fall below the 50% savings target.</p> <p>The HEAT Loan will be made available to pilot participants as an added tool to assist in bringing projects to fruition.</p>
<p><b>Delivery mechanism</b></p>	<p>Pilot program services will consist of outreach through a variety of channels to customers including through the existing RCS network to homeowner and to contractors through the residential new construction program. Project design details and assistance to the DER contractors doing the work will be handled through technical specialist organizations under contract and/or utilizing ARRA funds. In order for these projects to succeed, it will be essential to have extensive technical support and training, since the challenges of retrofitting a building to this degree in a manner that enhances rather than degrades the durability of the structure and the health and safety of the occupants, exceeds to a considerable degree what is involved in RCS or new home construction.</p>
<p><b>Joint program administrator enhancements planned for 2010 – 2012</b></p>	<p>Program Administrators will explore creating a second tier of incentives for households participating in the pilot program Thousand Home Challenge and/or approaching near Net Zero energy. This element and each project will be carefully reviewed to identify lessons learned and best practices, as well as to identify and fill gaps in the portfolio of housing types treated to date. Depending upon outcomes of cost-benefit analysis, the pilot may be expanded into a more full scale statewide program.</p>

<p><b>Three-Year Deployment/Road Map</b></p>	<ul style="list-style-type: none"> <li>• Publicity from completed projects will build interest for more homes, as will training of additional deep energy retrofit contractors.</li> <li>• There are a number of other points of entry that can be explored for timely leads including basement remediation, fire restoration, and siding contractors, if and when the pilot expands to a wider scale. Identifying how best to enable those contractors to partner with DER experienced contractors and make this work for their business plans is another tactic the pilot will explore.</li> <li>• Identifying lower cost HVAC and mechanical ventilation as well as super-insulated build-out approaches is vital to reducing total project costs. HVAC change-outs are often necessary since sealed combustion or forced draft is a requirement for combustion devices.</li> <li>• There are a number of products including advanced windows, integrated light HVAC, ventilation and water heating products that are ideal for very low energy load homes which are not yet available in the United States market. Through deep energy retrofit projects across New England and California, in particular, the market may grow and more of these technologies may emerge in the United States and can be tested and adopted in the program.</li> <li>• The full value proposition in DER work is not yet accounted for in the BCR models or well known, or in a form that helps to move this market including: far longer measure life than the 28 or 30 year max in current models and enhanced building durability and lower maintenance and insurance costs due to the addition of a rain screen with super insulated wall build out, not to mention improved IAQ and the impact on health costs. Opportunities to quantify and share information on this to better inform BCR analysis and market actor decisions can further the effort to reach pilot goals and climate change goals in the existing homes sector. However this is a large undertaking in some ways beyond the scope of the pilot, perhaps best done in a regional or national context.</li> </ul>
<p><b>Special Notes</b></p>	<p>In the 2009, pilot many customers who were passionate about climate change withdrew from consideration, even though forewarned that their costs would likely be equal to or greater than the incentives (\$42,000) due to worries about the economy and not being able to recoup their investment in energy savings over time or at the time of resale of the property. Financing which is extensive, long term, and either replicable or transferable to the next owner, is seen by many involved in this market as essential to increase participation including those who withdrew.</p> <p>Given the economy and scale of total investment for building owners, the pilot goals may only be achieved if</p>

considerable additional financing options become available through a wider group effort. The Deep Energy Retrofit working group will coordinate with the Financing and On-bill Repayment working group which is currently exploring financing options.

Lifestyle education will be used to reduce appliance use and will be used to leverage selection of desired project (including housing style) types and maximum household energy reductions.

If customers who express interest turn out not to be good candidates or opt out the pilot, the customer will be referred to the appropriate energy efficiency program.

### Deep Retrofit Single and Multi-Family Pilot

<b>Primary objective</b>	To investigate the potential for energy savings of at least 50 percent of total on-site energy use through deep retrofits of existing residential buildings and to identify how to reduce the costs and challenges associated with deep retrofits.
<b>Initially offered</b>	This pilot was originally offered as a pilot in the electric Program Administrators' 2009 plans.
<b>Joint vs. Program Administrator-specific offering</b>	<p>Jointly offered program integrated gas and electric including single family and multi-family by 2010.</p> <p>Incentive levels and outreach and program support vendors may vary by Program Administrator.</p>
<b>Program Design</b>	<p>The “deep energy efficiency” pilot will be consistent with the Governor’s Zero Energy Task Force recommendations and will at a minimum explore 1) a new Deep Energy Retrofit Pilot Program of existing buildings achieving 50% energy reductions or more as compared to baseline energy usage, and 2) a Zero Energy Pilot Program that encourages diverse paths to Zero Energy, including Passive House or similar programs. This will include a wide range of projects such as single family homes, affordable housing, mid to large multifamily and include a substantial amount of square footage.</p> <p>The design includes a plan to support deep retrofits and to gather information on customer satisfaction, behavior modification, and energy savings. The pilot will help the Commonwealth continue to develop information on appropriate measures for deep retrofits, the correct way to model potential energy savings for deep retrofits, approaches for different housing types, training energy-retrofit contractors, customer education and marketing</p>

	<p>materials, and financing and incentive levels.</p> <p>Budget permitting, gas utilities will pay incentives for eligible project if primary source of heat is gas. For one- to four-4 unit homes the electric program administrators will pay incentives for eligible project for non gas-heated homes, and for multi-family (5+ unit) buildings as well, if primary source of heat is electric. There is currently exploration by DOER into the possibility of the electric Program Administrators paying incentives for multi-family (5+ unit) projects whose primary heating fuel is oil or propane. Based on the results of this exploration, the electric Program Administrators will consider paying incentives for multi-family projects on a fuel blind basis.</p> <p>In order to achieve the targeted depth of energy savings in these projects it will be necessary to carefully consider the projects' HVAC systems with regard to size, efficiency, air intake and venting mechanisms, overall health and safety issues, and other 'house as a system' considerations. In some cases, in order to reach the highest efficiency levels a complete redesign out of the project's HVAC system may be necessary.</p> <p>On-going program evaluation and case study review of the homes treated will substantially inform the expanded effort in subsequent years.</p> <p>The Program Administrators will coordinate with the RCS/MassSAVE working group on making Deep Energy Retrofit information, including energy and other benefits, available through RCS/MassSAVE educational materials, statewide web content, and through home energy assessments.</p>
<b>Target market</b>	<ul style="list-style-type: none"> <li>• Home owners, property owners, and property managers considering renovations and willing to invest in extensive carbon reductions</li> </ul>

	<ul style="list-style-type: none"> <li>• Advanced Remodelers and Builder Remodelers</li> <li>• Architects</li> <li>• Designers</li> <li>• Trade allies</li> <li>• Others involved in renovation or restoration of residential buildings</li> </ul>
<p><b>Marketing approach</b></p>	<p>Outreach and marketing to identify and interest potential pilot candidates will be performed through internet research, targeted media outreach, contractor outreach through new homes program, multi-family audit program and potentially through home energy raters and other professionals with appropriate skills. Successful outreach and marketing are essential to the success of the pilot, and so a marketing strategy will be developed to ensure that customers who have the greatest likelihood of pursuing a Deep Energy Retrofit are systematically identified and approached about pilot participation.</p> <p>Project selection will be by the sponsoring Program Administrator, based on property owner proposals to participate utilizing a qualified project team with a design that meets program defined criteria for optimal energy performance, health, safety and durability, and other criteria.</p> <p>A listing of contractors and designers with appropriate pre-requisite deep energy retrofit related experience as per criteria defined by Program Administrator working group will be maintained to assist building owners in forming project teams to propose projects.</p> <p>Homes and apartment buildings on which renovations are planned (<i>e.g.</i>, siding and/or window replacements) will be targeted. Homeowner investments will be leveraged to maximize the effectiveness of the deep energy retrofits.</p>
<p><b>Target end uses</b></p>	<p>To dramatically reduce the amount of energy used in existing residences</p>

<p><b>Recommended technologies</b></p>	<ul style="list-style-type: none"> <li>• Exterior wall super-insulation build-outs</li> <li>• Attic insulation enhancements</li> <li>• Foundation wall/slab insulation</li> <li>• Extensive whole-house air sealing</li> <li>• High-performance windows and storm windows</li> <li>• High-performance lighting, including the use of CFL and light-emitting diode (“LED”) technologies</li> <li>• High-efficiency heating and cooling systems</li> <li>• Advanced thermostatic controls</li> <li>• High-efficiency appliances and products</li> <li>• Advanced energy use feedback and monitoring technology</li> <li>• Mechanical ventilation</li> <li>• Solar photovoltaic systems</li> <li>• Solar thermal systems</li> </ul>
<p><b>Financial incentives</b></p>	<p>High levels of incentives will be offered to ensure that deep retrofits are completed on the targeted number of existing homes and to achieve the desired mix of multifamily and single family demonstrations.</p> <p>Incentives may be tiered based on the number of units in a building.</p> <p>Basic incentives to move the market, based on pilot experience to date, will be a maximum of \$42,000 per unit. A higher tier of incentive levels up to an additional \$10,000 may be offered for deep energy retrofit projects that approach the highest energy performance standards, for example Net Zero energy, Passive House or Thousand Home</p>



	<p>Challenge standards.</p> <p>Staged and partial projects will be considered for inclusion in the pilot, and incentives will be scaled accordingly. A ‘staged’ project is one in which the participant plans to pursue deep energy retrofit levels (over 50% energy use reduction) in stages over a period of time. A ‘partial’ project is one in which the participant will pursue a substantial energy retrofit but which will fall below the 50% savings target.</p> <p>The HEAT Loan will be made available to pilot participants as an added tool to assist in bringing projects to fruition.</p>
<p><b>Delivery mechanism</b></p>	<p>Pilot program services will consist of outreach through a variety of channels to customers including through the existing RCS network to homeowner and to contractors through the residential new construction program. Project design details and assistance to the DER contractors doing the work will be handled through technical specialist organizations under contract and/or utilizing ARRA funds. In order for these projects to succeed it will be essential to have extensive technical support and training, since the challenges of retrofitting a building to this degree in a manner that enhances rather than degrades the durability of the structure and the health and safety of the occupants, exceeds to a considerable degree what is involved in RCS or new home construction.</p>
<p><b>Joint program administrator enhancements planned for 2010 – 2012</b></p>	<p>Program Administrators will explore creating a second tier of incentives for households participating in the pilot program Thousand Home Challenge and/or approaching near Net Zero energy. This element and each project will be carefully reviewed to identify lessons learned and best practices, as well as to identify and fill gaps in the portfolio of housing types treated to date. Depending upon outcomes of cost-benefit analysis, the pilot may be expanded into a more full scale statewide program.</p>

<p><b>Three-Year Deployment/Road Map</b></p>	<ul style="list-style-type: none"> <li>• Publicity from completed projects will build interest for more homes, as will training of additional deep energy retrofit contractors.</li> <li>• There are a number of other points of entry that can be explored for timely leads including basement remediation, fire restoration and siding contractors if and when the pilot expands to a wider scale. Identifying how best to enable those contractors to partner with DER experienced contractors and make this work for their business plans is another tactic the pilot will explore.</li> <li>• Identifying lower cost HVAC and mechanical ventilation as well as super-insulated build-out approaches is vital to reducing total project costs. HVAC change-outs are often necessary since sealed combustion or forced draft is a requirement for combustion devices.</li> <li>• There are a number of products including advanced windows, integrated light HVAC, ventilation and water heating products that are ideal for very low energy load homes which are not yet available in the United States market. Through deep energy retrofit projects across New England and California, in particular, the market may grow and more of these technologies may emerge in the United States and can be tested and adopted in the program.</li> <li>• The full value proposition in DER work is not yet accounted for in the BCR models or well known, or in a form that helps to move this market including: far longer measure life than the 28 or 30 year max in current models and enhanced building durability and lower maintenance and insurance costs due to the addition of a rain screen with super insulated wall build out, not to mention improved IAQ and the impact on health costs. Opportunities to quantify and share information on this to better inform BCR analysis and market actor decisions can further the effort to reach pilot goals and climate change goals in the existing homes sector. However this is a large undertaking in some ways beyond the scope of the pilot, perhaps best done in a regional or national context.</li> </ul>
<p><b>Special Notes</b></p>	<p>In the 2009 pilot, many customers who were passionate about climate change withdrew from consideration, even though forewarned that their costs would likely be equal to or greater than the incentives (\$42,000) due to worries about the economy and not being able to recoup their investment in energy savings over time or at time of resale of the property. Financing which is extensive, long term and replicable or is transferable to the next owner is seen by many involved in this market as essential to increase participation including those who withdrew.</p> <p>Given the economy and scale of total investment for building owners, the pilot goals may only be achieved if</p>

considerable additional financing options become available through a wider group effort. The Deep Energy Retrofit working group will coordinate with the Financing and On-bill Repayment working group which is currently exploring financing options.

Lifestyle education will be used to reduce appliance use and will be used to leverage selection of desired project (including housing style) types and maximum household energy reductions.

If customers who express interest turn out not to be good candidates or opt out the pilot, the customer will be referred to the appropriate energy efficiency program.

### Residential New Construction

<b>Primary Objective</b>	To capture lost opportunities, encourage the construction of energy-efficient homes and drive the market to one in which new homes are moving towards net-zero energy.
<b>Program Inception</b>	The program was initially offered in 1998.
<b>Joint vs. Program Administrator-Specific Offering</b>	Joint
<b>Program Design</b>	<p>The Program Administrators continue their strong commitment to a comprehensive whole-house approach for the Massachusetts New Homes with ENERGY STAR® Program. The Massachusetts program is a proud participant of the national ENERGY STAR new homes program and benefits from the regional, as well as national advertising efforts that ENERGY STAR Homes implements. The program is committed to achieving both a broader market penetration of energy-efficient homes from 2010 to 2012 as well as moving builders toward deeper energy savings where possible. The Program Administrators strive to retain 75 percent of the participating builders and recruit additional homebuilders and contractors working in the major renovations market.</p> <p>Homebuilders must target ENERGY STAR certification for all homes submitted to the program. However, the program will also provide incentives for an enhanced CODE Plus (a level above Massachusetts State Code but shy of the ENERGY STAR certification standards) as an avenue for broader reach as an entrée to ENERGY STAR. Direct installation of quality ENERGY STAR-qualified compact fluorescent lights (“CFLs”) in appropriate hard wired sockets, on-site training, and a final verification inspection is required for all homes participating in the program. The list of available lighting products has been expanded to include almost every type of bulb including candelabra based lighting. The JMC will also cross-promote with the Lighting group to introduce Solid State Lighting into this program.</p> <p>All projects consisting of four units or fewer will be designated as single family, and all projects of five units or more will be classified as multi-family. Buildings that are five stories or fewer that are permitted under the residential use group are eligible to participate in the program and to be certified as an ENERGY STAR-qualified</p>

<p><b>Program Design (cont.)</b></p>	<p>Home.</p> <p>Mixed-use (residential/C&amp;I) buildings may participate if they are permitted in the commercial use group as long as: (1) the entire structure is five stories or fewer, and (2) each residential unit has its own heating, cooling, and hot water systems separate from the other units. Homes that exceed these requirements will be treated under the Multi-Family group’s purview because of its mixed use nature. The Mid-Rise New Construction Program will encompass more than three stories for those that cannot be treated under the Massachusetts New Homes with ENERGY STAR Program. Additional qualifications for program participation are:</p> <p><b>ENERGY STAR Certification:</b></p> <ul style="list-style-type: none"> <li>• ENERGY STAR compliance with a Home Energy Rating System (“HERS”) Index of 85 or less for ENERGY STAR Tier I and a minimum modeled improvement over the current Massachusetts Baseline Home/User Defined Reference Home (“UDRH”) of at least 30 percent and 60 percent respectively for ENERGY STAR Tiers II and III. Three tiers of ENERGY STAR certification will be offered in the 2010 program. The criteria for each tier are listed in the Financial Incentives section.</li> <li>• Meeting the envelope leakage and duct leakage criteria</li> <li>• Successful completion of a Thermal Bypass Inspection Checklist (“TBC”) and potentially five additional checklists as introduced by U.S. Environmental Protection Agency (“EPA”) for Version III of the national ENERGY HOMES standard in 2010 with potential Version III adoption.</li> <li>• Meeting the EPA’s ENERGY STAR homes qualifications and/or the most rigorous standard available at the time (see <a href="http://www.energystar.gov/index.cfm?c=new_homes.hm_index">www.energystar.gov/index.cfm?c=new_homes.hm_index</a>).</li> <li>• Program required percentage of CFL installations, and increased emphasis of direct installation of all available hard-wired sockets.</li> </ul> <p><b>Code Plus Certification:</b></p> <ul style="list-style-type: none"> <li>• Meeting envelope leakage and duct leakage criteria</li> <li>• Program required percentage of CFL installations</li> </ul>
<p><b>Target Market</b></p>	<ul style="list-style-type: none"> <li>▪ Homebuilders</li> <li>▪ Contractors</li> <li>▪ Architects/Designers</li> <li>▪ Trade allies</li> <li>▪ HERS Raters</li> </ul>

	<ul style="list-style-type: none"> <li>▪ Homebuyers</li> <li>▪ Realtors</li> <li>▪ Developers</li> <li>▪ Low Income and Affordable Housing Developers</li> <li>▪ Code Officials</li> <li>▪ Consumers (in the market for new homes and or major renovations)</li> </ul>
<p><b>Marketing Approach</b></p>	<p>The program will continue to educate homebuilders, consumers, and trade partners regarding the energy-saving benefits and value of ENERGY STAR-qualified homes. Marketing efforts will focus on: homebuilder recruitment, continued training and support, public relations, and the implementation of large scale multi-media advertising campaigns geared toward homebuilders, consumers, and trade ally groups. The program will continue to support development of leads through building permit lists in cities and towns throughout the Commonwealth. These lists will be provided to market-based raters to use as prospecting tools. Hosting, sponsoring, and attending various trade show exhibitions and homebuilder conferences remain crucial to marketing the program.</p> <p>The program’s multi-media advertising campaign will include vehicles such as: strategic television partnerships with local affiliate or cable programming providers, radio live reads and on-air interviews, print advertising in builder and trade publications, direct marketing via email/fax lists, and a very heavy online advertising presence which includes comprehensive social media outlets. The program will participate in the new statewide consolidated website that will further promote the program and aid in cross-program promotion. There will continue to be heavy emphasis on “earned media” and editorial PR involvement to ensure market penetration and an increased program capture rate. In addition, individual Program Administrators will use targeted marketing as needed to meet program participation and spending goals.</p>
<p><b>Target End Uses</b></p>	<ul style="list-style-type: none"> <li>▪ Energy-efficient building shell</li> <li>▪ Proper duct and air sealing techniques</li> <li>▪ Quality Installation of HVAC equipment</li> <li>▪ Increased use of energy-efficient lighting</li> <li>▪ Energy efficient water and heating upgrades</li> <li>▪ Increased Indoor Air Quality</li> </ul>

<b>Recommended Technologies</b>	<ul style="list-style-type: none"> <li>▪ ENERGY STAR-qualified heating and cooling systems, lighting, appliances and windows</li> <li>▪ Increased levels of insulation using better materials, <i>i.e.</i>, blown in and/or foam board</li> <li>▪ Improved construction techniques to minimize air leakage, duct leakage, infiltration, and heat loss</li> <li>▪ Improved HVAC installation techniques and guidelines</li> <li>▪ Incorporate mechanical ventilation</li> <li>▪ Renewable ready-PV/Solar Thermal. Solar Thermal will likely be needed in order to achieve Tier 3 below.</li> </ul>
<b>Financial Incentives</b>	<p>Incentive levels may be adjusted to respond to market conditions. Current levels are shown in the table below. In addition, free ENERGY STAR-qualified CFL products are provided for each home. Participating homes are currently eligible for the following incentives which the program processes in addition to base incentives.</p> <ul style="list-style-type: none"> <li>• This program will coordinate with other programs such as Lighting, and Products to ensure that the program offers all available incentives that encourage deeper energy savings.</li> </ul>

### 2010 Incentives

Package	Requirements	Single-Family Incentive <sup>[1]</sup>	Multifamily Incentive <sup>[2]</sup>		
			5-99 units	100-199 units	200+ units
CODE Plus	6 ACH CFM 50, 8 percent duct leakage	\$325	\$225	\$225	\$225
ENERGY STAR I	ENERGY STAR compliance with a HERS Index of 85 or less	\$750	\$650	\$500	\$350

ENERGY STAR II	ENERGY STAR compliance with a HERS Index of 85 or less and 30 percent improvement or better over the Massachusetts Baseline Home	\$1,250	\$1,150	\$850	\$550
ENERGY STAR III	ENERGY STAR compliance with a HERS Index of 85 or less and 60 percent improvement or better over the Massachusetts Baseline Home	\$8,000	\$4,000 <sup>[3]</sup>	\$3,000 <sup>[3]</sup>	\$2,000 <sup>[3]</sup>
<sup>[1]</sup> Starting in 2010 the program will define a single-family home as a structure that contains one to four units.					
<sup>[2]</sup> Starting in 2010 the program will define a multi-family home as a structure that contains five or more units.					
<sup>[3]</sup> ENERGY STAR III Multifamily projects will be reviewed for final fee structure; listed are the maximum incentives paid by Program Administrators.					

### 2010-2012 Forecasted Program Activity

MA New Homes with ENERGY STAR Participation Levels			
	2010	2011	2012
Total Estimated Program Participants	2,138	2,396	2,956
Estimated Annual Growth Rate	2%	9%	21%



Total Estimated Housing Starts	6628	7224	8742
Estimated Market Penetration	32%	33%	34%

\*Growth rate estimated by Reed Construction Data, June 2009 Edition

<p><b>Delivery Mechanism</b></p>	<p>The program is administered by a Program Administrator in each service territory and coordinated regionally through the Joint Management Committee (“JMC”). The JMC, through a competitive bid process, will select an implementation contractor to oversee the day-to-day operations of the program statewide. The contractor is responsible for tracking and reporting program activity to the respective JMC Program Administrator. The contractor will also conduct quality assurance/quality control of field activities and advise the JMC on necessary program changes and enhancements. Throughout the planned timeframe, the JMC plans to continuously strive towards a market-based network of trained contractors who offer energy-efficiency and rating services to homebuilders for a fee. The Program Administrator may consider continuing to support rater fees for low income projects in their service territories.</p> <p>The program recognizes the enhanced emphasis on training necessary to make this program successful, as well as to support workforce development efforts through the Green Jobs Act. The program will support training of increased frequency and greater depth in the fundamentals of building science and the latest available technologies, including those for air sealing and insulation. The Program Vendor will be a HERS provider of last resort to help new raters become established as part of the open market structure. The program will also provide trainings (by raters or the Vendor) as well as potential classroom trainings. Through this effort, we can commit to training more than 50 percent of the builders in the program.</p>
<p><b>Joint Program Administrator</b></p>	<ul style="list-style-type: none"> <li>▪ With the advent of a new version (“Version III”) of the ENERGY STAR Homes Program, the JMC will consider adoption of that program, which may require changes in 2010.</li> <li>▪ There are ongoing discussions on Version III with regard to the verification process of quality HVAC</li> </ul>

<p><b>Enhancements Planned for 2010- 2012</b></p>	<p>installations. The discussions center on the testing requirements and the seasonal limitations in Massachusetts; the program will make every effort to work with the ENERGY STAR Homes Program and CoolSmart to increase quality installation and provide achievable, verifiable, savings to the program.</p> <ul style="list-style-type: none"> <li>▪ The Program Administrators are currently working together to identify a way to provide complete support to multi-family structures of five stories or fewer and they are considering allowing master metered electric buildings to participate in the program, as they are ineligible currently.</li> <li>▪ The 2009 major renovation pilot projects being conducted by the Program Administrators will provide further understanding for the JMC to garner greater savings by administering a Major Renovation Program during 2010-2012. A plan for a consistent unified program – either within RCS/MassSAVE or within new construction will be part of the October 2009 filing.</li> <li>▪ Support code amendments that add to energy efficiency and explore with all entities the possibility of offering incentives to municipalities that adopt “stretch code” revisions in their communities. The JMC will provide stretch code training support to towns and builders participating in the program where it has been adopted. Further details will be provided in an appendix on codes and standards.</li> <li>▪ The program will promote building science technologies which help interested homebuilders construct net zero energy homes.</li> <li>• Support workforce development efforts through Green Jobs Act by encouraging new raters to enter into the marketplace.</li> </ul>
<p><b>Three-Year Deployment/Road Map</b></p>	<p>For new construction, the efforts to achieve both deeper savings and gain broader market penetration will continue through multiple tiers of participation, one of which continues to push homes closer to net zero energy. These goals will be daunting in the recognition of the downturn in the economy and the resultant slow down of the building market. However, the program will have significant resources dedicated to “putting feet on the ground” to promote the program and support participating builders and other key stakeholders in the residential new construction market.</p> <p>For the three-year deployment, the Program Administrators will focus on:</p> <ul style="list-style-type: none"> <li>• Expansion of the current HERS rater network of nine competing companies</li> <li>• Moving closer to a fully market based program where Program Administrators reduce and ultimately phase out subsidies to raters shifting those monies directly to builders who, in turn will negotiate directly with raters for associated fees to rate homes</li> <li>• Expansion of the base of participating builders</li> </ul>

	<ul style="list-style-type: none"> <li>• Continued expansion of existing and new market allies</li> <li>• Training the market effectively in order to stay ahead of the introduction of more stringent building codes as well as new versions of the national ENERGY STAR Homes which will be significantly harder to achieve</li> <li>• Collaboration with Green Communities through technical support</li> <li>• Continued ramp up of consumer awareness</li> </ul> <p>The Program Administrators, in conjunction with the Consultants and LEAN, where appropriate, will be performing an assessment of the multi-family programs in Massachusetts. Because the target market for this program includes multi-family customers, the results of the statewide assessment may apply here. Please refer to the multi-family section for an update on the programs.</p> <p>The Program Administrators plan to implement the Statewide Multi-Family New Construction Pilot Program during the course of 2010. Coordination between this program and the ENERGY STAR Homes program will occur in order to provide a seamless delivery of new construction services to all eligible customers.</p>
<p><b>Special Notes</b></p>	<p>In order to provide context for the Program Administrators’ proposal, please refer to Exhibit G, containing the document <i>Massachusetts New Homes with ENERGY STAR, Program Theory</i> (July 13, 2009), which was prepared on behalf of the Program Administrators and was very recently finalized.</p> <p>The preceding program description is designed to support the successful attainment of the Green Communities Act’s energy efficiency investment goals and environmental benefits. Further, it is the intent of the Program Administrators to support the Council and its Consultants through a recognized ongoing iterative planning process to develop and implement plans that meet the objectives of the Council’s Priorities document. This program design is intended to addresses a number of applicable Council priorities including:</p>

**Special Notes  
(cont.)**

- Providing program consistency through this program.
- Focusing on maximizing incentive values and minimizing overhead costs in this program.
- Striving to provide customers/builders with an opportunity to lower utility bills through the purchase of energy efficient products.
- Striving to provide seamless delivery of this program to customers.
- Providing user-friendly program by offering multiple paths/opportunities for participation
- Coordinating with other programs for outreach communication and marketing strategy.
- The deeper savings will result from addressing elements such as additions that have not been addressed before. From the 2009 findings, the Program Administrators will amend the program to address deeper savings as a result.
- Comprehensive program delivery through JMC integrating gas and electric Program Administrators in a fuel-blind nature
- Coordinating with other programs on integrated website
- Market based HERS Rater Model, Trainings and Technical Assistance
- Performance based incentive structure, Third Tier
- Through tier development and refinement informed by the 2008-09 Zero Energy Challenge, the JMC will look towards deeper energy savings to promote near zero energy homes
- In anticipation of Version 3 of the ENERGY STAR Homes specification going into effect in 2011, the Program Administrators anticipate adopting many of the new specifications during the course of the 2010 program year in order to remain early adopters of more stringent energy efficiency requirements nationwide.
- The Program Administrators plan to conduct ENERGY STAR Homes Version 3 pilot during the course of the 2010 program year.

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|--|---|
|  | <ul style="list-style-type: none"><li>• The Program Administrators also plan to implement the Statewide Multi-Family New Construction 4-8 Story Pilot during the course of the 2010 program year.</li></ul> |
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### Multi-Family Retrofit Program

<b>Primary Objective</b>	To maximize the acquisition of cost-effective gas and electric energy and demand savings by addressing the informational, economic, institutional, and technical barriers that historically have made the multi-family market a “hard-to-reach” sector. Moreover, the program aims to broaden participation and achieve deeper savings per participant through an incentive structure that encourages such action.
<b>Program Inception</b>	The Massachusetts Program Administrators have offered energy efficiency services to the multi-family sector, through various program designs, since the 1980’s.
<b>Joint vs. Company Specific Offering</b>	The Program Administrators are proposing a common statewide program with the goal of offering a consistent customer experience throughout the state. In designing a program for this multi-faceted market, the Program Administrators recognize the need to allow for the flexibility to ensure that the needs of all participants are met.
<b>Program Design</b>	<p>The program design is based upon the following guiding principles:</p> <ul style="list-style-type: none"> <li>• Participants will initiate a request for all program services through one party, without the need to directly contact multiple program administrators or multiple parties within the same program administrator. Throughout the project life cycle, the participant will have access to a single point-of contact that will facilitate all programmatic communication and coordination.</li> <li>• Eligibility for program measures and services will be based on cost-effectiveness and will not be restricted by the rate class associated with the meter(s) for the facility.</li> <li>• The program is structured to ensure that participants are provided with a “whole building” fully integrated offering targeting both gas and electric end-uses. While on-site, however, all opportunities, regardless of fuel source, will be identified and documented for the customer.</li> </ul> <p>All efforts required to deliver a fully integrated gas and electric offering to a participant (the audit will be offered for propane and oil end-uses, however, at this time incentives will be provided only for gas and electric measures), regardless of service territory or rate class, will be performed in a manner that will result</p>

<p><b>Program Design</b> <b>(cont.)</b></p>	<p>in a seamless customer experience, thus mitigating the potential for customer confusion and lost opportunities. The cornerstone of the program design involves the services of a Multi-family Market Integrator who will provide project management services to ensure the seamless delivery of the program phases described below. (Additional detail on the role of the Multi-family Market Integrator will be described in the section titled Program Delivery).</p> <p><u>Participant Screening</u></p> <p>Delivering energy efficiency services to the multi-family market is challenging because of the many variations in size and construction as well as ownership and decision making structures that exist. The Program Administrators will ensure that the services offered by the program are easily scalable to accommodate simple projects, highly complex projects, and everything in between. In addition, there will be a screening process to identify where along this continuum a project lies. As stated above, some screening data will be available from the web site or lead generator and, in addition, usage data will be supplied by the appropriate Program Administrators (provided authorization from the customer paying the bills is obtained). The remaining screening information will be obtained when the participant is contacted upon enrollment. It is during this discussion, that the Multi-family Market Integrator will gain a better understanding of the end uses available for treatment and the motivations that drove the participant to solicit energy efficiency services. Armed with this information, the Multi-family Market Integrator will explain that, in addition to the measures initially requested, a whole building assessment may be performed which will identify other energy savings opportunities. (At this time, incentives will be paid for gas &amp; electric measures only.) By motivating the participant to accept the whole building assessment, the project could ultimately result in deeper savings than otherwise would have been realized.</p>
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Enrollment

Because of the diversity within the multi-family sector and the various market actors that may be involved in lead generation, the program provides for multiple points of entry that will all ultimately provide participants with a comprehensive program offering and a seamless experience. Participants may enroll in the program via telephone, the statewide web site (which is currently under development) or their request for services may be initiated by other parties such as an Account Executive, a contractor, a consultant or engineer. Each participant will need to contact only one party to avail themselves of comprehensive services. Once the Multi-family Market Integrator is made aware of a project (either via telephone, the web site or lead from another market actor), he or she reviews the information provided from the website screening questions or from the lead generator and then makes the initial contact with the customer and collects further information, as needed, to complete the enrollment.

Whole Building Assessment

Based on the outcome of the screening/enrollment process, the appropriate technical resources will be assigned to conduct a whole building, (fuel blind) assessment. The Multi-family Market Integrator will attempt, through the screening process, to identify all resources required for the assessment; however, there may be instances where additional expertise is required and further site visits may be necessary. Technical assessments, benchmarking, and engineering studies may be conducted on an as needed basis.

Integrated Proposal for Energy Efficiency Services



<p><b>Program Design</b> <b>(cont.)</b></p>	<p>Using the findings from the site-specific assessment, the appropriate parties will draft a project proposal that will include measures, other available services and incentives. At this time, incentives will be provided for gas and electric measures only. Once the comprehensive offer receives Program Administrator approval, it will be presented to the participant by the parties required to help the customer fully understand the offering.</p> <p><u>Delivery of Measures and Services</u></p> <p>The Multi-family Market Integrator will coordinate the delivery of the measures and services opted by the customer. The Multi-family Market Integrator or other appropriate party will strive to have all dwelling unit measures installed in a single visit to minimize disruption for the tenants; however, multiple visits may be required for the installation of common area measures. Commissioning services will be performed as appropriate.</p> <p><u>Quality Assurance</u></p> <p>Quality assurance will be performed in support of this program. Third party independent QA/QC services will be solicited through a competitive bidding process. Currently there are plans for a statewide RFP to be issued to obtain QA/QC services for multiple residential programs, including the Multi-family program. Customer satisfaction surveys will also be administered to provide additional feedback for the Program Administrators.</p> <p><i>Additional Program Design Elements</i></p> <ul style="list-style-type: none"> <li>• Upon request, a comparison of energy usage before and after participation will be provided by the Program Administrators or a vendor under contract to perform these services.</li> <li>• A link to the current EPA Benchmarking tool (Portfolio Manager), or other comparable tool, will be included on the website page(s) associated with the Multi-family Program. This will allow building</li> </ul>
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	<p>owners/managers to assess the energy efficiency of their buildings against comparable facilities.</p> <ul style="list-style-type: none"> <li>• The Program Administrators recognize that proper training for building operator and maintenance staff is a key factor in ensuring that expected savings are realized initially and persist over time. The Program Administrators will sponsor at least two sessions of a multi-family building operator training each year and provide an incentive of up to 50% of the training cost for facility operators .</li> <li>• Representation from the Multi-family working group will be included on the Deep Retrofit Pilot design team. The Multi-family Steering Committee will coordinate referrals to the Deep Energy Retrofit Single-family and Multi-family Pilot Program.</li> </ul>
<b>Target Market</b>	Residential facilities with five or more dwelling units. The program will address the unique circumstances associated with mixed use buildings.
<b>Marketing Approach</b>	<p>The program will be supported by the statewide energy efficiency marketing effort; however, direct outreach to building owners and/or property managers via trade associations will be used as a cost-effective mechanism for communicating with this population.</p> <p>Beginning in November of 2009, the Multi-family Steering Committee will begin developing a marketing plan to educate customers on the program services to be offered in 2010. The existing program vendors will participate in this session to provide their perspective based on their interactions with customers in the field.</p> <p>The Program Administrators conducted a literature review and focus group study. The results indicate that building owners/managers need to have confidence in the expected outcome from program participation. Once some projects are completed and results from these projects become available, this data can be used to develop simple case studies that can be placed on the web site and in other marketing materials.</p>
<b>Target End Uses</b>	At this time the program targets, through a comprehensive energy assessment, gas and electric end-uses only. Instant savings measures such as energy efficient lighting upgrades and DHW saving devices as well as major measures are included. Under the program re-design, participants will have access to both those measures that are traditionally deemed “residential” and those that are considered “commercial” without any

	<p>limitations imposed by their rate class/metering. Listed below are the primary end-uses targeted through the program.</p> <p>All cost-effective applications, systems, and building shell improvements that impact gas and electric consumption are eligible for incentives under this program. These include, but are not limited to, lighting, DHW, building shell improvements, appliances, motors, variable-speed drives, HVAC equipment, energy management systems and building controls, chillers, compressed air, and other site specific end-uses.</p>
<p><b>Recommended Technologies</b></p>	<p>Recommended gas and electric technologies offered may include, but are not limited to:</p> <ul style="list-style-type: none"> <li>Energy efficient lighting upgrades &amp; controls</li> <li>Occupancy sensors</li> <li>DHW measures: low flow showerheads, aerators and pipe wrap</li> <li>Programmable thermostats</li> <li>Insulation</li> <li>Air Sealing</li> <li>HVAC hi-efficiency equipment upgrades and controls</li> <li>ENERGY STAR-rated refrigerators and other eligible appliances</li> <li>Variable Speed Drives</li> <li>Motors</li> <li>Chillers</li> <li>Energy Management Systems (EMS)</li> </ul>

<p><b>Recommended Technologies (cont.)</b></p>	<p>Air compressors</p> <p>Water heating equipment, including Solar hot water heating systems</p> <p>Combined Heat and Power (CHP)</p> <p>Heat Recovery Ventilators (HRV) / Energy Recovery Ventilators (ERV)</p> <p>Custom Technologies</p> <p>Duct sealing measures and heat pump testing and upgrades will be performed through the existing Cool Smart or Cool Choice Program as appropriate. The Multi-family Market Integrator will work with the customer to ensure that the appropriate services are delivered. These end-uses are best served by contractors specializing in this technology. In addition, there are instances where the customer’s warranty may become void if anyone other than the original installation contractor performs work on the system. During program delivery, a packet of additional program offerings (i.e. lighting &amp; appliances) will be made available to participants.</p>
<p><b>Financial Incentives</b></p>	<p>There are four categories of incentives including a.) 100% incentive with \$0 customer co-pay; b.) fixed incentive and customer co-pay per measure; c.) incentive expressed as a percentage of the total installed cost; and d.) custom incentives based on the change between existing and replacement equipment. For individual gas and electric measure incentives, see Appendix A. Project caps, which take budget constraints into consideration, will be established by each Program Administrator.</p> <p>The Multi-family Steering Committee will consider alternative incentive structures specifically designed to encourage deeper savings over time. However, the Multi-family working group, based on their collective experience along with that of their implementation vendors, believes that offering integrated program services will provide for deeper savings than are currently being realized. The Program Administrators’</p>

approach involves launching the program using the incentive structure described above. Data on measures not opted for by program participants will be tracked by the Multi-family Market Integrator and assessed by the Multi-family Steering Committee. The Program Administrators believes that implementing this approach will allow for assessing where program incentives may need to be enhanced based on in-the field program experience.

In addition to the measure-level incentives described above, the Program Administrators will provide funding for “soft costs” including building operator training and technical assistance for those projects requiring an engineering study. The Program Administrators recognize that proper training for building operators and maintenance staff is a key factor in ensuring that expected savings are realized initially and persist over time.

The Program Administrators will sponsor at least two sessions of a multi-family building operator training each year and provide an incentive of up to 50% of the training cost for facility operators. Incentives may also be paid to offset the costs of gas and electric engineering studies.

The Program Administrators will examine the potential for offering on-bill financing to program participants. This assessment will take into consideration the unique characteristics of the multi-family market (i.e. the owner of the facility may responsible for the co-pay, but the energy bills may be paid by the tenants. The owner may not even be a customer of the Program Administrator).

To assist building owners and managers with their planning efforts, the Program Administrators will commit to project-specific funding for up to one year for pre-approved projects with signed service agreement by customer, subject to regulatory and funding constraints.

<b>Delivery Mechanism</b>	<p>The program will be administered cooperatively by the gas and electric Program Administrators. Collectively, the Program Administrators will form a Multi-family Steering Committee which will be responsible for program oversight and promoting continuous improvement/best practices with regard to the multi-family market.</p> <p>As stated in the Program Design section, the Multi-family Market Integrator role will be key to the delivery of this fully integrated statewide program. The role was specifically created to ensure a seamless customer experience for participants regardless of the fuels, rates and service territories involved in a project. The Multi-family Market Integrator will be responsible for facilitating the delivery of program services as well as acting as the conduit through which participant questions and concerns are directed to ensure that participants are not required to directly contact multiple parties during the project lifecycle. A comprehensive scope of work has been prepared for the Multi-family Market Integrator role and a vendor will be selected via a competitive bidding process.</p> <p>Provisions will be made within the delivery process to allow for participants to use their own staff or contractors to install the measures, provided that they have Program Administrator approval which will involve providing documentation of their qualifications prior to the installation.</p>
<b>Joint Program Administrator Enhancements Planned for 2010-2012</b>	N/A
<b>Sponsor Specific Elements</b>	Individual Program Administrators are encouraged to conduct pilot programs designed to allow for the evaluation of alternative program designs or specific technologies, especially those that encourage deeper savings. Findings from these pilots will be shared with the entire Multi-family Steering Committee and will be assessed to determine if enhancements to the current program design should be made based on the results



5. Begin monthly Multi-family Steering Committee Meetings	1/31/10	Agenda and meeting notes
6. Vendor Selection for Multi-family Market Integrator	6/1/10	
a. Update scope of work (if required) based on regulatory ruling on the Plans	2/8/10	Final SOW
b. Issue RFP	2/16/10	RFP
c. Bids due	4/1/10	Bidder proposals
d. Vendor selection	5/5/10	Notice to procurement staff of vendor selected
e. Contracts with each PA signed	6/1/10	Signed contracts
7. Individual Program Administrators develop internal plans to implement statewide program	7/15/10	

**PHASE II – PROGRAM IMPLEMENTATION**

Task Description	Target Completion Date	Deliverable
1. Implement common statewide incentives	1/1/10	
2. PAs that share a service territory will work	1/1/10	



<b>Three-Year Deployment (cont.)</b>	together to provide integrated gas and electric energy efficiency services to customers being served prior to implementation of the formal Multi-family Market Integrator role.		
	3. Implement Marketing Plan	Jan- Jun 2010	Marketing materials and schedule for delivery
	4. Kick-off meeting with Multi-family Market Integrator	6/2/10	Agenda and meeting notes
	5. Conduct training for PA and vendor staff	7/5/10	Documented completion of this task
	6. Preparation of all program materials	7/5/10	Program materials
	7. Program Implementation	7/15/10	Notification of program launch
	8. Monthly Multi-family Statewide Executive Committee Meetings	Ongoing	Meeting notes distributed to all participating Program Administrators
	9. Standardize gas C&I measures and incentives (please see footnote in Appendix A)	For 2010 Program Year	Updated measure and incentive list

	PHASE III – PROGRAM ASSESSMENT		
	Task Description	Target Completion Date	Deliverable
	1. Annual Multi-family Statewide Executive Committee review of program successes and lessons learned with results feeding back into modifications to the program design as required.	2011- 2012	Narrative to be included in annual PA plan updates.
<b>Special Notes</b>	<p>To provide a fully integrated energy efficiency offering, the program design is being developed by a cross-functional team including the Consultant and Program Administration staff representing gas and electric fuels, with experts from both the residential and C&amp;I sectors. To best utilize the expertise of each member of the team, the following sub-groups have been formed.</p> <p>The Technical sub-group is responsible for identifying the end-uses and associated technologies that are appropriate for the multi-family market. This sub-group is also responsible for developing incentive structures intended to achieve greater participation and deeper savings.</p> <p>The Evaluation sub-group was charged with building on the success of the April 2009 Multi-family Workshop to obtain a greater understanding of the “market rate” sector. This assisted the Program Administrators in developing strategies to overcome market barriers and thus achieve increased participation and deeper savings. To this end, the Program Administrators contracted with Nexus Market Research to</p>		

<p><b>Special Notes (cont.)</b></p>	<p>conduct focus groups as well as in-depth interviews with program administrators throughout the country.</p> <p>Additionally, the Program Administrators participated in pertinent webinars sponsored by organizations such as the Association of Energy Service Professionals (AESP) and ESource.</p> <ul style="list-style-type: none"> <li>• “50 Homes in One: Multi-family Efficiency Programs” on July 8, 2009, with speakers from Conservation Services Group, Wisconsin Energy Conservation Corp., Cambridge Energy Alliance, Pacific Gas &amp; Electric, Commonwealth Edison, and NYSERDA. This program is being sponsored by ESource.</li> <li>• “Serving the Multi-family Market: New Construction to Existing Buildings to Policy Programs” on August 6, 2009, with speakers from the Wisconsin Energy Center, NYSERDA and the Heschong Mahone Group. This program is being sponsored by AESP.</li> </ul> <p>This program description has addressed each of the items included in the Council’s Priorities Resolution. A summary of how these issues have been addressed is provided below for ease of reference.</p> <ul style="list-style-type: none"> <li>• “The PAs are encouraged to define “multifamily” as a building with more than four units”. <ul style="list-style-type: none"> <li>○ The target market for this program is a facility with 5 or more units.</li> </ul> </li> <li>• “The PAs are encouraged to work in conjunction with the Consultant to determine how to implement a program that from a customer’s perspective will be blind to whether building meters are commercial or residential”. <ul style="list-style-type: none"> <li>○ Participants will have access to incentives for all cost-effective measures offered through the program regardless of billing rate.</li> </ul> </li> <li>• “The PAs are encouraged to work in conjunction with the Consultant to determine how to ensure that</li> </ul>
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customers participating in the Multifamily Initiative need to fill out only one application for a given multi-family property and be required to interact with only one utility-related service provider or partner. For purposes of the multifamily program, the PAs are encouraged to define “property” as all buildings within a given property, regardless of the number of meters on that property. If the customer is not the building owner or landlord, the PA should seek to involve other customers on the property, whether other customers in the same development”.

- The Multi-family Market Integrator will take the information necessary for the customer to apply for all eligible program services, so there will be no need for the customer to contact multiple parties to initiate a request.
  - The term property will not be limited to individual buildings, but rather can mean, where appropriate, a group of buildings.
  - The Program Administrators plan to involve tenants in the process, for example providing them with energy education.
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- “The PAs are encouraged to develop mechanisms, including outreach and education to landlords to demonstrate the benefits of undertaking energy efficiency and provide equitable sharing of the costs and benefits of energy efficiency improvements”.
    - The marketing strategy for this program will include targeted outreach to the multi-family community.
  
  - “The PAs are encouraged to offer technical assistance in the form of audits, design assistance, commissioning, and training, and cash incentives based on building performance in the Multifamily Initiative”.
    - As stated above, the program includes technical assistance in the form of a “whole building” assessment to identify opportunities regardless of fuel. Incentives are provided for cost-effective gas and electric measures.
  
  - “The PAs are encouraged to explore a Multi-family Initiative deep energy retrofit track”.
    - There will be representation from the Multi-family Steering Committee on the program design team working on the Deep Retrofit Pilot to assess opportunities in facilities with five or more dwelling units.

<p><b>Special Notes (cont.)</b></p>	<ul style="list-style-type: none"> <li>• “To ensure the highest level of quality and consistency, the PAs are strongly encouraged, in conjunction with the Consultant, to research, analyze and report their findings to the Council requiring the accreditation of all auditors of multifamily facilities and associated contractors, through rapid but thorough review of successful models in other areas of the country including but not limited to New York, Wisconsin, Ohio, and the Pacific Northwest, and through researching BPI and other accreditation entities”. <ul style="list-style-type: none"> <li>○ The Program Administrators recognize the role that having trained professionals perform assessment and install measures plays in realizing expected savings. Primary vendors contracted by the Residential Program Administrators are required to have BPI certification or the equivalent. Sub-contractors will work under the supervision of the primary vendor. Primary vendors contracted by the C&amp;I Program Administrators are required to meet all local, municipal and state licensing requirements.</li> </ul> </li>   <li>• “PAs are encouraged to examine the experience of NYSERDA and other states’ multifamily programs”. <ul style="list-style-type: none"> <li>○ The Massachusetts Program Administrators held a conference call in April 2009 with NYSERDA and their Program Administrator to gain a better understanding of their delivery model.</li> <li>○ In preparation for the Multi-family Workshop, the facilitator conducted best practice research and presented their findings to the workshop participants.</li> <li>○ In June 2009, the Program Administrators retained the services of a market research firm to conduct focus groups and in-depth telephone interviews pertaining to multi-family programs across the country.</li> <li>○ Two nationwide webinars pertaining to multi-family programs were attended by representatives from the Program Design Working Group to review best practices.</li> </ul> </li> </ul>
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**APPENDIX A – FINANCIAL INCENTIVES TABLE**

<b>GAS MEASURES</b>	<b>INCENTIVE</b>
<p><i>Instant Savings Measures:</i></p> <p>Domestic hot water saving devices, such as faucet aerators and showerheads</p> <p>Energy Star rated programmable thermostats, where appropriate</p> <p>Basic in unit air sealing (e.g., weatherstripping and caulking)</p> <p>Pipe insulation (up to six feet)</p>	<p>No Cost to Customer</p>
<p><i>All other major energy saving measures including but not limited to:</i></p> <p>Attic Insulation</p> <p>Wall Insulation</p> <p>Rim joist insulation</p> <p>Space and Water heating equipment</p>	<p>Typically up to 50% of labor and equipment, or buy down the installed costs to the equivalent of a fixed payback period.<sup>1</sup></p> <p>Financial incentive may also include co-funding engineering and commissioning studies and/or design incentives covering a portion of incremental architectural and design costs for efficiency improvements.</p>

<sup>1</sup> Program Administrators have increasingly collaborated at the management, program management, and technical staff levels to standardize program measures, incentives, technical requirements, and participation criteria. The process of fully harmonizing prescriptive measures and the accompanying incentives will be

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complete for 2010. The criteria for vetting and approving custom projects, and assigning incentives will be standardized in 2010. Financial incentives cover a portion of the total installed project costs, typically up to 50% of labor and equipment, or buy the installed costs down to the equivalent of a fixed payback period. In addition, Program Administrators with the capability will offer on-bill financing options for municipal customers in 2010 to enable them to implement comprehensive energy efficiency treatment in their communities.

*Low-Income Program Descriptions*

**Residential Low-Income Program**

<b>Primary Objective</b>	To increase energy efficiency and reduce the energy cost burden for income-eligible customers through education and the installation of gas energy efficiency measures to achieve deeper and broader energy savings.
<b>Program Inception</b>	<p>Some Program Administrators' low-income programs date back to the early nineties.</p> <p>Since 1998, Program Administrators have been working with LEAN to improve the low-income program and increase funding. From this emerged the Best Practices Working Group to provide a more coordinated statewide low-income program and a means to ensure correct installation techniques for the program.</p>
<b>Joint vs. Program Administrator-Specific Offering</b>	This program is specific to individual Program Administrators. However, Program Administrators have been working in coordination with LEAN to offer common program elements. (See "Program Design.")
<b>Program Design</b>	<p>The Program Administrators, along with the LEAN, state organizations such as DHCD and the Network, make up the Best Practices Working Group. The working group's objective is to collaborate and coordinate on all aspects of the low-income program, including but not limited to planning, delivery, implementation, standardization, education, marketing, training, cost effectiveness, evaluation, and quality assurance.</p> <p>This program piggybacks on the current DHCD low-income energy efficiency program. Once customers are deemed eligible, they will receive an in-home energy assessment from their local Network agency. The Network agency will then arrange for weatherization and other services to be installed by a qualified contractor. This program will achieve deeper savings by installing additional efficiency measures, to the extent cost-effective, such as indirect water heaters with heating systems, exterior doors, front load clothes washers and repairs to make efficiency measures possible. Other measures will be investigated, such as solar</p>



<p><b>Program Design (cont.)</b></p>	<p>water heaters and usage monitoring systems. In addition, a change in rules as a result of the American Recovery and Reinvestment Act (“ARRI”) makes it possible to spend more federal money in each home which will allow Program Administrator funding to help address more items on the cost effective priority list for each customer. Savings will be distributed more broadly by treating additional homes, including mobile homes (including contractor training if needed) homes where tenants pay for heat. As a final step, the Network agency will perform a final quality assurance inspection to ensure that all work is performed to program guidelines.</p> <p>Education and information are included in all Program Administrators’ energy efficiency programs. The low-income program plans to develop/improve education materials and material distribution which will include:</p> <ul style="list-style-type: none"> <li>• Customer education packages: common “leave-behinds” in customer audit packs</li> <li>• Materials for outreach workers (<i>e.g.</i>, hospital intake people, senior centers)</li> <li>• A web link on Division of Unemployment Assistance website</li> <li>• Other outreach opportunities</li> </ul>
<p><b>Target Market</b></p>	<p>Residential natural gas heating customers living in one- to four- unit dwellings who are at sixty percent (60%) of the state median income level.</p> <p>In the case of multi-unit dwellings, at least fifty percent of the occupants must qualify as low-income in order to be served by the low-income program.</p> <p>In special cases, where outside grant money can enhance program services, the Program Administrators may approve participation for customers in specific communities at eighty percent (80%) of the state median income.</p>

	Any changes to eligibility will be addressed through the Best Practices Working Group.
<b>Marketing Approach</b>	<p>Program Administrators will engage in outreach efforts to notify customers of the availability and value of energy efficiency services. Marketing will consist of contacting, by mail and/or telephone, customers subscribing to the low-income rates who have not received prior energy services. Direct mail, bill inserts, and literature distributed through social service agencies, government offices, and other networks are also used to market the program. In addition, Program Administrators and low-income advocates are participating in statewide marketing efforts to encourage income-eligible customers to take advantage of discount rates, energy efficiency programs and fuel assistance programs.</p> <p>The program is also being integrated into a unified, statewide website. This website will allow customers to go to one site to find out about all energy efficiency offerings available to them.</p> <p>Outreach and marketing efforts will be expanded to include building relationships with unemployment centers, medical service providers, and other venues that would reach potential income-eligible customers.</p> <p>Marketing efforts will be designed to meet the objectives of reaching more customers (going broader into the customer base, for example by participating in statewide education and marketing efforts) and maximizing energy savings opportunities (going deeper into each home to find ways to save energy, such as by an education by energy monitoring approach, with computerized feedback based on actual usage, if such a strategy proves to be cost-effective).</p>

<b>Target End Uses</b>	<p>Target end uses include but are not limited to:</p> <ul style="list-style-type: none"> <li>• Comprehensive, whole house approach</li> <li>• Building shell</li> <li>• Heating</li> <li>• Domestic water heating</li> <li>• HVAC/mechanical systems</li> <li>• General waste heat</li> <li>• New technologies and renewables</li> </ul>
<b>Recommended Technologies</b>	<p>The Program Administrators will continue to work with the Best Practices Working Group to identify new cost-effective energy efficiency services, measures and technologies that are appropriate to offer to income-eligible customers. Current measures offered through the low-income program include, but are not limited to:</p> <ul style="list-style-type: none"> <li>• Attic insulation</li> <li>• Wall insulation</li> <li>• Pipe insulation</li> <li>• Duct insulation</li> <li>• Air sealing</li> <li>• Domestic hot water measures</li> <li>• Heating system repair and replacement</li> <li>• Major weatherization repairs (<i>e.g.</i>, electrical repairs, roofs, etc.)</li> <li>• Landlord heating system retirement pilot (PA-specific)</li> </ul>

<p><b>Recommended Technologies (cont.)</b></p>	<ul style="list-style-type: none"> <li>• Health and safety</li> </ul> <p>Other technologies to be discussed in the Best Practices Working Group for future consideration include but are not limited to:</p> <ul style="list-style-type: none"> <li>• Expanded landlord heating system retirement initiatives</li> <li>• Exterior doors</li> <li>• Super insulated roofs</li> <li>• Solar water heating</li> <li>• Green/hypoallergenic products</li> <li>• Window coverings</li> <li>• Mobile home insulation</li> <li>• ENERGY STAR Clothes washers</li> <li>• Other measures determined on a site-specific basis</li> </ul>
<p><b>Financial Incentives</b></p>	<p>In all but exceptional cases, low-income products and services are directly installed and delivered with no co-payment from participating customers, subject to local Network agency discretion.</p>

<p><b>Delivery Mechanism</b></p>	<p>Program Administrators, when warranted, use a lead vendor to administer the program. The Program Administrators work closely with their lead vendor and/or respective Network agencies on all aspects of the program design and implementation. The lead vendor/Network agencies are responsible for providing the actual weatherization services to the customer. The lead vendor/Network agencies work with installation contractors to ensure that the proper program guidelines are enforced. These agencies are also responsible for ensuring that the customer meets the eligibility requirements for program participation and providing the lead vendor and/or Program Administrator with the required documentation of all work performed.</p>
<p><b>Joint Program Administrator Enhancements Planned For 2010-2012</b></p>	<p>In order for the low-income program to increase the number of program participants and achieve deeper energy savings over the next three years, the Program Administrators will:</p> <ul style="list-style-type: none"> <li>• Work with LEAN, DHCD, and Network agencies to increase qualified contractor participation in the program through training and workforce development.</li> <li>• Continually review and evaluate new measures and technologies through the Best Practices Working Group process</li> <li>• Leverage all applicable revenue streams available to enhance services</li> <li>• Broaden program participation through coordinated marketing and outreach efforts</li> <li>• Deepen efficiency penetration consistent with a comprehensive, whole house approach</li> </ul>
<p><b>Three-Year Deployment</b></p>	<p>The Program Administrators, in conjunction with the Consultants and LEAN, where appropriate, will be performing an assessment of the multi-family programs in Massachusetts. Because the target market for this program includes multi-family customers, the results of the statewide assessment may apply here. For low-income, multi-family retrofit projects, the assessment will include the development of strategies to serve low-income multi-family buildings in a manner that is fuel-blind, meter-blind, and integrates low-income, residential and commercial programs, as appropriate, by minimizing co-payments to the greatest extent possible (pending a review of the budget impact by each Program Administrator).</p>

<p><b>Special Notes</b></p>	<p>The preceding program description is designed to support the successful attainment of the Green Communities Act’s energy efficiency investment goals and environmental benefits. Further, it is the intent of the Program Administrators to support the Council and its Consultants through a recognized ongoing iterative planning process to develop and implement plans that meet the objectives of the Council’s Priorities document. This program design is intended to addresses a number of applicable Council priorities including:</p> <ul style="list-style-type: none"> <li>• Seamless Delivery. By coordinating Program Administrator programs with the U.S. Department of Energy and U.S. Department of Health and Human Services programs administered by DHCD, as well as other programs implemented by the network that implements the Program Administrator and DHCD programs, Program Administrators assure that a common set of programs is available to all income-eligible customers and that the programs are seamless from the viewpoint of customers. Program Administrators' programs are also coordinated with each other, particularly across fuels. Nevertheless, experimentation and pilot programs implemented in particular territories allow development of improvements that are monitored by the Best Practices Working Group for possible adoption statewide.</li> <li>• Best Practices. The Program Administrators will continue to work within the Best Practice Working Group meetings for successful program development. The Best Practice Working Group’s objective is to collaborate and coordinate on all aspects of the low-income program including ongoing planning, delivery, implementation, marketing, training, evaluation, and quality assurance. In addition, by piggy-backing on the DHCD weatherization program, the Program Administrators will maximize seamless delivery to the customer without duplication or complexity.</li> <li>• Training. The Program Administrators will continue to explore common protocols in auditor and contractor training development and outreach for all areas identified through the Best Practices Working Group. The quality standards for qualified contractors will be consistent with the Massachusetts Weatherization Assistance Program Technical Manual, which was developed as a</li> </ul>
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working document to be used in conjunction with the Northeast Weatherization Field Guide. The guide provides comprehensive technical guidelines on appropriate weatherization protocols and techniques. In addition, the Program Administrators will provide to qualified auditors and contractors in-field training and materials related to energy efficiency technologies and help expand outreach efforts.

- Quality Control. All work is rigorously inspected to ensure high quality materials and installation practices are used. The Program Administrators, in coordination with the Best Practices Working Group, will work to maintain this high level of oversight.
- Pilots. The Best Practices Working Group is continually looking for new and innovative technologies and measures to help income-eligible customers save energy. To that end, the Program Administrators will consider piloting, monitoring, and evaluating new technologies/measures to determine if a full program rollout is justified.
- Deeper/Broader. Through the comprehensive, whole house approach, all available cost-effective energy efficiency measures offered through the program will be considered and, where feasible (dependent on health and safety as well as overall program cost effectiveness), implemented in order to attain greater savings. The program strives to provide all customers with an opportunity to lower utility bills through the purchase of energy efficient products.
- Coordination. The Program Administrators will coordinate with other programs for outreach communication and marketing strategies, the integrated website, contractor trainings to support a sufficient and quality installation focused workforce, and program quality assurance/quality control initiatives.

**Special Notes  
(cont.)**

The Program Administrators are aware that significant amounts of short-term economic stimulus funds may be made available to help underwrite low-income energy efficiency efforts. The levels and possible effect of this

	<p>potential capital infusion is not yet known, but this issue will be re-visited by the Program Administrators, LEAN, and the Council as final, accurate information becomes available.</p>
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### Low-Income Multi-family Retrofit Program

<b>Primary Objective</b>	<p>To deliver energy efficient products and services directly to the dwellings of residential customers living in facilities (with five or more units) on the low-income rate or of eligible income-eligible residents living in multi-family non-institutional facilities (with five or more units) owned or operated by a non-profit entity or a public housing authority, by addressing the informational, economic, institutional, and technical barriers that have historically made the low-income multi-family market a “hard to reach” sector in order to help eligible participants lower their energy bills.</p> <p>The program aims to broaden participation and achieve deeper savings per participant by integrating gas and electric measures into a single program.</p>
<b>Program Inception</b>	<p>Some Program Administrators offering services to this customer segment date back to the early nineties. Since 1998, Program Administrators have been working with the Best Practices Working Group to provide a coordinated program.</p>
<b>2010-2012 Program Goals</b>	<p><b>See individual PA filings.</b></p>
<b>2010-2012 Budget</b>	<p><b>See individual PA filings.</b></p>
<b>Joint vs. Program Administrator-Specific Offering</b>	<p>The Program Administrators are proposing a common statewide program with the goal of offering a consistent participant experience throughout the state. The Program Administrators recognize the need to allow for the flexibility to ensure that the needs of all participants are met.</p>
<b>Program Design</b>	<p>This program is designed to minimize or eliminate co-payments, integrate gas and electric program delivery, and integrate funding across all sectors that serve low-income multi-family facilities to the greatest extent possible.</p> <p>Eligibility for program measures and services will be based on the established program cost-effectiveness test,</p>

which include agreed non-energy benefits, and will not be restricted by rate class associated with the meter(s) for the facility to the greatest extent possible.

The program will be structured to ensure that participants are provided with a “whole building”, fully integrated offering targeting both gas and electric end uses. While on-site, all opportunities, regardless of fuel source will be identified and documented for the customer. All efforts to deliver a fully integrated offer to a participant will be performed in a manner that will result in a seamless participant experience.

The Program Administrators in collaboration with LEAN, state organizations such as the DHCD, public housing authorities (PHAs), community development corporations (CDCs), other non-profit entities that own or operate low-income non-institutional multi-family housing (non-profits), and Community Action Program (“CAP”) agencies, will make up the Best Practices Working Group. The working group’s objective will be to collaborate and coordinate on all aspects of the low-income multi-family program, including but not limited to, planning, delivery, implementation, standardization, education, marketing, training, cost effectiveness, evaluation, and quality assurance.

This program will piggyback on the current DHCD low-income energy efficiency programs and all other eligible funding sources (i.e. federal and state) to enhance program services. The LEAN Lead Vendor with respect to each PA service territory will be the same as the LEAN Lead Vendor for other low-income efficiency programs, or such other arrangement as is agreed with LEAN (hereinafter “LEAN Lead Vendor”). Sub-contracting will be appropriate to the complexity of the work required and will be based on the same audit tool as in the market rate multi-family retrofit program. Low-income customers will be referred to the LEAN Lead Vendor by the Multi-family Market Integrator (MMI), as defined in the multi-family retrofit program. Low-income customers may also apply directly through the LEAN network. An essential element of this program is that interested customers also have the option, at their discretion, of electing to participate in the market rate multi-family retrofit program. This approach helps ensure that there are multiple paths to participation in energy efficiency programs in this unique market sector that has also been served over many years by skilled contractors and engineering firms. These firms will continue to be eligible to provide services in this sector, both through the market rate multi-family retrofit program (and its terms and conditions) and, where qualified, as providers for the LEAN network under the terms and conditions of this program.

The following program design components are similar as those found in the multi-family retrofit program description.

Enrollment

Participants for this program may enroll through a low-income agency, statewide website, the multi-family statewide toll free number, Program Administrators or other venue.

Participant Screening

LEAN will develop an Advisory Committee comprised of LEAN, CDCs, other nonprofit owners of low-income non-institutional multifamily housing, and PHAs, which will be tasked with prioritizing low-income multi-family projects for each Program Administrator and alerting the Multi-family Market Integrator (MMI), as defined in the multi-family retrofit program, of projects assigned to move forward. The Advisory Committee will integrate flexibility into their planning to handle unique needs of Program Administrators or potential participants.

Due to the nature of this market segment most leads will be generated through the Advisory Committee, however, leads coming in via other venues will be screened by the MMI and forwarded to LEAN for eligibility confirmation.

Upon confirmation of a project, the LEAN Lead Vendor is responsible for coordinating the appropriate parties to address the project needs based on protocols agreed to by specific Program Administrators and consultation with specific Program Administrators to move the project forward.

Whole Building Assessment

Based on the outcome of the screening process, the appropriate technical resources will be assigned to conduct a whole building, (fuel blind) assessment. The audit firms used for the market rate program will also serve the low-income sector, along with the current Network agencies who serve the low-income multi-family market. If

the same firms are not available, the auditor(s) performing the services will be required to have, at a minimum, the same qualifications (i.e. training, certification, etc.) as the market rate program auditors. The LEAN Lead Vendor will attempt, through the screening process, to identify all resources required for the assessment; however, there may be instances where additional expertise is required and therefore more than one site visit is necessary. Technical assessments, benchmarking, and engineering studies will be conducted as needed. At the time of the assessment, education will be provided to participants and instant saving measures will be installed, as appropriate and authorized by the customer.

#### Integrated Proposal for Energy Efficiency Services

Using the findings from the site-specific assessment, the appropriate parties will draft a project proposal that will include gas and electric cost-effective measure opportunities and other available services where applicable. The project proposal will be forwarded to the appropriate Program Administrators for approval. Once the comprehensive offer has received Program Administrator approval, it will be presented to the participant by the parties required to help the customer fully understand the offering.

#### Delivery of Measures and Services

The LEAN Lead Vendor will coordinate the delivery of the measures and services opted by the customer. The installation firms used for the market rate program may also serve the low-income sector. If the same firms are not available, the vendors performing the services will be required to have, at a minimum, the same qualifications (i.e. training, certification, etc.) as the market rate program vendors. An exception to this protocol will occur when participants select their own vendor for the installation of gas measures such as heating systems, but they still must have the same qualifications as any other qualified installation vendor. The installation contractors will strive to have all dwelling unit measures installed in a single visit to minimize disruption for the tenants; however multiple visits may be required for the installation of common area measures. Commissioning services will be performed as appropriate.

#### Quality Assurance/Quality Control

Quality assurance will be performed in support of this program. The Program Administrators anticipate that the quality assurance will be performed by an independent third party. Customer satisfaction surveys will also be

	<p>administered to provide additional feedback for the Program Administrators. The same QA/QC protocols and vendors will be used for both the market rate and low-income sectors.</p> <p>Education and information are included in all Program Administrators' energy efficiency programs. The low-income multi-family program plans to develop/improve education materials and material distribution which will include education materials for landlords, property managers, building occupants, and property management personnel</p> <p><i>Additional Program Design Elements</i></p> <ul style="list-style-type: none"> <li>• The Program Administrators will, on request, inform participants of the change in their energy consumption one year after participating in the program. This may be accomplished via a letter or email.</li> <li>• Subject to a review of cost reasonableness, available tools will be used to allow LEAN to benchmark customer energy use against like buildings as part of the project screening process.</li> <li>• The Program Administrators recognize that proper training for building operators and maintenance staff is a key factor in ensuring that expected savings are realized. As such, the Program Administrators will assess the feasibility of offering incentives for the building owner/manager and/or their staff to obtain applicable training and certifications.</li> </ul> <p>The Program Administrators in collaboration with LEAN, state organizations such as the DHCD, public housing authorities (PHAs), community development corporations (CDCs), other non-profit entities that own or operate low-income multi-family housing (non-profits), and Community Action Program ("CAP") agencies, will make up the Best Practices Working Group. When topics to be discussed apply to both market rate and low-income customers, this group and the Multi-family Steering Committee (for the market rate program) will hold joint working sessions.</p>
<b>Target Market</b>	Residential customers on the low-income rate or individuals living in non-institutional dwellings owned or

	<p>operated by non-profit entities or public housing authorities with five or more units who are at 60 percent of median income level as well as landlords and property managers of these buildings.</p> <p>Fifty percent of the occupants must qualify as low-income in order to be served by the low-income multi-family program.</p> <p>In special cases, where outside grant money can enhance program services, the Program Administrators may approve participation for customers in specific communities at 80 percent of median income. Any changes to eligibility will be addressed through the Best Practices Working Group.</p>
<p><b>Marketing Strategy/ Approach</b></p>	<p>The Program Administrators foresee a high demand for the low-income multi-family program that will be managed jointly by the Advisory Committee and the Program Administrators.</p> <p>The Program Administrators will engage in outreach efforts to notify customers of the availability and value of energy efficiency services to stimulate interest in the program and operate within budgets. Marketing will consist of contacting customers subscribing to the low-income rates who have not received prior energy services and landlords of low-income tenants. Direct mail, bill inserts, and literature distributed through social service agencies, housing funders, government offices, and other networks are also used to market the program. Program Administrators will use their relationship with PHAs and other low-income property managers to market the benefits of the program.</p> <p>In addition, Program Administrators and low-income advocates are participating in statewide marketing efforts to encourage income-eligible customers to take advantage of discount rates, energy efficiency programs and fuel assistance programs.</p> <p>The program is also being integrated into a unified, statewide website. This website will allow customers and potential participants to go to one site to find out about all energy efficiency offerings available to them. Marketing efforts will be designed to meet the objectives of going broader and deeper to maximize energy</p>

	savings.
<b>Target End Uses</b>	<p>Gas and electric target end uses in both dwelling units and common areas include but are not limited to the following:</p> <ul style="list-style-type: none"> <li>• Comprehensive, whole building approach, including audits</li> <li>• Building shell</li> <li>• Heating and cooling</li> <li>• Domestic water heating</li> <li>• HVAC and other Mechanical systems and controls</li> <li>• Lighting and Appliances</li> <li>• General waste heat</li> <li>• New technologies and renewables</li> <li>• All other cost-effective site-specific end uses that impact gas and electric consumption</li> </ul>
<b>Recommended Technologies</b>	<p>The Program Administrators will continue to work with the Best Practices Working Group to identify new, cost-effective energy efficiency services, measures and technologies for gas and electric end uses that are appropriate to offer to low-income multi-family customers. Potential measures offered through the low-income multi-family program, where cost-effective, include but are not limited to:</p> <ul style="list-style-type: none"> <li>• Attic insulation</li> <li>• Wall insulation</li> <li>• Pipe insulation</li> <li>• Duct sealing/insulation</li> <li>• Air sealing, including weatherstripping</li> <li>• Domestic hot water measures</li> <li>• Lighting upgrades and controls</li> <li>• Energy Management Systems (EMS)</li> <li>• Occupancy sensors</li> <li>• Motors and drives</li> </ul>

<p><b>Recommended Technologies (cont.)</b></p>	<ul style="list-style-type: none"> <li>• Chillers</li> <li>• Air compressors</li> <li>• Heating system repair and replacement</li> <li>• Water heating equipment</li> <li>• Programmable thermostats</li> <li>• Ventilation system repair, adjustment, replacement</li> <li>• Refrigerators</li> <li>• Freezers (PA-specific)</li> <li>• Air conditioners</li> <li>• Heat Recovery Ventilation/Energy Recovery Ventilation</li> <li>• Redistribution systems</li> <li>• Temperature building controls</li> <li>• Power smart strips</li> <li>• Health and safety</li> </ul> <p>Other technologies to be discussed in the Best Practices working group for future consideration if cost-effective include but are not limited to:</p> <ul style="list-style-type: none"> <li>• Combined heat and power (CHP)</li> <li>• Major weatherization repairs (e.g., electrical repairs, roofs, etc.)</li> <li>• Exterior doors</li> <li>• Other envelope measures</li> <li>• Low mercury light</li> <li>• LED</li> <li>• ENERGY STAR Clothes washers</li> <li>• Solar water heating</li> <li>• Geothermal</li> <li>• Biomass</li> </ul>
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	<ul style="list-style-type: none"> <li>• Green/hypoallergenic products</li> <li>• Window coverings</li> <li>• Other measures as determined on a site-specific basis</li> </ul>
<p><b>Financial Incentives</b></p>	<p>Program Administrators will pay up to 100% of the project cost with established caps, including measure caps, which will be determined by agreement between LEAN and the Program Administrators based on a review of cost-effectiveness. Given the cost of larger capital investment projects (e.g. heating system upgrades), the Program Administrators will negotiate with all interested stakeholders to establish incentive caps and guidelines to ensure cost-effectiveness and a more systematic balanced approach to program spending.</p> <p>Program Administrator funds will only be accessed after other funding sources have been leveraged. Project participants willing to provide co-payments will be entitled to favorable weighting as the Advisory committee prioritizes projects.</p>
<p><b>Delivery Mechanism</b></p>	<p>The program will be administered cooperatively by the gas and electric Program Administrators in conjunction with interested stakeholders.</p> <p>There will be a common enrollment process (using the services of the Multi-family Market Integrator) for both the market rate and low-income segments to prevent customer confusion. Once the participant’s project is identified as a low-income multi-family project the delivery of the program services will be similar to that for market rate participants except that the LEAN Lead Vendor will be responsible for coordinating the appropriate resources and vendors to move the project forward.</p> <p>The program delivery mechanism serves to minimize lost opportunities and encourage deeper savings in the following ways:</p> <ul style="list-style-type: none"> <li>• The increased incentives amounts may allow for achieving energy savings that would not be possible if this population had to provide a significant co-payment.</li> <li>• Having the PHAs and non-profits (CDCs and other non-profit owners of non-institutional low-income multifamily housing) directly working with members of the Best Practices Working Group will</li> </ul>

	<p>facilitate access to the tenant spaces, which has been traditionally cited a potential barrier in the multi-family market.</p> <ul style="list-style-type: none"> <li>• The Best Practices Working Group will attempt to leverage funds from all applicable revenue streams to achieve deeper savings.</li> </ul>						
<p><b>Joint Program Administrator Enhancements Planned for 2010-2012</b></p>	<p>In order for the low-income multi-family program to achieve deeper energy savings and increase the number of program participants over the next three years, the Program Administrators will:</p> <ul style="list-style-type: none"> <li>• Leverage, to the best extent possible, all applicable revenue streams available to enhance services on a meter-blind basis, including integration of gas and electric, low-income, residential, and commercial funding.</li> <li>• Deepen efficiency penetration consistent with our comprehensive, whole building approach on a fuel-blind basis with increased incentives.</li> <li>• Implement LEAN Lead Vendor services across the state, similarly as described for the MMI in the Market Rate Multi Family program description.</li> <li>• Broaden program participation through coordinated marketing and outreach efforts, if needed.</li> <li>• Continually review and evaluate new measures and technologies through the Best Practices Working Group process.</li> </ul>						
<p><b>Program Administrator-Specific Elements</b></p>	<p>To be completed for the October Filing, if applicable.</p>						
<p><b>Three-Year Deployment/ Road Map</b></p>	<p>Provided below is the roadmap for the completion of the program design and program implementation.</p> <p>PHASE I – PROGRAM PLANNING</p> <table border="1"> <thead> <tr> <th>Task Description</th> <th>Target Completion Date</th> <th>Deliverable</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Task Description	Target Completion Date	Deliverable			
Task Description	Target Completion Date	Deliverable					

	1. Identify eligible measures and establish incentives	Completed 10/09	Set of measures and corresponding incentives
	2. Prepare draft scope of work for Multi-family Market Integrator services.	Completed 9/09	Draft work scope for Multi-family Market Integrator services.
	3. Establish PA protocols for budgeting and expense tracking under new “meter/rate” blind model	10/31/09	Discussion in the October filing in the Budget section describing assumption used in the budgeting process
	4. Evaluate the feasibility of offering incentives soft costs such as technical assistance and for building owner/manager or their staff to obtain applicable trainings and certification.	10/31/09	Documented findings from joint PA and Consultant assessment
	5. Develop detailed program delivery model	12/31/09	
	<ul style="list-style-type: none"> <li>• Document detailed roles and responsibilities for each market actor required to support the program design.</li> </ul>	12/31/09	Matrix including market actors along with their roles and responsibilities.
	<ul style="list-style-type: none"> <li>• Develop process flow documentation illustrating the customer experience and the interactions between other key market actors including the PAs, auditors, installation vendors, technical assistance and QA/QC providers.</li> </ul>	12/31/09	Process flow
	6. Create Marketing Plan	Ongoing	If needed, form a low-income

<ul style="list-style-type: none"> <li>○ If needed, the Program Administrators and LEAN will work together to develop a full marketing plan beyond the statewide marketing efforts</li> <li>○ Identify marketing material needed for customers</li> </ul>		<p>multifamily marketing committee to develop a detailed marketing and outreach plan.</p>
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**PHASE II – PROGRAM IMPLEMENTATION**

Task Description	Target Completion Date	Deliverable
1. Conduct training for PA and vendor staff	2010	Documented completion of this task
2. Implement Marketing Plan and/or create customer marketing materials	2010	Marketing materials and schedule for delivery
3. Program Implementation	2010	Notification of program launch
4. Monthly Multi-family Statewide Executive Committee Meetings, including LEAN	Ongoing	Meeting notes distributed to all participating Program Administrators and LEAN
5. Training	Ongoing	Training and workforce development will be accomplished by the Program Administrators working with LEAN, DHCD, CDCs, PHAs, other non-profit owners of non-institutional low-income multi-family housing, and CAP agencies to increase the number of qualified contractors, energy

			auditors, and administrative staff.
	6.Leveraging of funds	Ongoing	The Best Practices Working Group will leverage all applicable revenue streams available to enhance services.
<b>PHASE III – PROGRAM ASSESSMENT</b>			
	Task Description	Target Completion Date	Deliverable
	1. Annual Multi-family Statewide Executive Committee (including LEAN) review of program successes and lessons learned with results feeding back into modifications to the program design as required.	2011- 2012	Narrative to be included in annual PA plan updates.
	2. Evaluation of new measures.	ongoing	The Best Practices Working Group process will continually review and evaluate new measures and technologies. See “Recommended Technologies” above.
<b>Special Notes</b>	The Program Administrators, in conjunction with the Council’s Consultants, PHAs, CDCs, other non-profit owners of non-institutional low-income multi-family housing, and LEAN, have performed an assessment of the multi-family program in Massachusetts. For low-income multi-family projects, the assessment developed this		

program for serving low-income multi-family buildings in a manner that is fuel-blind, meter-blind, and integrates low-income, residential and commercial programs, as appropriate, with increased incentives up to 100% (pending a review of the budget impacts by each Program Administrator).

The program will address several of the Council's Priorities Resolution including:

- **Seamless Delivery.** By coordinating Program Administrator programs with the U.S. Department of Energy and the Department of Health and Human Services' programs administered by DHCD, as well as other programs implemented by the Network that implements the Program Administrator and DHCD programs, Program Administrators assure that a common set of programs is available to all low-income customers and that the programs are seamless from the viewpoint of customers. Program Administrators' programs are also coordinated with each other, particularly across fuels. Nevertheless, experimentation and pilot programs implemented in particular territories allow development of improvements that are monitored by the Best Practices Working Group for possible adoption statewide. This program will be uniquely meter-blind, i.e., combine funding from gas and electric PAs across low-income, residential, and commercial sectors.
- **Best Practices.** The Program Administrators will continue to work in coordination with LEAN (expanded to include CDCs, PHAs, and other non-profit owners of non-institutional low-income multi-family housing) at the Best Practice Working Group meetings for successful program development. The Best Practice Working Group's objective is to collaborate and coordinate on all aspects of the low-income multi-family program including ongoing planning, delivery, implementation, marketing, training, evaluation and quality assurance. In addition, by piggy-backing on the DHCD weatherization program and/or other state or federal programs, the Program Administrators will maximize seamless delivery to the customer without duplication or complexity.
- **Training.** The Program Administrators will continue to explore common protocols in auditor and contractor training development and outreach for all areas identified through the Best Practices Working Group. The quality standards for qualified contractors will be consistent with the Massachusetts Weatherization Assistance Program Technical Manual, which was developed as a working document to

**Special Notes  
(cont.)**

be used in conjunction with the Northeast Weatherization Field Guide. The Guide provides comprehensive technical guidelines on appropriate weatherization protocols and techniques. In addition, the Program Administrators will provide qualified auditors and contractors in-field training and materials related to energy efficiency technologies and help expand outreach efforts.

- Quality Control. All work is rigorously inspected to ensure high quality materials and installation practices are used. The Program Administrators, in coordination with the Best Practices Working Group, will work to maintain this high level of oversight.
- Pilots. The Best Practices Working Group is continually looking for new and innovative technologies and measures to help low-income customers save energy. To that end, the Program Administrators will consider piloting, monitoring and evaluating new audits and technologies/measures to determine if a full program rollout is justified.
- Broader/Deeper. Through the comprehensive, whole building approach, all available cost-effective energy efficiency measures offered through the program will be considered on a fuel-blind basis with minimized or no co-payments for gas and electric measures and where feasible (dependent on health and safety as well as overall program cost effectiveness) implemented in order to attain greater savings.

The Program Administrators are aware that significant amounts of short-term economic stimulus funds may be made available to help underwrite low-income energy efficiency efforts, including at public housing authority buildings. The levels and possible effect of this potential capital infusion is not yet known, but this issue will be re-visited by the Program Administrators, LEAN and the Council as final, accurate information is available. The Program Administrators reserve the right to claim savings regardless of funding sources used.

While the LEAN is looking to expand eligibility for this program to include affordable housing owners that are for-profit entities, both the Program Administrators and LEAN agree that implementation of this change will require policy changes. Until such changes are approved by the necessary regulators, this segment of the multi-family market will be served through the market rate program.

