

2010 – 2012

Massachusetts

**Joint Statewide Three-Year
Gas Energy Efficiency Plan**



national**grid**



**BL  CKSTONE
GAS COMPANY**

April 30, 2009

Statewide Three-Year Gas Energy Efficiency Plan

- I. EXECUTIVE SUMMARY..... 1**
 - A. The Green Communities Act 1**
 - B. D.P.U. 08-50-A..... 2**
 - C. The Council Process to Date 3**
 - D. Next Steps 4**
 - E. Overview of the Key Aspects of the Plan 6**
 - 1. *Benefits*..... 6
 - 2. *Cost-Effectiveness* 7
 - 3. *Progress Toward GCA Requirements and Goals* 8
 - 4. *Program Budgets* 9
 - 5. *Highlights of Program Design Strategies* 10
 - 6. *Evaluation and Monitoring* 11
 - 7. *Cost Recovery and Performance Incentives* 11
 - 8. *Mid-Term Revisions* 12
 - 9. *Summary* 12
- II. THE THREE-YEAR PLAN..... 13**
 - A. Core Benefits: Energy Savings, Greenhouse Gas Reductions, Net Economic Benefits and Progress Towards GCA Requirements and Goals..... 13**
 - 1. *Energy Savings*..... 13
 - 2. *Environmental Benefits* 16
 - 3. *Net Benefits and Cost Effectiveness Summary with Summary Table* 17
 - 4. *Progress Towards GCA Requirements and Goals*..... 18
 - i. Acquisition and Assessment of All Available Cost-Effective Energy Efficiency and Demand Reduction Resources..... 18
 - ii. Further Discussion of the Program Administrators’ Assessment Activities and of Key Barriers and Challenges 22

iii.	Key Factors, Challenges and Market Barriers	23
5.	<i>Demand Response Issues</i>	29
6.	<i>Competitive Procurement</i>	29
7.	<i>The Special Inclusion of Blackstone Gas</i>	30
8.	<i>Gas and Electric Program Integration and Coordination; Seamless Delivery</i>	30
i.	Background/General Overview.....	30
a)	<i>The Act</i>	31
b)	<i>The Council’s Priorities Resolution</i>	33
c)	<i>The Experience of the Program Administrators</i>	35
ii.	Benefits of Enhanced Integration and Coordination	35
iii.	Specific Approaches and Actions Regarding Gas and Electric Program Integration and Coordination	37
a)	<i>Integration and Coordination Working Group</i>	37
b)	<i>Specific Building Blocks</i>	38
c)	<i>Marketing Efforts</i>	39
d)	<i>Other Core Principles</i>	39
iv.	Conclusion and Long-Term Goals	41
9.	<i>Progress Towards Other MA Policy Goals/Requirements</i>	42
B.	Funding Sources	43
C.	Program Budgets and Budget Categories	43
1.	<i>Summary Table</i>	45
2.	<i>Summary Table Showing Percentage Increases from 2008-2012</i>	47
D.	Net Benefits And Cost Effectiveness Analysis	48
1.	<i>General Cost/Benefit Variables</i>	48
i.	Benefits	48
a)	<i>Energy System Benefits</i>	48
b)	<i>Program Participant Benefits</i>	48
ii.	Costs.....	49
a)	<i>Energy System Costs</i>	49

b) <i>Program Participant Costs</i>	50
iii. <i>Discount Rate</i>	50
2. <i>Summary Table</i>	50
i. <i>By sector, B/C Ratio, net benefits, total benefits, total costs, PA costs, customer costs</i>	50
3. <i>Costs Tables</i>	51
i. <i>Costs Summary Table</i>	51
4. <i>Benefits/Savings Tables</i>	52
i. <i>Benefits Summary Table by program: disaggregation of total benefits into benefits components</i>	52
ii. <i>Savings Summary Table by program: annual savings over life of measures installed during program year</i>	54
E. Bill Impacts	56
1. <i>Overview</i>	56
2. <i>Preliminary Statewide Bill Impact Analysis Table</i>	58
3. <i>Notes on Preliminary Bill Impact Analysis/Key Assumptions</i>	60
F. Program Descriptions	60
1. <i>Residential Programs Descriptions</i>	62
<i>Residential High Efficiency Heating Program</i>	62
<i>Residential High Efficiency Water Heating</i>	68
<i>Residential ENERGY STAR-Labeled Programmable Thermostat Rebate</i>	72
<i>Residential Conservation Services (“RCS”) / MassSAVE</i>	76
<i>Deep Retrofit 1-4 Family Pilot</i>	83
<i>Weatherization Program</i>	86
<i>Residential New Construction</i>	89
<i>Multi-Family Services</i>	96
2. <i>Low Income Programs Descriptions</i>	102
<i>Residential Low-Income Program</i>	102
3. <i>C&I Descriptions</i>	109
<i>Overview of C&I Efforts</i>	109

Consistent Messaging	110
Increased Savings Targets.....	110
Review of New Technologies	110
Community-Based Efforts	112
Workforce Development.....	114
Long-term Goals	115
C&I Prescriptive Programs	116
C&I Custom Program	121
Training & Education Programs	127
G. Special Marketing and Education Activities	133
H. Evaluation And Monitoring	134
1. <i>Background: Types of Evaluation and Monitoring Activity</i>	134
2. <i>Evaluation and Monitoring: Core Principles for 2010-2012</i>	137
3. <i>Specific Evaluation and Monitoring Activities for 2010-2012</i>	144
I. Performance Incentives	144
1. <i>Performance Incentives Summary Table</i>	147
J. Cost Recovery.....	148
1. <i>Calculation of Lost Base Revenue</i>	152
K. Mid-Term Revisions	152
III. GREEN COMMUNITIES ACT – DEPARTMENT OF PUBLIC UTILITIES.....	155
A. Acquisition of All Available Cost Effective Energy Efficiency	155
B. Allocation of Funds.....	155
1. <i>Minimum Requirement for Low Income</i>	155
C. Minimization of Administrative Cost.....	156
1. <i>Competitive Procurement Process</i>	157
IV. GREEN COMMUNITIES ACT – ENERGY EFFICIENCY ADVISORY COUNCIL	158
A. Additional Benefits.....	158
1. <i>Reduction in Peak Load</i>	158

2. <i>Economic Development and Job Growth/Retention</i>	158
V. APPENDICES	163
A. Glossary of Defined Terms	163
B. Proposed Council Timeline	167
C. Bibliography	173
D. Evolving Trends in Costs/Budgets	176
1. <i>Market EE Activity Table</i>	176

I. EXECUTIVE SUMMARY

A. The Green Communities Act

An Act Relative to Green Communities, Chapter 169 of the Acts of 2008 (“Green Communities Act” or “Act”)¹ was signed into law on July 2, 2008. A bold piece of legislation designed to promote enhanced energy efficiency throughout the Commonwealth, the Green Communities Act requires gas and electric distribution companies and municipal aggregators (together “Program Administrators” or “PAs”) to develop energy efficiency plans that will “provide for the acquisition of all available energy efficiency and demand reduction resources that are cost effective or less expensive than supply.” G.L. c. 25, § 21(b)(1). In connection with these energy efficiency plans, the Green Communities Act established a new advisory body, the Energy Efficiency Advisory Council (“Council”), consisting of eleven voting members of diverse backgrounds and expertise, and a non-voting member from each Program Administrator. Pursuant to the Act, the electric and gas Program Administrators, respectively, are required to provide a statewide electric efficiency investment plan and a statewide natural gas efficiency investment plan (each, a “Plan”) on or before April 30, 2009. *Id.* § 21(b)(1). The Act further specifies the contents of those plans, which are to be prepared by the Program Administrators in coordination with the Council. *Id.* § 21(b)(1)-(2). Today’s filing, submitted by **unanimous consent of all** the Massachusetts gas Program Administrators, constitutes the statewide natural gas Plan proposed for the Council’s approval and comment.

Although this Plan is directed primarily at the mandates of the Green Communities Act, the Program Administrators are cognizant of the role that the statewide electric and gas efficiency investment plans occupy in the Commonwealth’s broader, historically ambitious

¹ A Glossary of defined terms is included as Appendix A.

energy and environmental statutory scheme. With a series of bold legislative enactments, the Commonwealth of Massachusetts has signaled its commitment to ensuring that the Commonwealth is a worldwide leader in developing the green economy. On August 13, 2008, shortly following the enactment of the Green Communities Act, Governor Deval Patrick signed the Global Warming Solutions Act (“GWSA”) and the Green Jobs Act. The GWSA mandates the gradual reduction of greenhouse gas emissions (“GHG”) in the Commonwealth, establishing a schedule of emissions goals designed to spur innovation and promote research and development in the area of clean energy. Enacted concurrently, the Green Jobs Act provides a robust funding source for the green technology industry, facilitating economic development and job growth in the clean energy sector. Taken together, these legislative enactments reflect the Commonwealth’s commitment to climate protection and its leadership in promoting clean and renewable energy. The Program Administrators welcome the opportunity to design and implement innovative energy efficiency programs that not only advance the objectives of the Green Communities Act, but also promote the parallel goals of decreasing GHGs and promoting job creation in the clean energy sector.

B. D.P.U. 08-50-A

Although the Massachusetts Program Administrators have a well-established and very successful history in developing and implementing energy efficiency programs that are nationally recognized, the Department of Public Utilities (“Department”) recognized that the passage of the Act expanded existing energy efficiency requirements and, in particular, the standards imposed upon electric and gas distribution companies and other Program Administrators. Responding to these new directives, the Department opened an investigation in 2008 into its then-existing Energy Efficiency Guidelines in an effort to clarify those guidelines in

light of the Act and to provide more detailed guidance to the Program Administrators in preparing the three-year, statewide plans required under the Act. The Department solicited the comments of Program Administrators, governmental bodies, and other interested stakeholders. The resulting order, D.P.U. 08-50-A; Investigation by the Department of Public Utilities on its own Motion into Updating its Energy Efficiency Guidelines Consistent with An Act Relative to Green Communities issued on March 16, 2009 (“D.P.U. 08-50-A”), was a comprehensive and extremely useful clarification of the criteria to be applied in demonstrating cost-effectiveness and the process by which three-year energy efficiency plans should be prepared and reviewed.

The Program Administrators have benefited from the guidance of the Department, not only in its Order in D.P.U. 08-50-A, but also by means of the multiple and very productive D.P.U. 08-50 Working Group sessions convened by the Department and moderated by the Department and the Department of Energy Resources (“DOER”). The format of today’s filing, including the organization of the Plan and all statistical tables included in the Plan, reflect the productive and collaborative process that occurred in the context of the D.P.U. 08-50 Working Group.

C. The Council Process to Date

The Program Administrators are non-voting members of the Council and have participated collaboratively in the Council meetings that have occurred since its inception. The Program Administrators have benefited greatly from the thoughtful input provided by the Council and its consultants (“Consultants”), including the detailed guidance set forth in the Council’s March 24, 2009 Resolution Concerning Priorities to Guide the Development, Implementation and Evaluation of the PA Efficiency Plans (the “Priorities Resolution”). Indeed, the Priorities Resolution is frequently referenced within this Plan. The Program Administrators

appreciate the degree to which the Council process has been a productive collaboration. The gas Program Administrators have worked collaboratively with the Council to ensure that the Plan complies fully with each of the specific mandates of the Green Communities Act. The Program Administrators thank the Council members for their extensive efforts to date.

D. Next Steps

In accordance with the Green Communities Act, the Program Administrators plan to continue to work collaboratively with the Council and its Consultants following the filing of this statewide gas energy efficiency Plan. More specifically, in accordance with the Act, the Program Administrators will:

provide any additional information requested by the Council that is relevant to the consideration of the [P]lan. The Council shall review the [P]lan and any additional information and shall submit its approval or comments to the electric and natural gas distribution companies and municipal aggregators not later than 3 months after submission of the [P]lan. The electric and natural gas distribution companies and municipal aggregators may make any changes or revisions to reflect the input of the Council.

G.L. c. 25, § 21(c). Indeed, working cooperatively with the Council, the Program Administrators have already planned for full review sessions regarding the Plan. *See Appendix B.*

Following this Council review process, each of the Program Administrators will then submit their respective PA-specific three-year plan, “together with the Council’s approval or comments and a statement of any unresolved issues, to the Department . . . on or before October 31. The Department shall consider the plans and shall provide an opportunity for interested parties to be heard in a public hearing.” G.L. c. 25, § 21(d). The Department will then have a 90-day period to issue its decision on the respective PA-specific plans. In particular, the

Department is to ensure that such plan identifies and captures “all energy efficiency and demand reduction resources that are cost effective or less expensive than supply” and the Department may “approve, modify and approve, or reject and require the resubmission of the plan” based upon its review. *Id.*, §21(d)(2). Pursuant to the Act, the Department is also charged with approving a fully reconciling funding mechanism for the approved plan and, in the case of municipal aggregators, a fully reconciling funding mechanism that requires coordination between the distribution company and the municipal aggregator to ensure that program costs are collected, allocated and distributed in a cost effective, fair and equitable manner.” *Id.* Each of the Program Administrators currently plans to file in October 2009 a PA-specific plan that is consistent with, and flows out of, the statewide Plan submitted today. While the Program Administrators necessarily must reserve final judgment on the exact contents of their October filings pending the Council’s review and comment on this Plan, they are each committed to working diligently to ensure that their respective October filings fully comply with the Act.

Once their three-year plans are up and running in 2010, the Program Administrators will be required to provide quarterly reports to the Council, and the Council will be required to provide an annual report to the Department. G.L. c. 25, § 22(d).² The Department is also required to determine the effectiveness of each Program Administrator’s plan on an annual basis. *Id.*, § 21(d)(2). In order to help facilitate this review process, the Program Administrators, working collaboratively with the Department and the Council, will develop model quarterly and annual reporting templates for use by the Program Administrators.

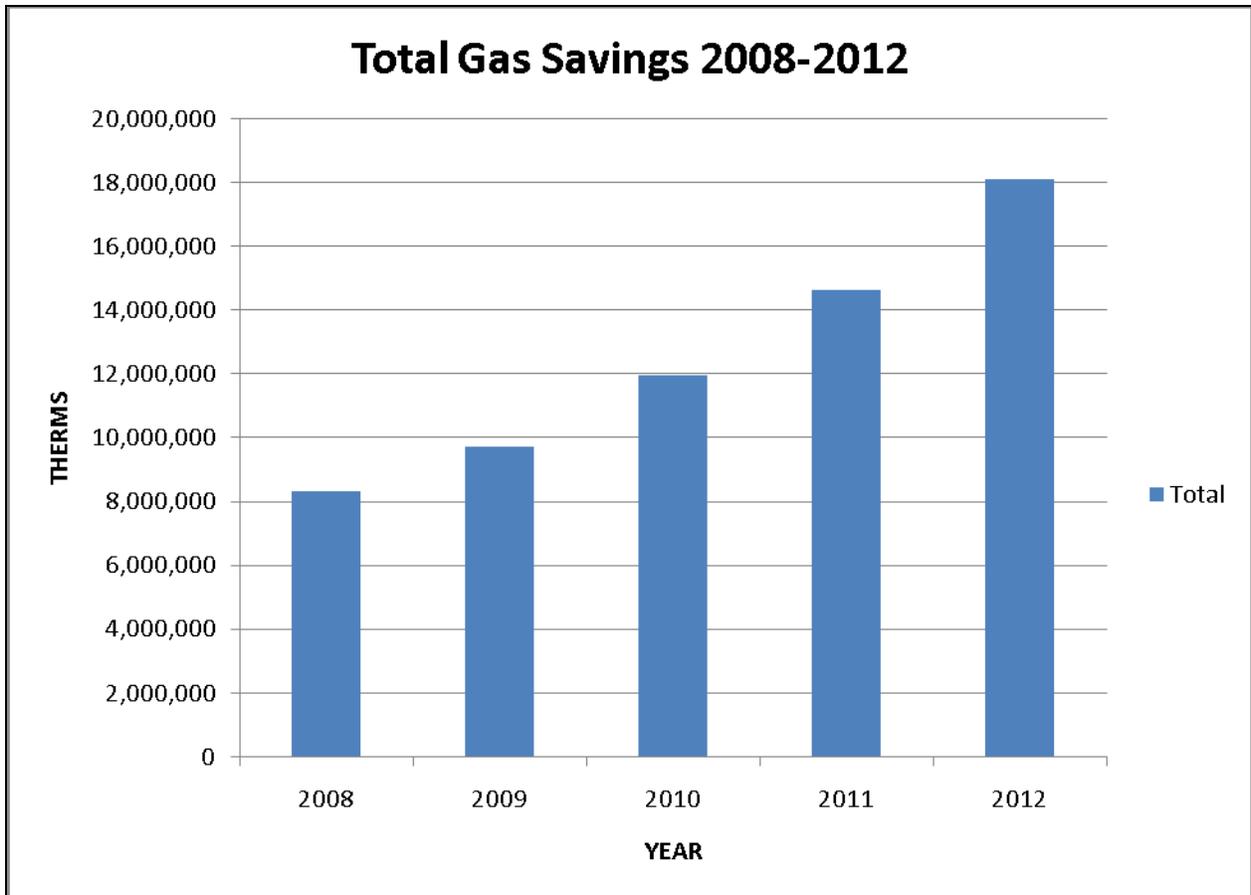
² The Plan contemplates that the Program Administrators will file quarterly and annual reports with both the Council and the Department.

In sum, the Program Administrators have developed this Plan based upon an unprecedented multi-party collaborative process and, as contemplated in the Green Communities Act, plan to continue such collaborative process throughout the three-year term of the Plan.

E. Overview of the Key Aspects of the Plan

1. *Benefits*

As indicated in the table below, the Program Administrators are seeking to increase, very substantially, the level of savings derived from energy efficiency activities, consistent with the bold actions contemplated under the Act. In particular, this Plan calls for cumulative savings on an overall statewide basis of 44,738,674 therms over the three-year period. The ramp-up to achieve these savings is graphically illustrated in the table below. As a direct result of these savings, CO₂ emissions will be reduced by approximately 3,925,000 tons. This achievement is comparable to the environmental benefits achieved by taking approximately 720,000 cars off the road.



2. *Cost-Effectiveness*

The Program Administrators have undertaken a preliminary statewide-level screening of the cost-effectiveness of the implementation of the Plan using the Department’s Total Resource Cost (“TRC”) test. This testing indicates the plan is cost effective with a statewide benefit cost ratio of 2.53 over the three years of the plan and is expected to produce net economic benefits of **over \$500 million**.

Total Resource Cost Test, 2010-2012				
Sector	B/C Ratio	Net Benefits	Benefits	Costs
Residential	2.47	\$217,538,063	\$365,822,602	\$148,284,539
Low Income	1.22	\$12,722,184	\$70,264,948	\$57,542,764
Commercial & Industrial	3.16	\$287,141,428	\$419,773,167	\$132,631,740
GRAND TOTAL	2.53	\$517,401,675	\$855,860,718	\$338,459,042

3. *Progress Toward GCA Requirements and Goals*

Consistent with the Act, the Plan seeks to capture all available cost-effective energy efficiency for the three-year period beginning January 1, 2010. In determining the level of savings to achieve in order to satisfy this mandate, the Program Administrators considered and weighed multiple factors, including: 1) the terms of the Act; 2) the directives of the Council, including the Council's Priorities Resolution; 3) the Department's Order in D.P.U. 08-50-A (including preliminary bill impact considerations); 4) industry studies and analyses; and 5) their own experience in implementing nationally-recognized energy efficiency programs for over two decades. The Program Administrators met collaboratively on a frequent basis to determine the appropriate savings goals and budgets to propose in this Plan. As a result of this iterative and collaborative process, and after considering the directives of the Council, the Program Administrators have achieved an unprecedented statewide unanimous consensus with respect to the savings goals, proposed budget levels and implementation strategies set forth herein.

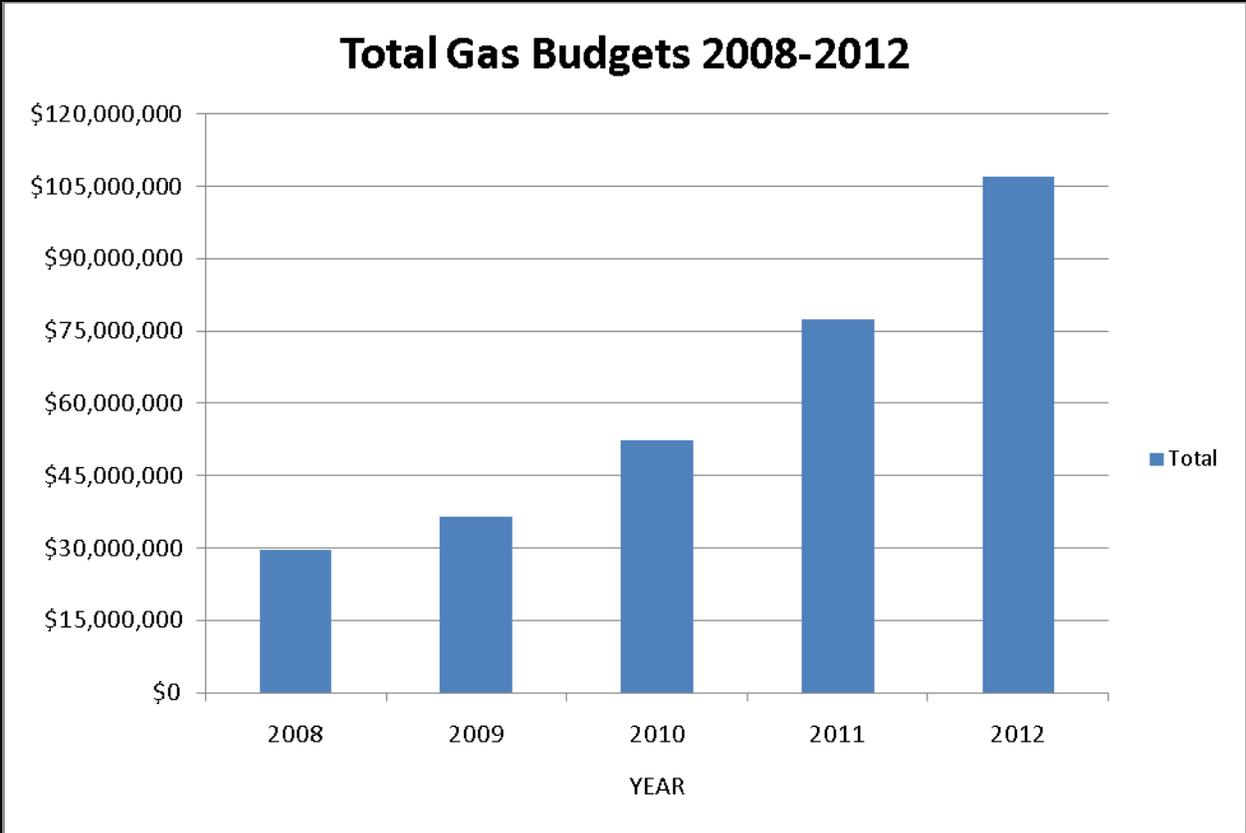
Among other areas of emphasis, the Plan seeks to maximize the usage of competitive procurement processes. The Plan also seeks to support the development of an enhanced energy services delivery infrastructure in Massachusetts. An important ancillary benefit of this effort will be job creation throughout the Commonwealth in the energy efficiency services sector.

Another unique aspect of the Plan is the level of coordination and integration of effort among the Program Administrators, as well as with the low-income program delivery network. The Plan seeks to enhance program designs in order to provide a seamless experience for customers seeking services from both gas and electric companies. Such coordination by the Program Administrators should allow for the achievement of deeper and broader levels of

savings at customer homes and facilities, all in a more cost-effective manner. In turn, these increased savings levels, over time, will help the Program Administrators reduce their costs of providing services and provide economic and environmental benefits to all customers.

4. *Program Budgets*

The summary table below sets forth the ramp-up of energy efficiency expenditures contemplated for the implementation of this Plan. As indicated below, the Program Administrators are proposing a phased ramp-up to the 2012 annual statewide expenditure level of \$106,821,901, which represents an increase of 262% of past (2008) annual expenditures on energy efficiency. Total three-year expenditures are projected to be \$236,421,739. This ramp-up is necessary in order to ensure that a trained delivery infrastructure is in place so that high quality services continue to be provided to customers. The ramp-up also will help provide smoother bill impacts with respect to implementation of the Plan. While the expenditures on energy efficiency under the Plan are significant and will result in certain increased elements of customer bills, the net present economic value of the benefits to be achieved under the Plan is \$517,401,675. The magnitude of these benefits helps demonstrate the value of the increased energy efficiency expenditures called for in this Plan. The Program Administrators' sensitivity to issues of bill impacts is highlighted in Section II.E of the Plan.



5. *Highlights of Program Design Strategies*

The Plan sets forth detailed strategies for coordinated program implementation in the residential, low-income, and commercial and industrial (“C&I”) sectors. The detailed plans set forth in the program description section of the Plan represent the results of collaboration and cooperation among the Program Administrators (both gas and electric), Council members, interested parties, and Consultants. Notably, the proposed low-income programs were developed in collaboration with the low-income weatherization and fuel assistance program network and build upon the current successful collaborative approach to program delivery to this important customer sector. The program designs reflect comprehensive strategies that provide for:

1) greater consistency in offerings throughout the state; 2) an enhanced customer experience, including seamless delivery strategies that integrate gas and electric efforts; and 3) the delivery of state-of-the-art new technologies. The Program Administrators are devoting special focus to the challenges attendant to serving the multi-family sector and are in the process of an ongoing program enhancement and design process aiming to simplify delivery of energy efficiency services for customers living in multi-family dwellings, regardless of their rate class or whether they rent or own their home.

6. *Evaluation and Monitoring*

Recognizing that the increased savings and expenditures proposed under the Plan need to be subject to rigorous evaluation and monitoring, the Program Administrators are proposing a comprehensive and transparent approach to evaluation and monitoring. The Program Administrators seek to undertake impact and process evaluations in an open manner, inviting the participation and input of the Council and its Consultants, in order to measure savings resulting from programs and enhance the quality of program delivery. A gas-related technical potential study was completed in early 2009 and the results will be incorporated into the detailed plans for the three-year programs.

7. *Cost Recovery and Performance Incentives*

Cost recovery, including the recovery of lost base revenue (“LBR”) and performance incentives (or through implementation of a Department-approved decoupled rate structure), is a critical element of the Plan. The Plan sets forth the proposals on cost recovery that seek to utilize existing recovery mechanisms that have worked well in the field for many years and that are well understood by most customers. The Plan seek to ensure that, prior to the collection of

funds from customers, the Program Administrators have fully accessed other potential available sources of funding. The Plan allows the Program Administrators the opportunity to recover their costs and be made economically whole for aggressively pursuing sales-reducing energy efficiency efforts, as well as earn a reasonable return associated with this investment based upon their actual performance and achievement.

8. *Mid-Term Revisions*

Consistent with the Department's Order in D.P.U. 08-50-A, the Plan provides objective standards that enable the Program Administrators to retain flexibility to make ongoing revisions and enhancements after the adoption of the Plan in order to reflect in-the-field conditions, technological advances, and state-of-the-art new technologies. In general, the Program Administrators will retain the flexibility to adjust spending and add or subtract program measures; however, Program Administrators will not add a new program or terminate an existing program or change a program budget by more than 20% without prior approval by the Department, with the opportunity for full participation by the Council.

9. *Summary*

In sum, the Plan represents an unprecedented collaboration among all the Program Administrators in Massachusetts, both gas and electric, as well as with diverse interested parties, and is geared to fully comply with the bold initiatives required under the Green Communities Act. The Program Administrators thank the Council and its Consultants for all their efforts, analysis, and suggestions to date. The Program Administrators look forward to working cooperatively with the Council and other interested parties in reviewing this Plan and ensuring

that Massachusetts customers are provided with programs that are marked by excellence and innovation and produce economic and environmental benefits throughout Massachusetts.

II. THE THREE-YEAR PLAN

A. Core Benefits: Energy Savings, Greenhouse Gas Reductions, Net Economic Benefits and Progress Towards GCA Requirements and Goals

1. Energy Savings

The savings goals and program budgets set forth in this Plan are presented on an aggregate, statewide basis on a sector-level basis (*i.e.*, residential, low-income, and C&I). In the October PA-specific filings contemplated under the Act, each Program Administrator will set forth its own recommended savings and budget levels for the three-year period commencing January 1, 2010, consistent with the overall goals and budgets developed in the statewide Plan review process. The Program Administrators note that this phased process complies with the Act, which first requires the filing of a joint statewide plan by all Program Administrators in April 2009, followed in October 2009 by individual PA-specific plans, after the conclusion of the review process of the statewide plans at the Council. *See* G.L. c. 25, §§ 21(b)-21(d).

In developing today's proposed statewide goals and budgets, each Program Administrator was tasked with submitting to the full group of Program Administrators its own PA-specific proposed savings goals and budgets for the three-year period. These proposals were subject to an extensive and multi-faceted review process that allowed for adjustments to be made by all Program Administrators based not only on peer review, but also upon the very helpful presentations made at the Council meetings by the Consultants. The savings goals and budgets presented on a statewide basis by the Program Administrators today represent the results of that iterative process. It is possible that the Program Administrators' proposals may be adjusted

(either upwards or downwards) based on the iterative review process contemplated for the next several months with the Council. The Program Administrators' goal is that this Council review process, in turn, will feed into an approved final statewide Plan that the Program Administrators can use as the benchmark for their PA-specific October 2009 filings. The current schedule recommended by the Program Administrators for the Council's review of the Plan (which schedule can be adjusted as needed based upon any then-current circumstances) and the finalization of an updated state Plan is set forth in Appendix B. This schedule builds upon the recommended schedule presented to the Council by the Consultants at the April 21, 2009 Council meeting and reflects the Program Administrators' limited comments to such schedule.

While each Program Administrator is increasing its saving goals and budgets relative to historic levels, the levels of these increases will not be directly proportionate across all Program Administrators. The increases specified in the Program Administrators' October filings will reflect the unique characteristics of each Program Administrator's service area and the specific needs of its customers. For the avoidance of doubt, however, it is the Program Administrators' goal and plan that the aggregate savings goals and budgets presented individually by the Program Administrators in their October 2009 filings will be consistent with, and flowing out of, the overall goals developed in the statewide Plan review process.³ The following table summarizes, on a per sector basis, by year and in total, the annual savings goals proposed by the Program Administrators in this Plan.

³ The Act provides that Program Administrators are not required to make all changes or revisions recommended by the Council in filing their October PA-specific plans. *See* G.L. c. 25, § 21(c)-(d)(1). It is the plan and goal, however, of each Program Administrator to be able to support in full the statewide Plan that ultimately results from the Council review process. The Program Administrators seek a full consensus regarding the statewide plan, as well as unanimous Council approval. Each Program Administrator must necessarily reserve its statutory rights in the event of unexpected developments in the Council review process that it does not believe are consistent with the best interests of its customers; however, it is the goal of Program Administrators that their October filings be built upon and consistent with the statewide Plan.

SAVINGS TOTALS FOR ALL GAS PROGRAM ADMINISTRATORS

YEAR	SECTOR	Total Therms	% Increase from 2008	% Increase from 2009
Baseline 1-2008	TOTAL	8,332,899		
Baseline 2-2009	TOTAL	9,729,104	17%	
2010	Residential	4,809,455		
	Low Income	544,349		
	C&I	6,617,465		
	TOTAL	11,971,269	44%	23%
2011	Residential	5,895,854		
	Low Income	640,457		
	C&I	8,119,015		
	TOTAL	14,655,326	76%	51%
2012	Residential	7,309,200		
	Low Income	793,595		
	C&I	10,009,284		
	TOTAL	18,112,080	117%	86%
Three-Year Total: 2010-2012	Residential	18,014,509		
	Low Income	1,978,401		
	C&I	24,745,765		
	TOTAL	44,738,674		

2. *Environmental Benefits*

In addition to economic benefits, efficiency resources bring significant environmental benefits that reduce air pollution and improve air quality in Massachusetts and in the region. The efficiency programs and initiatives included in this three-year Plan are aimed at reducing the amount of natural gas required to run the Commonwealth's economy. By reducing the amount of gas consumed in all sectors of the economy, important air and water benefits are delivered. The more efficient that homes, businesses and schools are, the less energy they consume. Decreasing energy consumption results in less demand for energy from natural gas pipelines. By lowering natural gas consumption, emissions of air pollutants and greenhouse gases can be reduced.

The combustion of natural gas produces nitrogen and sulfur oxides—two of the six “criteria pollutants” defined by the national Clean Air Act and identified as air quality indicators by the U.S. Environmental Protection Agency (“EPA”). Nitrogen oxides are precursors to ozone, a primary component of summer smog. In addition, nitrogen and sulfur oxides in particulate form reduce visibility and are associated with public health problems such as asthma; both air pollutants are linked to acid rain. Curbing the amount of energy needed to run the economy reduces the amount of nitrogen and sulfur oxide pollution emitted into the atmosphere.

In addition to providing cleaner air and water for Massachusetts, the Plan's programs will provide climate benefits. Reducing the amount of natural gas needed to heat and run our homes, schools, and businesses delivers important climate benefits. Massachusetts has taken bold action by adopting the GWSA which calls for economy-wide reductions in GHGs starting in 2020, making it ever more critical to achieve climate benefits through efficiency programs.

Collectively, the programs contained in this three-year Plan are expected to provide three-year cumulative annual savings of 44,738,674 therms and lifetime savings of 833,229,996 therms. Avoiding the consumption of 833,229,996 therms of natural gas in our homes and businesses represents the equivalent of reductions of approximately 3,925,000 tons of CO₂ emissions. In addition, these programs will provide non-gas benefits such as reductions in demand for electricity, fuel oil and water use.

Under climate cap-and-trade programs such as the GWSA and a potential federal program, investment in energy efficiency is recognized as the most effective cost-containment and consumer protection tool. Investing in energy efficiency lowers energy consumption, which reduces GHGs and the demand for allowances. The result is a lower price for carbon allowances and lower overall cost of the cap and trade program.

3. *Net Benefits and Cost Effectiveness Summary with Summary Table*

The Program Administrators have projected the expected benefits and costs associated with this statewide Plan consistent with the requirements of the Department's order in D.P.U. 08-50-A. In this order, "the Department reaffirms that the Total Resource Cost test is the appropriate test for evaluation of the cost-effectiveness of ratepayer-funded energy efficiency programs."

To conduct the TRC test, Program Administrators routinely update their benefit/cost screening models to reflect new assumptions relating to program costs and benefits, the discount rate, the general rate of inflation, and avoided costs. In general, the benefit categories in the TRC test include the value of energy savings, gas and electric system benefits, and other measurable benefits (for example, participant resource benefits, participant non-resource benefits and benefits due to measurable market effects).

Costs included in the TRC test include all Program Administrator costs and program participant costs. Program Administrator costs include program implementation expenses, evaluation costs, proposed performance incentives, and the tax liability for performance incentives plus any customer contribution received. Program participant costs include initial costs incurred by the customers as a result of their participation in the program.

The benefit/cost screening model uses all of this data to calculate the present value of the program benefits and costs, and then calculates ratios of these values to produce benefit/cost ratios (“BCRs”) for the TRC test. The present value of costs and benefits is calculated over the expected duration of the useful life of the measures installed resulting from the program.

The summary table below summarizes the expected benefits, costs, and BCR for the portfolio of programs the Program Administrators propose to implement over the three-year period. For more detailed information see tables in Section II.D below.

Total Resource Cost Test, 2010-2012				
Sector	B/C Ratio	Net Benefits	Benefits	Costs
Residential	2.47	\$217,538,063	\$365,822,602	\$148,284,539
Low Income	1.22	\$12,722,184	\$70,264,948	\$57,542,764
Commercial & Industrial	3.16	\$287,141,428	\$419,773,167	\$132,631,740
GRAND TOTAL	2.53	\$517,401,675	\$855,860,718	\$338,459,042

4. *Progress Towards GCA Requirements and Goals*

i. Acquisition and Assessment of All Available Cost-Effective Energy Efficiency and Demand Reduction Resources

The Green Communities Act provides that the Plan “shall provide for the acquisition of all available energy efficiency and demand reduction resources that are cost effective or less expensive than supply.” G.L. c. 25, § 21(d) (emphasis added). The Act does not define the term “all available energy efficiency.” For the Program Administrators, determining the optimal

proposal in this regard constituted a core task in assembling the Plan. Indeed, today's filing sets forth the first three-year Plan filing ever by any Program Administrator under the Green Communities Act, and the Program Administrators expect that, over time, helpful precedent and further guidelines will be developed with respect to this fundamental aspect of the Act. The Program Administrators welcome a detailed review by the Council of its proposal and they plan to engage in iterative discussions with the Council and its Consultants in order to ensure that the Act's mandates are satisfied. The Program Administrators note that, while the Act requires the acquisition of "all" energy efficiency, the Act does not require an exact numeric level of cost-effective energy efficiency and demand-reduction resources to be acquired under the Plan; likewise, what may be deemed to be the amount of "all available" efficiency today may not be the same as what becomes available three or six years from now because of technological advances and market changes. That said, the Program Administrators respectfully submit that today's Plan, which calls for an increase, by 2012, in annual savings of nearly more than double 2008 levels and increased expenditures on energy efficiency programs of 262% when compared with 2008 expenditures, falls squarely within the appropriate range of bold effort contemplated under the Green Communities Act. In developing this proposal and assessing the issue of the acquisition of all available cost-effective energy efficiency under the Act, the Program Administrators referred to five primary sources, which are outlined below.

First, the Program Administrators referred to the mandates of the Green Communities Act, in particular, G.L. c. 25, § 25(b), which notes that the Plans should provide for a "sustained and integrated statewide energy efficiency effort." (Emphasis added.) The Program Administrators interpret the use of the term "sustained" in the Act as indicating a clear desire by the General Court that the energy efficiency efforts being undertaken pursuant to the Plan

constitute steps in a multi-year, sustained effort rather than a short-term, and likely highly leveraged, effort to obtain all available cost-effective energy efficiency in a three- or even six-year period.

Second, the Program Administrators referred to, and carefully reviewed, both the Council's Priorities Resolution and the suggested savings goals developed by the Consultants and presented to the Council, most recently at the Council's meeting of April 14, 2009. While the Program Administrators have not adopted all of the Consultants' recommendations, such recommendations have proved to be a useful touchstone and an important factor in the Program Administrators' discussions. The Program Administrators will be pleased to engage in further discussion with the Council and its Consultants as they review the Plan.

Third, the Program Administrators also referred to the Department's Order in D.P.U. 08-50-A. The Department noted in D.P.U. 08-50-A that, consistent with the Green Communities Act, the consideration of rate impacts of energy efficiency programs must be factored into the development of Plans. More specifically in D.P.U. 08-50-A, the Department stated that the Green Communities Act requires the Department to:

“consider the effect of rate increases on residential and commercial customers” when reviewing proposals for increased funding of energy efficiency activities. G.L. c. 25, § 19(a). The assessment of rate impacts from the energy efficiency programs will be important to the Department, and we expect that it will be of importance to many of the Massachusetts energy efficiency stakeholders. Therefore, consistent with the Act, and consistent with the Department's traditional review of any change in rates, charges and tariffs subject to our jurisdiction, we will require Program Administrators to include in their three-year energy efficiency plans a comprehensive and well-documented assessment of rate impacts and average bill impacts associated with their energy efficiency activities. ... The Department does not expect there to be any “bright line” or single standard that can be used to determine whether a particular rate or average bill impact associated with a particular energy efficiency plan is acceptable. Instead, we expect Program Administrators to present a comprehensive estimate of how

energy efficiency programs are likely to impact customers' rates and average bills, and describe why the estimated impacts are appropriate in light of the expected benefits of the energy efficiency programs.

D.P.U. 08-50-A at 56-57 (quotations in text). As set forth in Section II.E, the Program Administrators have analyzed billing impacts in proposing this Plan and believe that the Plan appropriately balances the need for bold action and increased activities, with the need to avoid rate continuity issues and the possible negative effects that bill impact concerns could have on the overall success of the Plan.

Fourth, in developing their target savings for the Plans, the Program Administrators referred to, among others, the following primary studies and analysis of technical potential: "Economically Achievable Energy Potential in New England," prepared by Optimal Energy, Inc. for Northeast Energy Efficiency Partnership ("NEEP"), the 2009 "Massachusetts Residential Appliance Saturation Survey" conducted by Opinion Dynamics Corporation, and "Natural Gas Energy Efficiency Potential in Massachusetts" by GDS Associates, Inc. and Summit Blue Consulting, April 2009. These studies have helped the Program Administrators identify and determine cost-effective achievable savings levels. These studies are referenced in the Bibliography attached as Appendix C and are currently available on the web at www.richmaylaw.com/eeplan (on an interim basis), and will be made available on the Council's website www.ma-eeac.org (the "Websites"). Working cooperatively with the Council, the Program Administrators plan to continue to assess the levels of achievable cost-effective energy resources.

Fifth, the Program Administrators reviewed and discussed their own experience in implementing nationally-recognized energy efficiency programs for over two decades. The Program Administrators met collaboratively on a frequent and intense basis to determine the

appropriate savings goals and budgets to propose in this Plan. Without limiting the foregoing, each Program Administrator was required to make projections for its individual service area, as well as to comment on other Program Administrators' projections and statewide projections.

As a result of this iterative and ongoing process, and after consideration of all these factors, the Program Administrators, acting by unanimous consent, are submitting this Plan and look forward to reviewing and discussing it with the Council. In the following sections, the Program Administrators provide a more detailed discussion of certain issues regarding assessing all available, cost-effective energy efficiency.

ii. Further Discussion of the Program Administrators' Assessment Activities and of Key Barriers and Challenges

For purposes of this initial statewide Plan, the Program Administrators performed a preliminary and general "assessment of the estimated lifetime cost, reliability and magnitude of all available energy efficiency and demand reduction resources that are cost-effective or less expensive than supplied." G.L. c. § 21(b)(2) (emphasis added). In particular, the Program Administrators have specifically set forth in Section II.D, the estimated costs associated with the available energy efficiency proposed for the Plan. Based upon many years of experience and study, the Program Administrators have also assessed the reliability of energy efficiency resources and note that energy efficiency resources have proven to produce persistent savings and be reliable over the extended life of installed measures; indeed, energy efficiency has been a notably reliable part of the services that Program Administrators have provided over many years. The Program Administrators have similarly provided an assessment of the magnitude of the benefits and costs associated with obtaining these resources. *See* Section II.D. The Program Administrators emphasize that this Plan reflects an initial, preliminary assessment that is general in nature and that is also the first statewide assessment being performed pursuant to the Green

Communities Act. The Program Administrators plan to work cooperatively with the Council on refining and enhancing this preliminary assessment. Without limiting future assessment activities, the Program Administrators recommend that a comprehensive technical potential study be performed in the period 2010-2012 that targets both electric and gas end uses. Such a technical potential study will be a useful tool in refining the assessment ultimately developed in the Council review process regarding this Plan and in future assessments under the Act.

iii. Key Factors, Challenges and Market Barriers

This Massachusetts statewide Plan aggressively advances energy efficiency in the Commonwealth and positions the Commonwealth as the national leader in energy efficiency investments. The Green Communities Act, signed into law on July 2, 2008, requires that electric and natural gas resource needs shall first be met through all available energy efficiency and demand reduction resources that are cost effective or less expensive than supply. In this subsection of the Plan, the Program Administrators discuss certain key factors, challenges and market barriers that have factored into their assessment of the achievable level of energy efficiency to set forth in this Plan.

- **Electric and natural gas resource needs shall first be met through all available energy efficiency and demand reduction resources that are cost effective or less expensive than supply.**
 - The Program Administrators recognize that energy efficiency investments are the fastest way to address growing energy demands. Efficiency programs can be scaled and implemented in a short period of time, often in one to three years. Energy efficiency programs and demand reduction programs reduce demand for energy, thereby also reducing GHGs. In addition to emission reductions and energy savings, demand-side

management also brings benefits of lower water use and reduced environmental damage from fossil fuel extraction. The programs and initiatives contained in this Plan outline bold action and are intended to serve as the first resource by which to meet overall energy demand. The Program Administrators developed this Plan leveraging knowledge and expertise they have gained over the past two decades delivering nationally recognized energy efficiency programs that have provided energy consumers with significant savings.

- **The acquisition plan for all available cost-effective energy efficiency recognizes the significant barriers that must be overcome in order to achieve the aggressive goals outlined in the Plan.**

- The significant ramp-up of energy efficiency savings outlined in this Plan provides a strong foundation for rapidly providing the Commonwealth and its residents (including businesses and low-income customers) with all realistically achievable energy efficiency. This Plan, which strives to obtain all realistically achievable energy efficiency, is also grounded in an understanding of market barriers and deliberately strives to bridge the significant market and policy barriers.

- **Market Barriers**

To be successful in energy efficiency, the programs must bridge the four major market barriers of awareness, affordability, accessibility and availability, each of which affects customers' adoption of energy efficiency and the ability of Program Administrators to achieve and obtain savings. This Plan outlines many

initiatives that Program Administrators believe are critical to bridging these four major market barriers.

- **Awareness** is a barrier that in the past, with capped budgets, marketing and outreach, was not encountered on a grand scale. In this Plan, there is recognition that enhanced marketing and outreach will be needed to achieve deeper and broader penetration. Deeper penetration refers to the promotion of additional cost-effective technologies and strategies to capture comprehensive, whole-building savings among the traditional base of expected program participants. Achieving deeper market penetration requires raising participants' awareness and understanding of the value of investing in additional measures that create increased savings per participant. In addition to expanding marketing and incentive strategies, this Plan incorporates other strategies to overcome awareness barriers, with the goal of dramatically increasing the level of participation among eligible customers, *i.e.*, making participation broader. Broader penetration can include outreach to traditionally hard-to-reach customer groups, such as groups where English is not the first language.
- **Availability** is a barrier when manufacturers either do not produce or do not effectively market significant quantities of the energy efficiency products. Availability may be constrained also by the availability of workforce or delivery mechanisms. The challenge for manufacturing in the energy efficiency sector is to respond not only to the Commonwealth's efficiency increases, but also to such increases across the nation. This challenge is compounded by the economic crisis which is hindering manufacturers from making additional investments. From a workforce perspective, Program Administrators recognize that additional workforce must be trained and deployed to effectively deliver the programs. This is not an insignificant barrier.
- **Accessibility** is another market barrier which refers to the customers' access to the product. To mitigate this barrier, Program Administrators must connect with mid-stream market actors, such as distribution retailers, to help ensure that products are displayed and stocked in sufficient quantity. The program descriptions set forth in this Plan work with key market actions, including campaigns through training and marketing.
- **Affordability** is a market barrier resulting from the initial cost of energy efficiency solutions. Given the current economic environment, Program Administrators are concerned that affordability is a major barrier and one that has become difficult to predict as customer buying patterns have changed dramatically with the advent of more limited

credit. This Plan attempts to mitigate the affordability barrier through the use of incentives and loan mechanisms.

- **Policy Barriers Regarding Energy Efficiency**

In addition to market barriers, it is important to also understand the policy barriers that need to be overcome to secure all available energy efficiency. These barriers are more subtle, but include economic, sustainability, and regulatory concerns.

- **Economic**

Economic concerns are particularly relevant in today's environment. The Program Administrators recognize the Plan's tremendous value, but also understand that it is important to consider the rate impacts of the ramp-up of these programs. Given the societal sensitivity to the cost of the programs, this Plan discusses the associated preliminary expected bill impacts of program implementation. Detailed bill impact analysis for each Program Administrator will be set forth in the PA-specific Plans to be filed in October and will contain the detailed information required by the Department's Order in D.P.U. 08-50-A.

- **Sustainability**

Likewise, the sustainability of the programs is an important consideration. Many advocates stress that in achieving all available energy efficiency, the annual efforts must be sustainable for the long term for the health of the economy, workforce and infrastructure needed to support energy efficiency.

- **Regulatory Concerns**

Finally, support of strong regulatory frameworks that complement the Program Administrators' ramp-up of programs is a critical function. These

frameworks create a healthy regulatory infrastructure by which Program Administrators can confidently and boldly advance programs knowing that there is clarity in the regulatory rules and process and the opportunity to align shareholder objectives with public policy objectives. The Program Administrators will look to the Council, the DOER, the Department, and other interested stakeholders for a continuation of their strong record of clear guidance and consistent policy making.

- **Assessing Technical Potential**

As noted in above, the Program Administrators used multiple resources, as one of a variety of methods, to build a robust understanding of the potential for all available cost-effective energy efficiency and demand reduction resources. These resources referenced and analyzed by the Program Administrators include the materials and data amassed by the Consultants, the NEEP 2005 study of “Economically Achievable Energy Efficiency Potential in New England”, the 2009 “Massachusetts Residential Appliance Saturation Survey” conducted by Opinion Dynamics Corporation and “Natural Gas Energy Efficiency Potential in Massachusetts” by GDS Associates, Inc. and Summit Blue Consulting, April 2009. *See Appendix C and the Websites.*

These studies all are grounded in the definition of technical potential as “the complete penetration of all measures analyzed in applications where they are deemed technically feasible from an engineering perspective. The “Technical Potential” does not necessarily take into account cost-effectiveness, budget

constraints, or whether homeowners or businesses are willing to undertake energy-saving actions or investments.”⁴

The “Economically Achievable Energy Efficiency Potential” is defined as that portion of the Technical Potential that is cost-effective (either from a customer, societal, or total resources perspective). This three-year Plan aggressively targets all cost-effective energy-efficiency resources, but the Plan is also grounded by realistic constraints to program implementation such as market and policy barriers. Such barriers lead to this Plan’s focus on obtaining all realistically achievable potential in a manner that allows for a sustained effort and that does not create unacceptable short term bill impacts.

Realistically achievable potential takes “into account impediments to program implementation, including financial, political, and regulatory barriers that are likely to limit the amount of savings that might be achieved through energy efficiency and demand response programs.”⁵ It therefore recognizes both market and policy barriers. These barriers were carefully assessed by Program Administrators from two perspectives in developing the Plan. First, after almost two decades of successfully implementing energy efficiency programs, the Program Administrators have an in-depth understanding of these barriers and were able to integrate their knowledge of both market and policy barriers with the various studies used to inform the Plan. This careful review of different types of helped derive the Program Administrators’ assessment of all available energy

⁴ Economically Achievable Energy Efficiency Potential in New England, May 2005; prepared by Optimal Energy, Inc. for Northeast Energy Efficiency Partnership, Inc.

⁵ Assessment of Achievable Potential from Energy Efficiency and Demand Response Programs in the U.S. (2010-2030), January 2009; Electric Power Research Institute.

efficiency. Second, knowledge of the market and policy barriers is critical when designing programs, as these programs must address and mitigate these barriers. From that perspective, the program incentive design, delivery models, and support infrastructure developed by the Program Administrators and discussed in Section II.F of this Plan are grounded in a thorough understanding of applicable market and policy barriers.

5. *Demand Response Issues*

The Program Administrators are working to incorporate demand responsive measures in all offerings, as appropriate, over the term of this Plan. A number of these resources are detailed in the program design sections found in Section II.F below. In addition, as technical assessment studies are undertaken for customers, the studies will also address how to make the proposed energy efficiency measure demand responsive through automation of end-use devices such as thermostats and modifying gas management algorithms within any energy management software for HVAC, and other process applications. In addition, the studies would identify other options available for customers to manage their gas use in the event that the customer takes advantage of varying pricing options from energy suppliers. In short, enabling an energy efficiency measure to be demand responsive will be less expensive doing it at the time the measure is installed versus having to retrofit or re-program energy management software in the future.

6. *Competitive Procurement*

Historically, the Program Administrators have utilized the competitive procurement process for retaining contractors and vendors for activities including but not limited to: audit delivery; quality control; monitoring and evaluation; marketing and website design. The Program Administrators are committed to utilizing competitive procurement practices to the

fullest extent throughout the implementation of this Plan. Therefore, consistent with past practice, the Program Administrators anticipate that they will issue requests for proposals to engage the appropriate third-party vendors to provide energy efficiency activities, will consider the input and direction of the Council and its Consultants with respect to the retention of necessary Consultants, and where necessary will work collaboratively to ensure that energy efficiency services have been procured in a manner that minimizes cost to the ratepayers, while maximizing the associated benefits of that investment.

7. *The Special Inclusion of Blackstone Gas*

The Program Administrators are pleased that Blackstone Gas Company (“Blackstone”) is a signatory to the Plan. Blackstone is uniquely situated among all the Program Administrators. It is a very small utility, with only approximately 1,500 customers in total. Historically, other than for participation in the statewide RCS program, Blackstone has not been a participant in comprehensive energy efficiency efforts and has not offered material energy efficiency services to its customers. On a going-forward basis, it is anticipated that Blackstone will become a member of the GasNetworks[®] collaborative and will participate in GasNetworks’ programs. Blackstone is also exploring entering a contractual arrangement to have additional services performed and will keep the Council informed of developments in this regard. The inclusion of Blackstone in the Plan reflects the Program Administrator’s goal of undertaking a true, statewide effort to touches all interested parties.

8. *Gas and Electric Program Integration and Coordination; Seamless Delivery*

i. Background/General Overview

In this section of the Plan, which is common to both the statewide electric Plan and the statewide gas Plan, the Program Administrators describe the approaches contemplated under the Plans to provide seamless program delivery from the customer's perspective and an optimal level of program integration, collaboration, and coordination. In preparing this section, the Program Administrators primarily referred to three sources: 1) the Act; 2) the Council's Priorities Resolution of March 24, 2009; and 3) their own, in-the-field experience. The Program Administrators also considered helpful presentations from the Consultants to the Council, individual Councilor's remarks at Council meetings, and input from various parties in working groups and internal discussions. Based upon this review, the Program Administrators are proposing approaches and actions, some of which will be phased in over time, to integrate and coordinate gas and electric program offerings in an enhanced manner, with the ultimate (and related) goals of simplifying participation for customers and increasing energy savings in a cost-effective manner. The Program Administrators note that these approaches and actions will continue to be refined before the filing of PA-specific Plans in October, and the Program Administrators plan to continue to work collaboratively with the Council and its Consultant on these matters, both now and during the three-year term of the Plans.

a) *The Act*

The core provisions of the Act that relate to program integration are set forth below. The Act is explicit that gas programs are to be administered by the gas Program Administrators and electric programs are to be administered by electric Program Administrators. In particular, with respect to electric programs, the Act provides:

The programs shall be administered by the electric distribution companies and by municipal aggregators with energy plans certified by the Department under Subsection (b) of Section 164 of Chapter 164.

. . . In authorizing such programs, the Department shall ensure that they are delivered in a cost-effective manner capturing all available efficiency opportunities, minimizing administrative costs to the fullest extent practicable and utilizing competitive procurement processes to the fullest extent practicable

G.L. c. 25, § 19(a) (emphasis added).

Similarly, with respect to gas programs, the Act provides:

The Department may approve and fund gas energy efficiency programs proposed by gas distribution companies including, but not limited to, demand side management programs. Energy efficiency activities eligible for funding under this section shall include combined heat and power and geothermal heating and cooling projects. Funding may be supplemented by funds authorized by Section 21. **The programs shall be administered by the gas distribution companies.** In authorizing such programs, the Department shall ensure that they are delivered in a cost-effective manner capturing all available efficiency opportunities, minimizing administrative costs to the fullest extent practicable and utilizing competitive procurement processes to the fullest extent practicable.

G.L. c. 25, § 19(a) (emphasis added).

The Act goes further with respect to integration and coordination and specifically provides:

The Council shall, as part of the approval process by the Department, seek to maximize net economic benefits through energy efficiency and load management resources and to achieve energy, capacity, climate and environmental goals through **a sustained and integrated statewide energy efficiency effort.** . .

The Council shall, as part of its review of plans, examine opportunities **to offer joint programs** providing similar efficiency measures that save more than 1 fuel resource **or to coordinate programs** targeted at saving more than one fuel resource. Any costs for joint programs shall be allocated equitably among the efficiency programs.

G.L. c. 25, § 22(b) (emphasis added).

This statutory language indicates the clear intention of the General Court to require: (1) that the Plans build upon the expertise developed by the Program Administrators; and (2) that the gas and electric Program Administrators are responsible for the implementation of gas and electric programs under the Act. The Act does not require (or contemplate) that a single entity will be responsible for implementation of all programs. The Council is tasked with seeking to achieve a “sustained and integrated statewide energy efficiency effort” and ensuring that opportunities “to offer joint programs” and “to coordinate programs” are fully examined. The Program Administrators’ proposals set forth below seek to build upon, and are consistent with, this explicit statutory guidance.

b) *The Council’s Priorities Resolution*

In its Priorities Resolution adopted on March 24, 2009, the Council provided guidance to the Program Administrators in terms of its goals regarding program integration and seamless delivery. Most specifically, in Section 2 of its Priorities Resolution, the Council stated:

In order to plan for the successful on-going attainment of the savings goals derived from the Green Communities Act, the PAs are be expected to develop strategies to provide comprehensive treatment and to acquire deep savings in customer facilities. **The Council also expects the PAs to develop and implement a comprehensive outreach, communication, and marketing strategy to inform and encourage program participation** and to support the development of the infrastructure necessary to provide these efficiency services.

Priorities Resolution, Section 2 (emphasis added).

In section 22 of its Priorities Resolution, the Council further stated that:

The PAs shall strive to maximize seamless delivery to the customer, without duplication or complexity, regardless of a given property’s rate class, territory or utility type by:

- Simplifying the number of programs in which a property can participate and instead develop comprehensive single-point programs that take a whole building approach to energy savings, while seamlessly integrating electric and gas efficiency measures into one program.
- Streamlining program administration so every “property” is required to fill out only one application that encompasses gas and electric programs and is blind to a property’s rate class or territory.
- Developing consistency and coordination across service territories so that entities with multiple locations across the Commonwealth receive program services (gas, electric and some renewable) in a manner that reduces administrative burdens.
- Implementing inter-utility, inter-fuel type, and inter-rate class funding mechanisms which enable single point programs for properties that are served by two Program Administrators, properties that have multiple rate class meters, and/or properties that are participating in whole-building approach programs.
- **Including a shared chapter in the gas and electric plans that describes how programs specifically integrate gas and electric initiatives to maximize overall utility savings.**

See Priorities Resolution, Section 25 (emphasis added).

The Program Administrators have sought to be responsive to these priorities in their proposals, noting that a number of these goals will be approached in a phased effort that will necessarily take time to succeed fully. Where the Program Administrators have points of amplification with respect to certain of these specific goals of the Council, they are set forth below.

c) *The Experience of the Program Administrators*

Gas and electric Program Administrators have historically engaged in coordinated and integrated activities to serve common customers. In the C&I sector, such activities, while productive, have been less formal and approached on individual basis, typically involving extensive efforts to serve large customers in a coordinated fashion. These efforts have resulted in some notable successes throughout the Commonwealth.⁶ The Program Administrators seek to build on these successes and the lessons learned in these projects as they move to a more standardized approach to integration and coordination. In the residential sector, the Program Administrators, working cooperatively with the DOER, have fully coordinated and integrated several activities, most notably in the development and operation of the residential statewide RCS audit program under the “MassSAVE” umbrella. The residential new construction program and statewide low-income program are also award-winning approaches to statewide consistency and market development of whole building performance in both the new construction and retrofit markets. The Program Administrators are seeking to leverage this experience and create higher quality and more comprehensive approaches geared to providing a seamless experience from the customer’s perspective.

ii. Benefits of Enhanced Integration and Coordination

The core potential benefits of increased integration and coordination of gas and electric programs include:

- Providing better customer service, including fuel blind recommendations and priorities for energy savings and simplified application processes

⁶ Examples of successful joint gas and electric projects include, without limitation, the Hampden County Sheriff’s Office Project, the Greater Lawrence Sanitary District Project and the Medfield Schools Project.

- Simplified consistent messaging to customers and other market actors
- Economies and efficiency in program delivery
- Capturing more comprehensive savings at participating facilities
- Improved cost-effectiveness analysis that ensures all energy and non-energy benefits are identified and accounted for
- Improved BCRs that reflect benefits of both gas and electric measures

By ensuring that customers understand all of the options for energy efficiency available- both gas and electric- the Program Administrators believe that customers will be encouraged to implement a more comprehensive package of measures, maximizing energy savings. Once the programs are fully implemented, customers and the practitioners designing buildings will have knowledge of and access to all program offerings through one source at the beginning of the equipment or systems selection process. For example, in a new construction or renovation project, a lead might come through a vendor of one discipline, for example an electric contractor seeking information from the local electric company on incentives for lighting systems for a customer that heats with gas. At the time of such contact, the electric company should be ready to present identifiable opportunities for deeper electric savings, as well as pre-specified opportunities for gas savings. The overall project would be scoped by the gas and electric Program Administrators in a coordinated fashion that is seamless to the customer to address potential savings, not only from lighting systems, but also from building envelope mechanical systems, space conditioning and water heating equipment, and HVAC measures. The customer would benefit from the experience and offerings of both gas and electric Program Administrators, but would do so in an integrated, one-stop process.⁷ This goal will take time to

⁷ It is a goal of the Program Administrators that vendors of energy efficiency services will be trained and charged with identifying multiple savings opportunities in a customer site, regardless of fuel, thereby increasing the number of savings opportunities identified and the levels of savings achieved.

achieve, and numerous details need to be reviewed and finalized, but the Program Administrators are confident that such integration and coordination can be realized.

iii. Specific Approaches and Actions Regarding Gas and Electric Program Integration and Coordination

In order to achieve enhanced program integration and coordination, the Program Administrators are proposing the following initial approaches and activities. As noted above, these approaches and activities will be refined and further developed for the PA-specific Plans to be filed in October:

a) *Integration and Coordination Working Group*

The Program Administrators are establishing a standing working group, including a member from each Program Administrator, to work collaboratively over the three-year term of the Plan to address integration and coordination efforts. Members of the Council (and the Council's Consultants) will be invited to all open meetings of this working group. The primary functions of this working group will be to ensure that: (a) all Program Administrators remain abreast of the key energy efficiency activities of other Program Administrators; (b) energy efficiency implementation activities and efforts by all Program Administrators are integrated and coordinated to the optimal extent; (c) statewide marketing and media campaigns are coordinated with a focus on integrated easy-to-understand communications to customers; and (d) best practices and integration/coordination efforts in other jurisdictions are reviewed and discussed. The working group would be consensus-based and would not have the authority to bind any individual Program Administrators without their express written consent. Among other models, the Program Administrators would look to the GasNetworks group for guidance, particularly GasNetworks' success in developing consistent program offerings in the gas industry that are

common across Program Administrators and that utilize common application forms, rebate levels and marketing materials (including a common GasNetworks website).

b) *Specific Building Blocks*

For broad-based programs that cover multiple end-uses and include custom measures, developing statewide consistent programs that promote both gas and electric measures will entail developing, over time, the following primary building blocks to achieving integration and coordination:

- Consistent prescriptive applications where appropriate, regardless of technology
- A consistent incentive structure and design (*e.g.*, percentage of incremental cost) to the extent reasonable.
- A single customer offer for a package of measures, for gas and electric energy efficiency opportunities.
- A single set of program rules regardless of fuel (*e.g.*, technical assistance co-pay offer, TRC cost-effectiveness guidelines, payback limits, eligibility, etc.) Electric measures that save oil should include those oil savings in screening for cost-effectiveness in accordance with the D.P.U. 08-50-A screening guidelines.
- A single statewide tool for measure and project screening, with the only differences being transmission and distribution (“T&D”) avoided capacity costs and, perhaps, utility-specific line losses.
- For certain efforts or initiatives that are end-use or measure specific (*e.g.*, Cool Choice and certain outreach efforts to trade allies and manufacturers), there likely will be (and should be) some gas vs. electric differences. Wherever it makes sense, the Program Administrators will explore integrating these initiatives; if they are kept separate (*i.e.*, as separate gas and electric programs), they should appear as a consistent part of the broader effort, with the same look, feel and incentive strategies.
- Tracking systems for Program Administrators do not need to be integrated (although the Program Administrators’ data collection is generally consistent and reporting capabilities are generally comparable); what is important is that they be invisible to customers and upstream actors and not impact program participation.
- Analyzing upstream marketing and distribution strategies to determine whether or not they can be merged into a single approach; the Program Administrators seek to focus on

increased consistency and integrated approaches with trade allies, manufacturers, market actors and market channels.

- Developing guidelines for allocating program costs among different fuel customers for joint programs where benefits accrue to each energy system.
- Consistent messaging to customers.

Although these core building blocks will take time to develop, it is the Program Administrators' goal that each of these building blocks will have been fully developed during the initial three-year implementation period covered under this Plan.

c) *Marketing Efforts*

A critical component of integration and seamless delivery is consistent messaging. A statewide website (marketing portal) and marketing approach to make customers aware of program offerings will minimize the market confusion that can result from competing advertising campaigns that may overlap in the mass media. The Program Administrators have already initiated the process to develop and operate a central web-based site that allows customers to gain access to all relevant information, applications and forms and expect that the site will be operational in 2010. In addition, individual Program Administrators (and, likely, the GasNetworks group) will continue to implement their own complementary marketing initiatives to reinforce and support the overall statewide marketing strategy as well as address unique local conditions and/or sub-markets in their service areas. These individual activities will be undertaken in consultation with other Program Administrators in order to maintain good communications, promote the statewide efforts, and avoid inadvertent inconsistent messaging.

d) *Other Core Principles*

The Program Administrators emphasize the following additional core principles regarding integration and coordination:

- A single entity for program implementation is not required for successful program integration and coordination. The Act is clear that gas and electric Program Administrators should be responsible for administering their respective programs, building upon both their unique relationships with their customer base and years of experience and deep knowledge in the energy efficiency field that ultimately benefits customers and enhances programs. What is essential is that gas and electric Program Administrators coordinate their activities and pool their knowledge and expertise so that customers enjoy a seamless, integrated process.
- Customers must always be able to turn to their local gas or electric company or other Program Administrator (for example, the Cape Light Compact) for the provision of energy efficiency services, and low-income customers must always be able to turn to their local low-income weatherization and fuel assistance program network in addition to their local Program Administrators. As integration and coordination increases, it is important that a customer (perhaps most pointedly, a large commercial or industrial customer) retain the ability to contact their designated account representative for help in developing customized services that best meet the customer's needs. Indeed, to ensure maximum customer uptake, multiple customer channels should be preserved, including direct contact with the Program Administrator. Program Administrators have established strong, long-term relationships with their customers, and maintain a robust understanding of their customers' business requirements. This strong understanding often results in a natural opportunity to promote programs in a customized fashion that is meaningful to customers, particularly large customers.
- Program Administrators need to maintain the ability to provide direct and responsive service to any customer (from a small residential customer to the largest industrial customer) who reaches out to them for assistance. Likewise, they must be able to serve customers who may want to undertake only certain measures (or aspects of an energy efficiency program) at a given time.
- Program Administrators need the flexibility to continue to create innovative processes and programs. Increased integration should in no way inhibit the creativity of Program Administrators, in particular with respect to the development and implementation of pilot programs. Program Administrators should be able to propose innovative pilot efforts that are not fully coordinated or integrated with other statewide activities. Indeed, a key goal of such pilots is that they yield data as to whether the approach explored in the pilot should be implemented on a larger, statewide scale.
- As Program Administrators increase integration, they will need to document the costs associated with implementing the integration, whether from manual work-arounds, or automated solutions, as well as any increased efficiencies. This full understanding of costs and benefits will ensure that the best decisions are made with respect to delivering seamless service with full transparency.

- The Program Administrators will seek to make their efforts more seamless from the perspectives of vendors and market actors, as well as customers.
- In working on integration and coordination matters, the Program Administrators will devote a specific focus to multi-family program delivery matters. On April 15, 2009, and April 16, 2009, the Program Administrators convened a multi-family program workshop attended by Council members, customers, vendors and other stakeholders in the energy efficiency community. A key component of the workshop included an assessment of customer needs, where issues such as integration and coordination of gas and electric program efforts and providing a seamless customer experience were discussed and documented. The information gathered at the workshop will be used by the Program Administrators and the Consultants in ongoing efforts to develop an enhanced statewide approach to gas and electric multi-family programs.

iv. Conclusion and Long-Term Goals

The long-term goal of the Program Administrators is to provide a consistent set of statewide programs and strategies that can be delivered to customers in a coordinated fashion that ensures seamless service, regardless of whether the customer is served by a combined gas/electric utility, municipal aggregator, by different gas and electric utilities or has facilities or projects in multiple Program Administrator service areas. The Program Administrators will explore all reasonable avenues to achieve this goal, potentially including providing services under contract to other Program Administrators in unique circumstances. There may be areas or initiatives where some diversity in approach will be appropriate based on unique service territory characteristics, or will be useful in developing a longer term approach (*e.g.*, utilizing different incentive structures for certain new programs in different areas for a finite time period to see if one of several approaches has better success), but such variances are expected to be limited.

For this Plan, the intent is to establish statewide goals and budgets based on current programs and new initiatives in progress. The PA-specific plans due in October will contain more detail on integration and coordination. More specifically, the Program Administrators will continue to work on approaches and activities for achieving integration and enhanced

coordination and further articulate strategies (with a special focus on multi-family program efforts) for achieving these goals, along with a more refined schedule for such activities. The Program Administrators plan to develop this more refined schedule by June 2009 (consistent with electric Program Administrators' metrics). The Program Administrators will work collaboratively with the Council and other interested parties on advancing the goals of integration and coordination.

Achieving these goals will take time. In each of the next three years, the Program Administrators expect to see increased consistency in: (1) participation requirements; (2) available core services and measures; (3) conditions, exclusions and limits; and (4) incentive amounts and/or calculations.

9. *Progress Towards Other MA Policy Goals/Requirements*

Although this Plan is directed primarily at the mandates of the Green Communities Act, the Program Administrators are cognizant of the role that the statewide electric and gas efficiency investment plans occupy in the Commonwealth's broader, historically ambitious statutory scheme and ambitious policy goals. As noted in the Executive Summary, on August 13, 2008, shortly following the enactment of the Green Communities Act, Governor Patrick signed the GWSA and the Green Jobs Act. Taken together, these legislative enactments reflect the Commonwealth's commitment to climate protection and its leadership in promoting clean and renewable energy. The Program Administrators welcome the continued opportunity to design and implement innovative programs that promote the Commonwealth's goals of promoting energy efficiency, decreasing GHGs, and spurring job creation in the clean energy sector.

B. Funding Sources

The Program Administrators project funding the energy efficiency efforts described herein from collections from the fully reconciling funding mechanism required under the Act and discussed in Section II.J below. The Program Administrators will also explore other possible means of funding these efforts, such as economic stimulus funds.

C. Program Budgets and Budget Categories

The program budgets set forth in Table II.C.1 below are presented on an aggregate, statewide basis by sector (*i.e.*, residential, low-income, and C&I). These budgets reflect an unprecedented rapid increase in the energy efficiency funding in the Commonwealth needed to support the aggressive savings goals outlined in this Plan. For example, the statewide budget for the residential sector increases 106% from 2010 to 2012. In the low-income sector, the budget increases 144% from 2010 to 2012. Similarly, the C&I budget increases 81%.

In the October PA-specific filings contemplated under the Act, each Program Administrator will set forth its individual proposed budget levels for the three-year period commencing January 1, 2010, consistent with the overall goals developed in the statewide Plan review process.

Budget categories

Consistent with the DOER's 225 CMR 11.00 "Guidelines Energy Efficiency Oversight and Coordination," dated June 2004, the Program Administrators have developed their budgets using the following categories:

- **Program Planning and Administration (“PP&A”).** The funds in the PP&A budget category provide for all in-house and outsourced costs associated with planning activities and program administration.
- **Marketing and Advertising.** This budget provides funds for all in-house and outsourced costs associated with marketing activities such as the development and implementation of advertising campaigns that inform customers about energy efficient products and services and other special energy education efforts.
- **Customer Incentive.** The budget dollars in this category fund customer incentive costs (*e.g.*, rebates) needed to overcome market barriers.
- **Sales, Technical Assistance & Training.** The function of the dollars budgeted in this category is to provide for all in-house and outsourced costs associated with implementation activities, including inspections and technical assistance, and all costs related to delivery of the program.
- **Evaluation & Market Research.** Budgeted dollars in this category fund all in-house and outsourced costs associated with evaluation activities, including costs related to cost-effectiveness evaluation, market research (*e.g.*, baseline studies, market assessments, surveys), impact and process evaluation reports, and other costs clearly associated with evaluating the program.
- **Performance Incentive.** This budget category funds the performance incentive that can be earned by the electric distribution companies if they meet established goals.

1. *Summary Table*

Program Administrator Budget, 2010 (1)									
Program	Program Costs								
	Program Planning and Administration	Marketing and Advertising	Participant Incentive	Sales, Technical Assistance & Training	Evaluation and Market Research	Total Program Costs	Performance Incentive (2)	Lost Base Revenue (3)	Total Budget (4)
Residential	\$2,181,658	\$1,717,878	\$13,986,412	\$2,288,597	\$625,082	\$20,799,626	\$1,587,684	\$2,430,471	\$24,817,781
Low Income	\$925,246	\$340,458	\$6,793,058	\$1,939,959	\$327,259	\$10,325,980	\$849,557	\$294,319	\$11,469,856
Commercial & Industrial	\$2,176,609	\$753,003	\$11,468,388	\$2,330,660	\$499,289	\$17,227,948	\$1,417,388	\$2,135,728	\$20,781,064
GRAND TOTAL	\$5,283,512	\$2,811,339	\$32,247,858	\$6,559,216	\$1,451,630	\$48,353,554	\$3,854,629	\$4,860,518	\$57,068,701

Program Administrator Budget, 2011 (1)									
Program	Program Costs								
	Program Planning and Administration	Marketing and Advertising	Participant Incentive	Sales, Technical Assistance & Training	Evaluation and Market Research	Total Program Costs	Performance Incentive (2)	Lost Base Revenue (3)	Total Budget (4)
Residential	\$2,959,225	\$2,391,016	\$21,955,403	\$3,062,599	\$1,053,464	\$31,421,708	\$2,452,186	\$1,225,199	\$35,099,093
Low Income	\$1,438,692	\$589,225	\$11,636,334	\$3,374,856	\$656,750	\$17,695,857	\$1,453,712	\$243,378	\$19,392,946
Commercial & Industrial	\$2,672,945	\$923,748	\$15,514,029	\$2,830,000	\$741,233	\$22,681,954	\$1,866,099	\$1,070,218	\$25,618,271
GRAND TOTAL	\$7,070,862	\$3,903,989	\$49,105,766	\$9,267,455	\$2,451,447	\$71,799,519	\$5,771,996	\$2,538,795	\$80,110,310

Program Administrator Budget, 2012 (1)									
Program	Program Costs								
	Program Planning and Administration	Marketing and Advertising	Participant Incentive	Sales, Technical Assistance & Training	Evaluation and Market Research	Total Program Costs	Performance Incentive (2)	Lost Base Revenue (3)	Total Budget (4)
Residential	\$3,719,242	\$3,100,801	\$30,486,254	\$3,874,866	\$1,476,085	\$42,657,249	\$3,363,445	\$1,432,190	\$47,452,884
Low Income	\$1,940,526	\$832,225	\$16,619,535	\$4,819,702	\$964,703	\$25,176,692	\$2,071,349	\$316,042	\$27,564,083

Commercial & Industrial	\$3,392,510	\$1,316,023	\$20,847,576	\$4,455,082	\$1,088,521	\$31,099,712	\$2,558,621	\$1,236,221	\$34,894,554
GRAND TOTAL	\$9,052,278	\$5,249,049	\$67,953,365	\$13,149,651	\$3,529,309	\$98,933,652	\$7,993,416	\$2,984,453	\$109,911,521

Program Administrator Budget, 2010-2012 (1)									
Program	Program Costs								
	Program Planning and Administration	Marketing and Advertising	Participant Incentive	Sales, Technical Assistance & Training	Evaluation and Market Research	Total Program Costs	Performance Incentive (2)	Lost Base Revenue (3)	Total Budget (4)
Residential	\$8,860,124	\$7,209,695	\$66,428,069	\$9,226,062	\$3,154,631	\$94,878,583	\$7,403,315	\$5,087,860	\$107,369,758
Low Income	\$4,304,464	\$1,761,908	\$35,048,927	\$10,134,518	\$1,948,712	\$53,198,529	\$4,374,618	\$853,739	\$58,426,885
Commercial & Industrial	\$8,242,064	\$2,992,774	\$47,829,992	\$9,615,742	\$2,329,042	\$71,009,615	\$5,842,108	\$4,442,166	\$81,293,889
GRAND TOTAL	\$21,406,652	\$11,964,377	\$149,306,989	\$28,976,322	\$7,432,386	\$219,086,726	\$17,620,041	\$10,383,766	\$247,090,532

Notes:

- (1) Refer to common definitions set forth above in this section.
- (2) Values listed in this table represent pre-tax performance incentive amounts. See Section II.I. Performance Incentives for supporting calculations.
- (3) Incremental LBR only. These numbers will not correspond with the total LBR in Table II. J. Cost Recovery.
- (4) Total PA Budget is the sum of Total Program Costs, Performance Incentives, and LBR.
- (5) Neither this table nor any subsequent tables contain budget data for Blackstone Gas. Blackstone's programs have not yet been sufficiently developed to be included at this time, but Blackstone is working on determining this data. Due to Blackstone's extremely small customer base, Blackstone's savings and costs will not have a material affect on the information presented herein.

2. *Summary Table Showing Percentage Increases from 2008-2012*

This table shows an alternative presentation to the budget data, and includes data showing percentage increases in budgets from 2008 and 2009 to each year of the Plan, without the inclusion of LBR amounts.

BUDGET TOTALS FOR ALL GAS PROGRAM ADMINISTRATORS

YEAR	SECTOR	PPA	Marketing and Advertising	Customer Incentive	Sales, Tech Assis & Training	Evaluation and Market Research	Performance Incentive	TOTAL	% Increase from 2008	% Increase from 2009
Baseline 1-2008	TOTAL	NA	NA	NA	NA	NA	NA	\$29,513,182		
Baseline 2-2009	TOTAL	NA	NA	NA	NA	NA	NA	\$36,518,230	24%	
2010	Residential	\$2,181,658	\$1,717,878	\$13,986,412	\$2,288,637	\$625,083	\$857,275	\$22,387,352		
	Low Income	\$925,245	\$340,457	\$6,793,058	\$1,939,904	\$327,258	\$392,503	\$11,175,479		
	C&I	\$2,176,609	\$753,004	\$11,468,388	\$2,330,675	\$499,289	\$638,970	\$18,645,352		
	TOTAL	\$5,283,512	\$2,811,339	\$32,247,858	\$6,559,216	\$1,451,630	\$2,008,873	\$52,208,183	77%	43%
2011	Residential	\$2,959,225	\$2,391,016	\$21,955,403	\$3,062,599	\$1,053,464	\$1,019,493	\$33,873,894		
	Low Income	\$1,438,692	\$589,225	\$11,636,334	\$3,374,856	\$656,750	\$452,328	\$19,149,569		
	C&I	\$2,672,945	\$923,748	\$15,514,029	\$2,830,000	\$741,233	\$712,463	\$24,548,053		
	TOTAL	\$7,070,862	\$3,903,989	\$49,105,766	\$9,267,455	\$2,451,447	\$2,324,657	\$77,571,515	163%	112%
2012	Residential	\$3,719,242	\$3,100,801	\$30,486,254	\$3,874,866	\$1,476,085	\$1,250,467	\$46,020,694		
	Low Income	\$1,940,526	\$832,225	\$16,619,535	\$4,819,702	\$964,703	\$581,186	\$27,248,041		
	C&I	\$3,392,510	\$1,316,023	\$20,847,576	\$4,455,082	\$1,088,521	\$843,816	\$33,658,334		
	TOTAL	\$9,052,278	\$5,249,049	\$67,953,365	\$13,149,651	\$3,529,309	\$2,839,603	\$106,927,068	262%	193%
Three Year Total: 2010-2012	Residential	\$8,860,125	\$7,209,696	\$66,428,069	\$9,226,102	\$3,154,632	\$3,127,234	\$102,281,939		
	Low Income	\$4,304,464	\$1,761,907	\$35,048,927	\$10,134,463	\$1,948,711	\$1,426,016	\$57,573,089		
	C&I	\$8,242,064	\$2,992,775	\$47,829,992	\$9,615,757	\$2,329,043	\$2,195,250	\$76,851,738		
	TOTAL	\$21,406,652	\$11,964,377	\$149,306,989	\$28,976,322	\$7,432,386	\$6,748,500	\$236,706,767		

D. Net Benefits And Cost Effectiveness Analysis

The gas Program Administrators have used the TRC test, as required and approved by the Department in its order in D.P.U. 08-50-A, to analyze the cost effectiveness of the gas energy efficiency programs proposed in this Plan on an aggregate, by sector basis for the years 2010, 2011 and 2012.

1. *General Cost/Benefit Variables*

The general costs and benefits included in a TRC test by the gas Program Administrators are summarized below:

i. Benefits

a) *Energy System Benefits*

- **Avoided Gas Supply Costs** - The avoided gas supply cost factors used in these cost-effectiveness determinations are based on the Avoided Cost of Gas Delivered to Retail Customers in Northern and Central New England by End Use (Gas Delivered via Tennessee Gas Pipeline) as published in Exhibit B-6 in the *Avoided Energy Supply Costs in New England 2007 Final Report*, prepared for: Avoided-Energy-Supply-Component (AESC) Study Group, by: Synapse Energy Economics, Inc., August 10, 2007.

b) *Program Participant Benefits*

- **Participant Resource Benefits** - to account for reduced consumption of gas, electricity, water, and other resources as a result of the implementation of energy efficiency programs and calculated as the product of (a) the reduction in consumption of gas, electricity, water, and other resources, and (b) avoided costs factors for each of these

resources. To the greatest extent practical, common assumptions regarding savings per measure/participant, measure lives, etc. have been used with sources identified and documented)

- Participant Non-Resource Benefits including: reduced costs for operation and maintenance associated with efficient equipment or practices; the value of longer equipment replacement cycles and/or productivity improvements associated with efficient equipment; reduced environmental and safety costs (*i.e.*, those for changes in a waste stream or disposal of lamp ballasts or ozone-depleting chemicals); reduced disconnections for inability to pay.

ii. Costs

a) *Energy System Costs*

- Program Administrative Costs including: payments to vendors for energy efficient equipment and services; payments to contractors to plan for and/or install energy efficient equipment; rebates or incentives paid to program participants or vendors for energy efficient equipment and/or services; costs to check for proper functioning of and maintenance of installed equipment; costs to market energy efficient equipment and services to customers and to seek participation in energy efficiency programs; and costs to develop, plan, administer, monitor, and evaluate energy efficiency programs.
- Performance incentives have also been included as a cost in the cost effectiveness screening model.

b) *Program Participant Costs*

- All initial expenses incurred by program participants as a result of their participation in energy efficiency programs including: net cost of the energy efficient equipment (e.g.; incremental participant costs); cost to plan for and install the energy efficient equipment; and cost of the energy efficiency services (i.e., inspections for proper equipment functioning)

iii. Discount Rate

In accordance with D.P.U. 08-50-A, benefits and costs have been stated in present value terms, using a discount rate of 3.66% (equal to the average twelve-month yield on 10 year U.S. Treasury Bonds for the 2008 calendar year).

2. *Summary Table*

The Program Administrators present the following tables in accordance with the Plan filing procedures developed by the D.P.U. 08-50 Working Group.

- i. By sector, B/C Ratio, net benefits, total benefits, total costs, PA costs, customer costs

Total Resource Cost Test, 2010				
Sector	B/C Ratio	Net Benefits	Benefits	Costs(1)
Residential	2.72	\$60,573,128	\$95,770,278	\$35,197,150
Low Income	1.70	\$7,834,904	\$19,001,152	\$11,166,248
Commercial & Industrial	3.30	\$77,676,624	\$111,482,046	\$33,805,423
GRAND TOTAL	2.82	\$146,084,656	\$226,253,476	\$80,168,821

Total Resource Cost Test, 2011				
Sector	B/C Ratio	Net Benefits	Benefits	Costs(1)
Residential	2.43	\$70,197,942	\$119,246,636	\$49,048,693
Low Income	1.19	\$3,673,982	\$22,813,243	\$19,139,261
Commercial & Industrial	3.19	\$94,311,419	\$137,308,391	\$42,996,973
GRAND TOTAL	2.51	\$168,183,343	\$279,368,269	\$111,184,927

Total Resource Cost Test, 2012				
Sector	B/C Ratio	Net Benefits	Benefits	Costs(1)
Residential	2.35	\$86,766,993	\$150,805,688	\$64,038,695
Low Income	1.04	\$1,213,300	\$28,450,554	\$27,237,254
Commercial & Industrial	3.06	\$115,153,385	\$170,982,730	\$55,829,345
GRAND TOTAL	2.38	\$203,133,678	\$350,238,972	\$147,105,294

Total Resource Cost Test, 2010-2012				
Sector	B/C Ratio	Net Benefits	Benefits	Costs(1)
Residential	2.47	\$217,538,063	\$365,822,602	\$148,284,539
Low Income	1.22	\$12,722,184	\$70,264,948	\$57,542,764
Commercial & Industrial	3.16	\$287,141,428	\$419,773,167	\$132,631,740
GRAND TOTAL	2.53	\$517,401,675	\$855,860,718	\$338,459,042

3. *Costs Tables*

i. Costs Summary Table

2010				
Programs	Program Costs (1)	Performance Incentive (2)	Participant Costs	Total Resource Costs (3)
Residential	\$20,799,625	\$1,569,239	\$12,828,286	\$35,197,150
Low Income	\$10,325,979	\$840,268	\$0	\$11,166,248
Commercial & Industrial	\$17,227,948	\$1,402,214	\$15,175,260	\$33,805,423
GRAND TOTAL	\$48,353,553	\$3,811,721	\$28,003,546	\$80,168,821

2011				
Programs	Program Costs (1)	Performance Incentive (2)	Participant Costs	Total Resource Costs (3)
Residential	\$31,421,709	\$2,431,636	\$15,195,348	\$49,048,693
Low Income	\$17,695,857	\$1,443,403	\$0	\$19,139,261
Commercial & Industrial	\$22,681,954	\$1,848,828	\$18,466,191	\$42,996,973
GRAND TOTAL	\$71,799,520	\$5,723,867	\$33,661,539	\$111,184,927

2012				
Programs	Program Costs (1)	Performance Incentive (2)	Participant Costs	Total Resource Costs (3)
Residential	\$42,657,249	\$3,341,929	\$18,039,518	\$64,038,696
Low Income	\$25,176,691	\$2,060,562	\$0	\$27,237,254
Commercial & Industrial	\$31,099,713	\$2,538,858	\$22,190,774	\$55,829,345
GRAND TOTAL	\$98,933,653	\$7,941,349	\$40,230,293	\$147,105,294

2010-2012				
Programs	Program Costs (1)	Performance Incentive (2)	Participant Costs	Total Resource Costs (3)
Residential	\$94,878,583	\$7,342,804	\$46,063,153	\$148,284,539
Low Income	\$53,198,528	\$4,344,234	\$0	\$57,542,763
Commercial & Industrial	\$71,009,615	\$5,789,899	\$55,832,225	\$132,631,740
GRAND TOTAL	\$219,086,726	\$17,476,937	\$101,895,379	\$338,459,042

Notes:

(1) Program Costs include Program Planning and Administration, Marketing and Advertising, Program Incentive, Sales, Technical Assistance & Training, Evaluation and Market Research (See Table II.C., Budget Summary).

(2) See Table II.I for more information regarding Performance Incentives.

(3) This represents the total TRC Test costs, which does not include LBR.

4. *Benefits/Savings Tables*

The Program Administrators present the following tables in accordance with the Plan filing procedures developed by the D.P.U. 08-50 Working Group.

- i. Benefits Summary Table by program: disaggregation of total benefits into benefits components

Gas Benefits, 2010 (Lifetime \$)														
Program	Gas	Electric		Non-Gas Non-Electric*									TOTAL TRC Benefits	
				Resource							Non-Resource	TOTAL		
		Capacity	Energy	No. 2 Distillate	No. 4 Fuel Oil	No. 6 Fuel Oil	Propane	Wood	Water	Kerosene				
Residential	\$93,191,122	\$1,091,235	\$1,487,922	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$102,317,688
Low Income	\$12,897,474	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,103,678	\$6,103,678	\$19,001,152
Commercial & Industrial	\$111,467,893	\$0	\$14,153	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$111,482,046
GRAND TOTAL	\$217,556,489	\$1,091,235	\$1,502,075	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,103,678	\$6,103,678	\$232,800,886

Gas Benefits, 2011 (Lifetime \$)														
Program	Gas	Electric		Non-Gas Non-Electric*									TOTAL TRC Benefits	
				Resource							Non-Resource	TOTAL		
		Capacity	Energy	No. 2 Distillate	No. 4 Fuel Oil	No. 6 Fuel Oil	Propane	Wood	Water	Kerosene				
Residential	\$115,967,859	\$1,427,128	\$1,851,649	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$119,246,636
Low Income	\$15,183,645	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$7,629,597	\$7,629,597	\$22,813,243
Commercial & Industrial	\$137,290,205	\$0	\$18,186	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$137,308,391
GRAND TOTAL	\$268,441,710	\$1,427,128	\$1,869,835	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$7,629,597	\$7,629,597	\$279,368,269

Gas Benefits, 2012 (Lifetime \$)														
Program	Gas	Electric		Non-Gas Non-Electric*									TOTAL TRC Benefits	
				Resource							Non-Resource	TOTAL		
		Capacity	Energy	No. 2 Distillate	No. 4 Fuel Oil	No. 6 Fuel Oil	Propane	Wood	Water	Kerosene				
Residential	\$146,650,643	\$1,840,632	\$2,314,414	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$150,805,689
Low Income	\$18,913,558	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,536,996	\$9,536,996	\$28,450,554
Commercial & Industrial	\$170,959,233	\$0	\$23,497	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$170,982,730
GRAND TOTAL	\$336,523,433	\$1,840,632	\$2,337,911	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,536,996	\$9,536,996	\$350,238,973

Gas Benefits, 2010-2012 (Lifetime \$)														
Program	Gas	Electric		Non-Gas Non-Electric*									TOTAL TRC Benefits	
		Capacity	Energy	Resource										
				No. 2 Distillate	No. 4 Fuel Oil	No. 6 Fuel Oil	Propane	Wood	Water	Kerosene	Non-Resource	TOTAL		
Residential	\$355,809,624	\$4,358,995	\$5,653,984	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$365,822,603
Low Income	\$46,994,677	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$23,270,271	\$23,270,271	\$70,264,948
Commercial & Industrial	\$419,717,331	\$0	\$55,836	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$419,773,167
GRAND TOTAL	\$822,521,632	\$4,358,995	\$5,709,821	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$23,270,271	\$23,270,271	\$855,860,718

*where applicable

ii. Savings Summary Table by program: annual savings over life of measures installed during program year

Gas Savings (Annual), 2010														
Program	Gas (MMBTU)	Gas (Therms)	Electric		Non-Gas Non-Electric*								Non-Resource (1)	
			Capacity (kW)	Energy (kWh)	Resource									
					MMBTU									Gallons
					No. 2 Distillate	No. 4 Fuel Oil	No. 6 Fuel Oil	Propane	Wood	Kerosene	Water			
Residential	480,945	4,809,455	265	960,390	-	-	-	-	-	-	-	-	-	
Low Income	54,435	544,349	-	-	-	-	-	-	-	-	-	-	-	
Commercial & Industrial	661,747	6,617,465	-	8,645	-	-	-	-	-	-	-	-	-	
GRAND TOTAL	1,197,127	11,971,269	265	969,035	-	-	-	-	-	-	-	-	-	

Gas Savings (Annual), 2011														
Program	Gas (MMBTU)	Gas (Therms)	Electric		Non-Gas Non-Electric*								Non-Resource (1)	
			Capacity (kW)	Energy (kWh)	Resource									
					MMBTU									Gallons
					No. 2 Distillate	No. 4 Fuel Oil	No. 6 Fuel Oil	Propane	Wood	Kerosene	Water			
Residential	589,585	5,895,854	331	1,200,488	-	-	-	-	-	-	-	-	-	

Low Income	64,046	640,457	-	-	-	-	-	-	-	-	-	-
Commercial & Industrial	811,901	8,119,015	-	11,143	-	-	-	-	-	-	-	-
GRAND TOTAL	1,465,533	14,655,326	331	1,211,630	-							

Gas Savings (Annual), 2012																
Program	Gas (MMBTU)	Gas (Therms)	Electric		Non-Gas Non-Electric*											
			Capacity (kW)	Energy (kWh)	Resource										Non-Resource (1)	
					MMBTU											Gallons
					No. 2 Distillate	No. 4 Fuel Oil	No. 6 Fuel Oil	Propane	Wood	Kerosene	Water					
Residential	730,920	7,309,200	413	1,500,609	-	-	-	-	-	-	-	-	-			
Low Income	79,360	793,595	-	-	-	-	-	-	-	-	-	-	-			
Commercial & Industrial	1,000,928	10,009,284	-	14,383	-	-	-	-	-	-	-	-	-			
GRAND TOTAL	1,811,208	18,112,080	413	1,514,993	-	-	-	-	-	-	-	-	-			

Gas Savings (Annual), 2010-2012																
Program	Gas (MMBTU)	Gas (Therms)	Electric		Non-Gas Non-Electric*											
			Capacity (kW)	Energy (kWh)	Resource										Non-Resource (1)	
					MMBTU											Gallons
					No. 2 Distillate	No. 4 Fuel Oil	No. 6 Fuel Oil	Propane	Wood	Kerosene	Water					
Residential	1,801,451	18,014,509	1,009	3,661,487	-	-	-	-	-	-	-	-	-			
Low Income	197,840	1,978,401	-	-	-	-	-	-	-	-	-	-	-			
Commercial & Industrial	2,474,576	24,745,765	-	34,170	-	-	-	-	-	-	-	-	-			
GRAND TOTAL	4,473,867	44,738,674	1,009	3,695,657	-	-	-	-	-	-	-	-	-			

*where applicable

(1) For each program that includes non-resource benefits, identify the category of non-resource benefits and provide a complete description of the calculation used to determine the benefit amount, and include all supporting documentation

E. Bill Impacts

1. *Overview*

Consistent with the goal of the three-year plan to provide for the acquisition of all available energy efficiency and demand reduction resources that are cost effective or less expensive than supply, the Program Administrators sought to develop a statewide Plan that provides for this acquisition with the lowest reasonable customer contribution. G.L. c. 25, §21(b). Therefore, consistent with the requirements of the Act, the Program Administrators have developed a series of initial estimated statewide bill impacts that provide a broad overview of the general statewide effect that the energy efficiency programs and measures proposed in this Plan will have on an average residential and C&I customer's bill during the course of the three-year plan. These bill impacts are **very preliminary** estimates, applying various assumptions to derive an average cost to provide energy efficiency measures across the Commonwealth and the various service territories. These assumptions are set forth in the notes accompanying these initial projections. The bill impact that will actually be realized by a customer will depend on several variables, including the cost of service in a particular Program Administrator's service territory, the customer's actual individual usage, and the availability of public or private funds other than those collected through the conservation charge ("CC") for application towards energy efficiency expenditures. As a result, this preliminary, statewide bill impact analysis in today's Plan is offered for preliminary instructive purposes only and to demonstrate the Program Administrators' cognizance of the need to consider carefully bill impacts in all planning under the Act. The Program Administrators will work with the Council and its Consultants to prepare refined and detailed bill impact analyses consistent with the requirements set forth in the Department's order in D.P.U. 08-50-A, not only for this statewide Plan, but more particularly for

the PA-specific plans to be filed in October.⁸ The actual bill impact analyses that each individual Program Administrator will include in its October energy efficiency plan filing can be expected to vary (in many cases, materially) from the statewide, preliminary projections provided herein.

The Program Administrators specifically note that, in preparing bill impact analyses, they will be guided by the following core provisions of the Department's order in D.P.U. 08-50-A, which make clear that not only the costs of energy efficiency efforts, but also the benefits of such efforts must be reflected in the final billing analyses to be submitted in October:

- Rate and average bill impact analysis should be performed on a portfolio basis, as opposed to on a program-by-program basis, because it is the entire portfolio of programs that will affect customer rates and bills.
- Rate and average bill impact estimates should account for the impacts over the long term (*e.g.*, for the average life of efficiency measures), in order to capture the full effect of energy efficiency savings and costs.
- Rate and average bill impact analyses should compare: (1) the estimated rates and bills with the energy efficiency programs in place to (2) the estimated rates and bills that would be in place in the absence of the energy efficiency programs.
- Rate and average bill impact estimates should be conducted for each customer class, as well as for all customers on average.
- Rate and average bill impact estimates should present not only the absolute dollar increase in distribution rates and bills but also the percentage increase in distribution rates and bills.
- Rate and average bill impact estimates should present the percentage impact on total rates and bills, as well as the percentage impact on distribution rates and bills.
- Rate and average bill impact estimates should account for the revenues that are collected through a revenue decoupling mechanism or through an interim lost base revenue adjustment mechanism.

D.P.U. 08-50-A at 57-58.

⁸ The Program Administrators plan to participate in the Bill Impact Working Group convened by the Department and the Council to develop appropriate joint methods and types of assumptions and inputs that will be used by each Program Administrator in the presentation of PA-specific plans.

2. Preliminary Statewide Bill Impact Analysis Table

			2008			2009			2010			2011			2012		
	Typical Annual therms	Typical Annual Bill Excluding all DSM charges	DSM Rate per therm (includes RCS cost)	DSM Charge	DSM impact as a % of Total Bill	DSM Rate per therm (includes RCS cost)	DSM Charge	DSM impact as a % of Total Bill	DSM Rate per therm (includes RCS cost)	DSM Charge	DSM impact as a % of Total Bill	DSM Rate per therm (includes RCS cost)	DSM Charge	DSM impact as a % of Total Bill	DSM Rate per therm (includes RCS cost)	DSM Charge	DSM impact as a % of Total Bill
Residential Non-Heat (R1)																	
Average	160	\$ 331.59	\$ 0.011	\$ 1.79	0.5%	\$ 0.025	\$ 4.07	1.2%	\$ 0.028	\$ 4.51	1.3%	\$ 0.042	\$ 6.69	1.9%	\$ 0.056	\$ 8.90	2.5%
High			\$ 0.056	\$ 8.94	2.2%	\$ 0.066	\$ 10.49	2.6%	\$ 0.080	\$ 12.85	3.1%	\$ 0.093	\$ 14.80	3.6%	\$ 0.107	\$ 17.19	4.2%
Low			\$ 0.007	\$ 1.13	0.4%	\$ 0.013	\$ 2.07	0.7%	\$ 0.015	\$ 2.48	0.8%	\$ 0.017	\$ 2.73	0.9%	\$ 0.019	\$ 2.99	1.0%
Residential Heat (R3)																	
Average	1,000	\$ 1,524.85	\$ 0.018	\$ 18.12	1.2%	\$ 0.024	\$ 23.99	1.6%	\$ 0.032	\$ 31.92	2.2%	\$ 0.048	\$ 47.54	3.1%	\$ 0.064	\$ 64.43	4.2%
High			\$ 0.038	\$ 37.61	2.6%	\$ 0.046	\$ 46.06	3.2%	\$ 0.059	\$ 59.49	4.1%	\$ 0.070	\$ 69.75	4.7%	\$ 0.083	\$ 82.51	5.6%
Low			\$ 0.013	\$ 13.22	0.8%	\$ 0.015	\$ 14.62	0.9%	\$ 0.025	\$ 24.63	1.4%	\$ 0.028	\$ 27.72	1.6%	\$ 0.030	\$ 29.61	1.7%
C&I, Low Use - High Winter Use																	
Average	1,427	\$ 2,250.00	\$ 0.011	\$ 17.58	0.8%	\$ 0.015	\$ 23.41	1.0%	\$ 0.022	\$ 33.22	1.4%	\$ 0.027	\$ 42.45	1.7%	\$ 0.036	\$ 57.55	2.3%
High			\$ 0.016	\$ 25.02	1.1%	\$ 0.018	\$ 28.69	1.2%	\$ 0.022	\$ 39.68	1.6%	\$ 0.030	\$ 53.21	1.8%	\$ 0.043	\$ 77.59	2.6%
Low			\$ 0.006	\$ 6.94	0.4%	\$ 0.008	\$ 8.87	0.5%	\$ 0.018	\$ 13.76	1.0%	\$ 0.022	\$ 14.39	1.2%	\$ 0.026	\$ 18.10	1.6%
C&I, Medium Use - High Winter Use																	
Average	10,285	\$ 13,685.15	\$ 0.010	\$ 102.77	0.8%	\$ 0.014	\$ 134.40	1.1%	\$ 0.020	\$ 190.76	1.5%	\$ 0.026	\$ 239.55	1.9%	\$ 0.035	\$ 318.99	2.5%
High			\$ 0.014	\$ 204.20	1.1%	\$ 0.017	\$ 213.39	1.3%	\$ 0.021	\$ 276.04	1.7%	\$ 0.029	\$ 311.55	2.0%	\$ 0.043	\$ 368.37	2.9%
Low			\$ 0.006	\$ 18.02	0.4%	\$ 0.008	\$ 23.58	0.5%	\$ 0.016	\$ 64.46	0.9%	\$ 0.019	\$ 73.09	1.2%	\$ 0.023	\$ 83.07	1.5%
C&I, High Use - High Winter Use																	
Average	57,201	\$ 69,936.55	\$ 0.010	\$ 482.27	0.9%	\$ 0.014	\$ 606.55	1.2%	\$ 0.020	\$ 830.38	1.7%	\$ 0.025	\$ 1,018.76	2.2%	\$ 0.034	\$ 1,293.46	2.9%
High			\$ 0.014	\$ 1,247.28	1.2%	\$ 0.016	\$ 1,356.63	1.4%	\$ 0.021	\$ 1,689.92	1.8%	\$ 0.029	\$ 1,908.04	2.4%	\$ 0.042	\$ 2,287.57	3.5%
Low			\$ 0.006	\$ 18.02	0.5%	\$ 0.008	\$ 23.58	0.7%	\$ 0.015	\$ 64.46	0.9%	\$ 0.019	\$ 73.09	1.3%	\$ 0.023	\$ 83.07	1.6%
C&I, Low Use - Low Winter Use																	
Average	5,131	\$ 7,385.49	\$ 0.011	\$ 21.27	0.9%	\$ 0.015	\$ 27.69	1.1%	\$ 0.021	\$ 45.12	1.6%	\$ 0.026	\$ 54.35	2.0%	\$ 0.035	\$ 69.65	2.6%
High			\$ 0.015	\$ 121.06	1.2%	\$ 0.018	\$ 159.93	1.4%	\$ 0.022	\$ 457.82	1.7%	\$ 0.030	\$ 519.68	2.1%	\$ 0.043	\$ 591.22	3.1%
Low			\$ 0.005	\$ 14.49	0.4%	\$ 0.007	\$ 20.01	0.5%	\$ 0.017	\$ 25.12	1.0%	\$ 0.019	\$ 28.22	1.3%	\$ 0.025	\$ 32.92	1.6%
C&I, Medium Use - Low Winter Use																	
Average	14,445	\$ 17,047.25	\$ 0.010	\$ 113.42	1.0%	\$ 0.014	\$ 146.73	1.3%	\$ 0.020	\$ 218.10	1.8%	\$ 0.026	\$ 263.83	2.3%	\$ 0.035	\$ 345.79	3.0%

High			\$ 0.014	\$189.96	1.4%	\$0.017	\$ 216.46	1.6%	\$0.021	\$ 417.90	1.8%	\$0.029	\$ 474.35	2.5%	\$0.043	\$ 539.65	3.6%
Low			\$ 0.005	\$72.25	0.4%	\$0.007	\$ 105.40	0.5%	\$0.016	\$ 158.91	0.9%	\$0.019	\$ 214.52	1.2%	\$0.023	\$ 284.01	1.6%
C&I, High Use - Low Winter Use																	
Average	135,148	\$ 140,169.97	\$ 0.010	\$1,145.46	1.0%	\$ 0.014	\$1,415.46	1.3%	\$ 0.020	\$2,073.65	1.9%	\$ 0.025	\$2,355.90	2.4%	\$ 0.034	\$2,933.00	3.2%
High			\$ 0.014	\$2,914.48	1.5%	\$0.016	\$3,659.50	1.7%	\$0.021	\$6,149.53	2.0%	\$0.029	\$6,427.21	2.6%	\$0.042	\$8,275.00	3.7%
Low			\$ 0.005	\$110.60	0.5%	\$0.007	\$ 146.09	0.7%	\$0.015	\$ 417.90	1.0%	\$0.018	\$ 474.35	1.3%	\$0.023	\$ 539.65	1.7%

3. *Notes on Preliminary Bill Impact Analysis/Key Assumptions*

The preliminary gas statewide bill impact analysis compares the typical average bill, by class, showing the estimated rate increase, absolute dollar increase, and the percentage increase in bills compared (1) the typical bill excluding all DSM related charges (2) with the DSM budgeted costs for the years 2008-2012. The statewide average bill impacts were derived by weighting the customer counts for each utility for both residential and C&I separately. Please note, that these impacts do not yet quantify any reduced system costs resulting from energy efficiency programs or other benefits of such programs. These material benefits will be reviewed with the Council and will be included in the PA-specific filings to be made in October. Also, these statewide analyses do not show any participant benefits in terms of reduced usage and, as noted above, are presented solely on a preliminary basis to reflect the Program Administrators' sensitivity to bill impact issues.

F. Program Descriptions

The program designs set forth in this section have been collaboratively developed by the Program Administrators. As a critical part of this program design process, the Program Administrators reached out to interested parties, including the Council's Consultants and the low-income program delivery network, in order to develop state-of-the-art program designs that enjoy broad-based support. In some instances, the designs set forth below are fully developed and contain detailed information down to the exact level of proposed customer incentives. In other instances, some details of the program designs remain under discussion and will be further developed, not only during the review of this Plan by the Council, but also in advance of each Program Administrator's specific three-year plan to be filed on or before October 31, 2009. In developing these program designs, the Program Administrators sought to be directly responsive

to the suggestions advanced in the Council's Priorities Resolution, and the Program Administrators will continue to work with Council members and the Council's Consultants on these designs. A critical component of these program designs is enhanced consistency, integration and coordination among all Program Administrators. As indicated in the program descriptions below, it is the Program Administrators' goal that, except in limited circumstances based upon a Program Administrator's unique circumstances (*e.g.*, the specific needs of a service territory or the desire to operate a pilot effort), these program designs will be implemented by all Program Administrators on a coordinated statewide basis. This coordination and consistency should: 1) increase customer satisfaction and decrease customer confusion throughout Massachusetts; 2) simplify messages and marketing campaigns to customers, thereby making them more powerful; and, 3) ultimately, help the Program Administrators achieve broader and deeper energy savings. The Program Administrators look forward to reviewing these designs with the Council and other interested parties and finalizing state-of-the-art programs for implementation in 2010.

1. *Residential Programs Descriptions*

Residential High Efficiency Heating Program

<p>Primary Objective</p>	<p>The Residential High Efficiency Heating Program is designed to promote the installation of ENERGY STAR-rated high efficiency gas furnaces, hot water boilers and energy efficient steam boilers in residential homes. Incentives/rebates are administered via the GasNetworks collaborative.</p> <p>The objective of the program is to overcome market barriers to energy efficient heating equipment and increase program awareness among consumers, plumbing/heating contractors, and home builders/developers, through rebates, incentives, education, and training opportunities.</p>
<p>Program Inception</p>	<p>The program was initially offered in 1997.</p> <p>GasNetworks is a nationally-recognized and award-winning collaborative of local natural gas companies serving nearly 2 million residential and C&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 collaborative of natural gas utilities is to work with governmental agencies and affiliates to promote energy-efficient technologies, create common energy efficiency programs, educate consumers, and promote contractor training and awareness of ever-changing natural gas technologies. Massachusetts members include Bay State Gas, Berkshire Gas, National Grid, New England Gas, NSTAR Gas, and Unitil.</p>
<p>2010-2012 Savings Targets</p>	<p>To be provided with October 2009 Filings.</p>

2010-2012 Budget	To be provided with October 2009 Filings.
Joint vs. Program Administrator-Specific Offering	Joint
Program Design	<p>The program offers rebates for equipment in the new construction and replacement market (<i>i.e.</i>, lost-opportunity applications).</p> <p>The objective of the program is to overcome current market barriers to energy efficient equipment through rebates, education, and to increase customer, builder/developer, and plumbing/heating contractor awareness of high efficiency equipment and its benefits.</p> <p>Qualifying customers are eligible to receive mail-in rebates for high efficiency gas furnaces, boilers, combination units, and energy efficient steam boilers all with input ratings of 300,000 BTU or less.</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 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.</p>
Target Market	<p>Residential Target Markets include:</p> <ul style="list-style-type: none"> • New Construction - Heating Equipment / Systems • Existing Homes - Replacement of Existing Heating Equipment (new equipment/old systems) <p>The Program Targets these Market Segments:</p> <ul style="list-style-type: none"> • Residential Home Owners with natural gas heating equipment • Home Designers and Architects

<p>Target Market (cont.)</p>	<ul style="list-style-type: none"> • Engineers • HVAC Contractors and Technicians • Suppliers of High Efficiency Heating equipment and related parts/accessories • Manufacturers and Distributors of High Efficiency Heating equipment • New Home Builders and Remodeling Contractors
<p>Marketing Strategy/Approach</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 the member company websites, and the GasNetworks collaborative website, www.gasnetworks.com, where consumers and contractors can learn about the programs, download rebate applications, and obtain other valuable energy efficiency information. The website and its functions will be integrated into the unified, statewide website set to be completed by the end of 2009.</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 rebate 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 manufacture/distributor level marketing and training infrastructure as a platform to educate contractors and wholesalers at a regional level.</p> <p>Program marketing will be supplemented by vendor outreach directly to equipment suppliers and installation contractors. This will provide direct communication on programs and qualifying equipment, as well as 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 break through the barriers of awareness and understanding with new technology.</p>

Target End Uses	Residential space heating fueled by natural gas.																		
Recommended Technologies	<ul style="list-style-type: none"> ▪ Super-efficient condensing furnaces and boilers where feasible ▪ Electronically commutated fan motors, which provide higher electric efficiency for warm air distribution ▪ Elevating installation practices and standards 																		
Financial Incentives	<p>The equipment criteria and incentive levels proposed for residential heating customers who participate in this program are as follows:</p> <table border="0" style="width: 100%;"> <tr> <td style="padding-left: 20px;">Furnace, 92% AFUE or greater</td> <td style="text-align: right; padding-left: 20px;">\$400</td> </tr> <tr> <td style="padding-left: 20px;">Furnace, 92% AFUE or greater w/ECM*</td> <td style="text-align: right; padding-left: 20px;">\$500</td> </tr> <tr> <td style="padding-left: 20px;">Furnace, 94% AFUE or greater w/ECM*</td> <td style="text-align: right; padding-left: 20px;">\$650</td> </tr> <tr> <td style="padding-left: 20px;">Boiler, 85% AFUE or greater</td> <td style="text-align: right; padding-left: 20px;">\$700</td> </tr> <tr> <td style="padding-left: 20px;">Boiler, 90% AFUE or greater</td> <td style="text-align: right; padding-left: 20px;">\$1,500</td> </tr> <tr> <td style="padding-left: 20px;">Heat Recovery Ventilator</td> <td style="text-align: right; padding-left: 20px;">\$500</td> </tr> <tr> <td style="padding-left: 20px;">Combo Boiler-On Demand condensing unit</td> <td style="text-align: right; padding-left: 20px;">\$1,600</td> </tr> <tr> <td style="padding-left: 20px;">Combo Boiler-On Demand non-condensing unit</td> <td style="text-align: right; padding-left: 20px;">\$1,000</td> </tr> <tr> <td style="padding-left: 20px;">Steam boiler, 82% AFUE with electronic ignition</td> <td style="text-align: right; padding-left: 20px;">\$200</td> </tr> </table> <p>* \$200 of this rebate is funded by electric Program Administrators as part of an integrated approach efficiency gas furnaces that are also electrically efficient.</p>	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	\$700	Boiler, 90% AFUE or greater	\$1,500	Heat Recovery Ventilator	\$500	Combo Boiler-On Demand condensing unit	\$1,600	Combo Boiler-On Demand non-condensing unit	\$1,000	Steam boiler, 82% AFUE with electronic ignition	\$200
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	\$700																		
Boiler, 90% AFUE or greater	\$1,500																		
Heat Recovery Ventilator	\$500																		
Combo Boiler-On Demand condensing unit	\$1,600																		
Combo Boiler-On Demand non-condensing unit	\$1,000																		
Steam boiler, 82% AFUE with electronic ignition	\$200																		

Delivery Mechanism	The program is administered by each gas Program Administrator and coordinated regionally through GasNetworks collaborative. GasNetworks utilizes a third-party contractor, secured through a competitive bid process, to administer the rebates to customers. The contractor is responsible for tracking and reporting program activity to GasNetworks.
Joint Program Administrator Enhancements Planned for 2010-2012	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, builders, and engineers about the benefits of using ENERGY STAR-rated high efficiency heating and cooling equipment.
Program Administrator-Specific Elements	To be completed in the October filing if applicable.
Three-Year Deployment Three-Year Deployment (cont.)	<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 current and forecasted outlook on 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 potentially significant barrier, the Program Administrators will explore an “early replacement” program that will target old, inefficient--but still operating--heating equipment for replacement with high efficiency equipment. The Program Administrators are aware that significantly higher incentive levels may be needed to address this very important market.</p> <p>The gas Program Administrators will work to progressively expand attic duct sealing offerings, preferably integrated with the electric Program Administrators.</p> <p>In addition, GasNetworks will continue to:</p>

	<ul style="list-style-type: none"> ▪ Make customers aware of high-efficiency gas heating equipment and the energy savings achievable ▪ Increase market sector awareness and demand for high-efficiency gas heating equipment ▪ Facilitate the purchase of high efficiency gas heating equipment ▪ Provide training to Trade Allies, such as plumbing and heating contractors ▪ Increase trade ally awareness of the benefits of high-efficiency gas heating equipment
Special Notes	<p>The Program Administrators are considering the introduction of an early replacement program to promote the early retirement of inefficient but functioning boilers and furnaces.</p> <p>Program Administrators are also considering new technologies for inclusion into the GasNetworks efficiency program portfolio such as micro combined heat and power (“CHP”) units.</p> <p>The GasNetworks programs have received numerous national awards and recognition including:</p> <ul style="list-style-type: none"> • <i>ACEEE Exemplary Program GasNetworks Joint Gas & Electric High Efficiency Furnace Rebate</i> • <i>ACEEE GasNetworks Regional Multi-Utility Collaborative Comprehensive Portfolio - 2004</i>

Residential High Efficiency Water Heating

Primary Objective	To increase the demand and market share for residential high-efficiency natural gas water heaters through rebates, education, and increased customer, builder/developer, and plumbing/heating contractor awareness of high efficiency water heating technologies.
Program Inception	The program was initially offered in 2001.
2010 – 2012 Savings Targets	To be provided with October 2009 Filings.
2010 - 2012 Budget	To be provided with October 2009 Filings.
Joint vs. Program Administrator-Specific Offering	Joint
Program Design	The Residential High Efficiency Water Heating Rebate Program is designed to promote the installation of high efficiency gas water heating equipment by overcoming current market barriers. The program offers rebates for new construction and replacement equipment (<i>i.e.</i> , lost-opportunity applications).
Target Market	<ul style="list-style-type: none"> ▪ Residential customers who heat water with natural gas ▪ Contractors ▪ Trade allies ▪ Equipment manufacturers and distributors ▪ Builders ▪ Architects ▪ Engineers
Marketing/Strategy Approach	<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: direct mail, radio and print media, bill inserts, trade ally events, sponsorships, and program brochures.</p> <p>The program will also be promoted via the member company websites, and the GasNetworks integrated</p>

<p>Marketing/Strategy Approach (cont.)</p>	<p>website, www.gasnetworks.com, where consumers and contractors can learn about the programs, download rebate applications and obtain other valuable energy efficiency information. The website and its functions will be integrated into the unified, statewide website set to be completed by the end of 2009.</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 rebate program through various Program Administrator-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.</p> <p>Program marketing will be supplemented by vendor outreach directly to equipment suppliers and installation contractors.</p> <p>In addition to customer rebates, installation contractors may also receive incentives for the installation of high efficiency water heating equipment.</p>
<p>Target End Uses</p>	<p>Residential natural gas water heating customers</p>
<p>Recommended Technologies</p>	<p>The Program Administrators will initially focus on the three water heating technologies: tankless, on-demand water heaters, indirect water heaters and the recently announced, ENERGY STAR-labeled storage water heaters. The Program Administrators constantly strive to ensure that they remain on the cutting edge of promoting new technologies as they become available.</p>

Financial Incentives	<p>The incentive levels and equipment criteria for residential customers who participate in this program are as follows:</p> <table border="1" data-bbox="489 370 1549 938"> <thead> <tr> <th data-bbox="489 370 793 511">Equipment</th> <th data-bbox="793 370 1339 511">Criteria</th> <th data-bbox="1339 370 1549 511">Rebate</th> </tr> </thead> <tbody> <tr> <td data-bbox="489 511 793 625">Indirect Water Heater</td> <td data-bbox="793 511 1339 625">Connected to a high efficiency boiler, 30-75 gals</td> <td data-bbox="1339 511 1549 625">\$500</td> </tr> <tr> <td data-bbox="489 625 793 779">Tankless, On-Demand Water Heater</td> <td data-bbox="793 625 1339 779">Minimum 0.82 Energy Factor and no standing pilot</td> <td data-bbox="1339 625 1549 779">\$1,000</td> </tr> <tr> <td data-bbox="489 779 793 938">ENERGY STAR-Labeled Storage Water Heater</td> <td data-bbox="793 779 1339 938">Minimum 0.62 Energy Factor</td> <td data-bbox="1339 779 1549 938">\$50</td> </tr> </tbody> </table>	Equipment	Criteria	Rebate	Indirect Water Heater	Connected to a high efficiency boiler, 30-75 gals	\$500	Tankless, On-Demand Water Heater	Minimum 0.82 Energy Factor and no standing pilot	\$1,000	ENERGY STAR-Labeled Storage Water Heater	Minimum 0.62 Energy Factor	\$50
Equipment	Criteria	Rebate											
Indirect Water Heater	Connected to a high efficiency boiler, 30-75 gals	\$500											
Tankless, On-Demand Water Heater	Minimum 0.82 Energy Factor and no standing pilot	\$1,000											
ENERGY STAR-Labeled Storage Water Heater	Minimum 0.62 Energy Factor	\$50											
Delivery Mechanism	<p>The program is administered by each gas utility Program Administrator and coordinated regionally through GasNetworks collaborative. GasNetworks utilizes a third-party contractor, secured through a competitive bid process, to administer the rebates to customers. The contractor is responsible for tracking and reporting program activity to GasNetworks.</p>												
Joint Program Administrator Enhancements Planned for 2010-2012	<p>Similar to the “early retirement” initiative being considered by the Program Administrators for the High Efficiency Heating system, the Program Administrators will explore offering incentives to customers to update existing functioning water heaters to high efficiency ENERGY STAR-rated water heaters and/or tankless water heaters.</p>												

Program Administrator-Specific Elements	To be completed during the October filing if applicable.
Three-Year Deployment	<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 the 2010-2012 period. Indeed, rebate levels approaching full system incremental cost may be required to address certain market barriers including the current and forecasted outlook on the economy.</p> <p>The depressed economy will likely dramatically reduce consumer spending for the replacement of functional as well as old, broken, but repairable water heating equipment. In order to address this potentially significant barrier, the Program Administrators will explore an “early replacement” program that will target old, inefficient—but still operating—water heating equipment for replacement with high efficiency equipment. The Program Administrators are aware that significantly higher incentive levels may be needed to address this very important market.</p>
Special Notes	<p>The gas Program Administrators will continuously explore new high efficiency water heating technologies and will adopt such technologies when they become available an after appropriate Program Administrator evaluation. This was the case recently as GasNetworks introduced a high efficiency combination boiler/water heating rebate into its portfolio of high efficiency heating/water heating initiatives</p> <p>The GasNetworks programs have received numerous national awards and recognition including:</p> <ul style="list-style-type: none"> ■ <i>AESP National Award for Outstanding Achievement in Energy Program Design and Implementation 2007</i>

Residential ENERGY STAR-Labeled Programmable Thermostat Rebate

Primary Objective	The primary objective of the Programmable Thermostat Rebate program is to educate customers of the savings that they may incur, both in energy and financially, by installing an ENERGY STAR-Labeled Programmable Thermostat. A rebate is offered to entice the natural gas heating customer to purchase and install an ENERGY STAR-Labeled Programmable Thermostat.
Program Inception	The program was initially offered in 2004.
2010-2012 Savings Targets	To be provided with October 2009 Filings.
2010-2012 Budget	To be provided with October 2009 Filings.
Joint vs. Program Administrator-Specific Offering	This program is offered as a joint program.
Program Design	The Program Administrators offer incentives to customers for purchasing/installing and ENERGY STAR-labeled thermostats.
Target Market	<ul style="list-style-type: none"> • Residential customers who heat their home with natural gas • Heating and Cooling Contractors • Heating Equipment Supply Houses • Homebuilders

Marketing Strategy/Approach	<p>The program will be marketed to residential heating customers, heating and cooling contractors, and homebuilders through the following:</p> <ul style="list-style-type: none"> • Direct Mail Promotions • Retail outlets • GasNetworks e-newsletter • Plumbing wholesalers • Contractor Training Seminars • MassSAVE, GasNetworks and Program Administrator websites • Community Events • Customer Newsletters • Utility Bill Messages • Utility Bill Inserts <p>The Program Administrators will continue their efforts to partner with large hardware chains and look to establish potential “upstream” opportunities that will broaden the outreach and further the market penetration of the program.</p>
Target End Uses	Residential space heating
Recommended Technologies	ENERGY STAR-Labeled Programmable Thermostat
Financial Incentives	\$25 rebate per ENERGY STAR-Labeled Programmable Thermostat (limit 2 per residential gas account)

Delivery Mechanism	The program is administered by each gas utility Program Administrator and coordinated regionally through the GasNetworks collaborative. GasNetworks utilizes a third-party contractor, secured through a competitive bid process, to administer the rebates to customers. The contractor is responsible for tracking and reporting program activity to GasNetworks.
Joint Program Administrator Enhancements Planned for 2010-2012	The Program Administrators will endeavor to partner the programmable thermostat offerings with all programs that promote incentives/rebates for installing high efficiency heating equipment. In addition, the Program Administrators will work with their electric Program Administrators to integrate programmable thermostat rebates to contractors and customers installing cooling equipment and explore the potential for including demand response programmable thermostats in our incentive offerings.
Program Administrator-Specific Elements	To be completed for the October filing if applicable.
Three-Year Deployment	Because of the challenges inherent in educating consumers about the benefits of installing ENERGY STAR-Labeled Programmable Thermostat, the Program Administrators will work with manufacturers, distributors, contractors and retailers to broaden the awareness of the program and the energy-saving potential of programmable thermostats. Also during the three-year deployment, Program Administrators will explore alternative marketing forums in order to reach and educate a larger volume of residents. Further, enhancements in an attempt to streamline the mail-in rebate process and expand on the existing relationship between the gas Program Administrators and a number of retailers, including “big box” retailers, the Program Administrators will explore the possibility of offering “instant” rebate offerings at the retailer level will be considered.

Special Notes	<p>Unlike other areas of the country, the ENERGY STAR Programmable Thermostat program in the Northeast has been found to be cost effective after recent evaluations and the Program Administrators will explore the continuation of this program should ENERGY STAR decide to discontinue their support of this technology nationally.</p> <p>Gas Program Administrators, in coordination with the electric Program Administrators, plan to investigate new technology and advancements in programmable “all-in-one” types of thermostats. These new thermostats, in combination with home energy management, can be installed to regulate heating, cooling, lighting, appliances and electronics in the residence.</p> <p>The GasNetworks programs have received numerous national awards and recognition including:</p> <ul style="list-style-type: none">■ <i>ACEEE Exemplary Portfolio of Energy Efficiency Programs 2007</i>
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Residential Conservation Services (“RCS”) / MassSAVE

Primary Objective	To educate residential customers about energy use in their homes and offer information regarding energy-saving opportunities. This allows the customer to identify and initiates the process of installing cost-effective energy efficiency upgrades and practices. The RCS/MassSAVE program provides an entryway for customers to participate in all comprehensive energy efficiency programs.
Program Inception	<p>During the period 1980 through 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>
2010-2012 Program Goals	To be provided with October 2009 Filings.
2010-2012 Budget	To be provided with October 2009 Filings.
Joint vs. Program Administrator-Specific Offering	Joint
Program Design	Improving on almost three decades of program success, the RCS/MassSAVE program takes a “one-stop shopping” approach for customers. The program is committed to a comprehensive whole-house approach and

seeks to maximize both gas and electric energy savings. This is a significant leap forward, making distinctions between Program Administrators indiscernible to consumers. Program Administrators strive to fully support those who are interested in making energy-efficient improvements to their homes. The program helps those customers identify and install all the equipment needed to control their future energy costs.

The level of service is intended to be flexible, provide information to a broad group of customers and supply information regarding deep retrofit services and renewable opportunities 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. Customers are guided to appropriate program services 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.

The home visits include:

- The first visit, referred to as the Screening Visit, is scheduled 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 about 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, compact fluorescent light bulbs are installed for free in all appropriate locations, as are low-flow shower heads, 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 from the direct install measures are

<p>Program Design (cont.)</p>	<p>designed to cover the cost of the visit. This visit will also identify and recommend specific energy-efficient upgrades. This Diagnostic Visit will also identify and recommend more significant energy efficiency 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.</p> <ul style="list-style-type: none"> • The Quality Assurance Visit includes follow up by a PA-approved vendor. The Quality Assurance Visit is intended to verify that all energy efficiency measures were installed to the levels deemed appropriate by Program Administrators. <p>Program Administrators strive to maximize energy savings by promoting/supporting contractor education and training. The purpose of contractor training is to generate a broader workforce knowledgeable in energy efficient installation techniques.</p>
<p>Target Market</p>	<p>All non-low income residential customers living in single-family houses or one- to four-unit multi-family buildings, whose primary heating source is natural gas and who are committed to making their homes more energy efficient. Program Administrators will shift more attention toward targeting decision makers.</p>
<p>Marketing Strategy/ Approach</p>	<p>Program Administrators will engage in outreach efforts to notify customers of the availability and value of energy efficiency services through:</p> <ul style="list-style-type: none"> • MassSAVE website (Enhanced via the Statewide Integrated Energy Efficiency Website) • Bill inserts • Radio, print and visual media advertising • New media advertising (advanced online options) • Targeted marketing through community outreach programs such as Cambridge Energy Alliance, Marshfield Energy Challenge and the Energy Smack-Down initiatives. • Targeted marketing through the use of data collected in Screening Visits <p>Marketing under the residential retrofit programs will be utilized to generate the demand needed to support the 2010 through 2012 increase in funding.</p> <p>Individual Program Administrators may conduct additional marketing and may ramp their marketing up or</p>

Marketing Strategy/ Approach (cont.)	<p>down as needed to meet participation and budget goals.</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 owner-occupied 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).</p>
Target End Uses	<p>The program targets any cost-effective energy-saving improvements using a comprehensive, whole-house, approach including, but not limited to:</p> <ul style="list-style-type: none"> • Building Envelope • Heating • HVAC/Mechanical systems • Water Heating • Energy saving appliances and lighting • Deep retro fit measures • New technology/renewable
Recommended Technologies	<p>Recommended technologies include air sealing, duct sealing, insulation, refrigerators, thermostats, ventilation, ENERGY STAR windows, solar DHW systems, and heating/cooling systems. The program also provides general information about energy efficiency and solar DHW systems to consumers on request. Other measures may include heating system controls, superinsulation, CHP technologies, solar DHW systems, and opportunities for piloting “deep retrofit” enhancements of major renovation projects. Customers will see these offerings as an integrated program.</p>
Financial	<p>The RCS/MassSAVE program provides multiple site visits at no cost to the customer, free installation of instant savings measures, as well as, an educational experience including information regarding all statewide program</p>

<p>Incentives</p>	<p>incentives and financing options. This program will coordinate with other programs such as Weatherization, GasNetworks, Cool Smart, etc.</p> <p>The gas RCS/MassSAVE program provides customers with information regarding financing options available via electric Program Administrators.</p> <p>The HEAT Loan program provides qualified customers with a 0% interest loan to be applied towards the following energy efficiency upgrades:</p> <ul style="list-style-type: none"> • Insulation • Duct System Improvements • High-efficiency heating systems • High-efficiency domestic hot water (DHW) systems • Solar domestic hot water (DHW) systems • ENERGY STAR labeled thermostats • ENERGY STAR labeled water heaters • Other renewable technologies on a pre-approved basis <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 to maximize energy savings. Using HEAT Loan funds to manage safety issues will allow Program Administrators to access a broader spectrum of efficiency in the future.</p> <p>Additional customer financing options are also being explored.</p> <p>In addition to the heating incentives, customers are also eligible for electric cooling incentives offered through the electric program administrators Massachusetts Cool Smart program.</p>
<p>Delivery Mechanism</p>	<p>The program is administered within each service territory by its Program Administrator and is coordinated statewide through the RCS Network, a coalition of RCS/MassSAVE Program Administrators and program vendors working together with the DOER. The program is delivered by program vendors, selected through a</p>

	<p>competitive bidding process, contracting directly with independent subcontractors to perform energy efficiency weatherization upgrades. Weatherization work completed by RCS/MassSAVE Program Vendors 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>RCS Network members are working together toward a “best practices” approach and to provide a more coordinated statewide program as a means to ensure correct installation techniques for the RCS/MassSAVE Program. RCS Network members apply a “best practices” approach and work together to make quality control an integral part of the RCS/MassSAVE Program.</p>
<p>Joint Program Administrator Enhancements Planned for 2010-2012</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 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, will look to incorporate infrared and blower door testing where applicable.</p>
<p>Program Administrator-Specific Elements</p>	<p>To be completed for the October Filing if applicable.</p>
<p>Three-Year Deployment</p>	<p>The RCS/MassSAVE program design is being modified in an effort to significantly increase the number of properties serviced by the program, which will also lead to higher energy savings achieved. 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 Building Performance Institute or its</p>

<p>Three-Year Deployment (cont.)</p>	<p>equivalent as a benchmark.</p> <p>The Program Administrators, in conjunction with the Council’s Consultant 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 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, with a minimal or no co-payment.</p>
<p>Special Notes</p>	<p>It is the intention of the Program Administrators to continue efforts in standardizing the implementation of energy efficiency measures in order to provide seamless service to the customer. The RCS/MassSAVE program will undergo an evolutionary redesign with emphasis being placed on reaching more customers while increasing energy savings. The Screening Visit will provide an opportunity for Program Administrators to collect important property data. The data collected will be used in order to target marketing efforts, as well as provide Program Administrators with valuable market potential information. The Diagnostic Visit provides immediate savings via the installation of air sealing and ensures that insulation measures are installed to the highest energy efficient standards. The redesign is intended to engage the customer in an energy efficiency educational process ultimately leading to the implementation of energy efficiency measures.</p>

Deep Retrofit 1-4 Family Pilot

Primary Objective	To investigate the potential of energy savings of 50% or more through deep retrofits of existing residential buildings and to identify how to reduce the costs associated with deep retrofits.
Initially Offered	This pilot is being offered in 2009.
2010-2012 Program Goals	To be provided with October 2009 Filings.
2010-2012 Budget	To be provided with October 2009 Filings.
Joint vs. Program Administrator-Specific Offering	Joint by 2011, potentially individual during 2010
Program Design	<p>The pilot will assess the costs and benefits of deep energy retrofits in Massachusetts residences. The design will include a plan to develop and support deep retrofits and to gather information on building data, customer satisfaction, behavior modification, and energy savings. The pilot will help the Commonwealth continue to develop information on appropriate measures for deep retrofits, proper modeling of potential energy savings for deep retrofits, and approaches for diverse housing types. The pilot will also address important components such as the training of energy-retrofit contractors, customer awareness and education, the development of comprehensive marketing materials, financing mechanisms, and appropriate incentive levels.</p> <p>It is expected that program evaluation and case study review of the homes treated during the 2009-2010 program will substantially inform an expanded effort in subsequent years.</p>
Target Market	<ul style="list-style-type: none"> ▪ Home owners considering renovations and or extensive energy use and carbon reductions ▪ Advanced Remodelers and Builders ▪ Architects ▪ Designers

	<ul style="list-style-type: none"> ▪ Trade allies ▪ Others involved in renovation of one- to four- family owner-occupied homes
Marketing Approach	A small number of existing homes will be selected to participate in this pilot. Homes where renovations are planned (<i>e.g.</i> , additions, siding and/or window replacements) will be targeted. Homeowner investments will be leveraged to maximize the effectiveness of the deep energy retrofits. It is expected that incentives may be reduced over time and the number of homes treated will increase in subsequent years.
Target End Uses	<ul style="list-style-type: none"> • Building shell • Heating equipment • Water heating equipment
Recommended Technologies	<ul style="list-style-type: none"> • Exterior wall super-insulation build-outs • Attic insulation enhancements • Foundation wall/slab insulation • Extensive whole-house air sealing • High-performance windows • High-efficiency heating and cooling systems • Advanced thermostatic controls • High-efficiency appliances and products • Mechanical ventilation • Solar photovoltaic systems • Solar thermal systems
Financial Incentives	High levels of incentives will initially be offered to ensure that deep retrofits are completed on a relatively small sample of existing homes. Where possible, incentives and appliance use and lifestyle education will be used to leverage selection of desired project (including housing style) types and maximum household energy reductions.
Delivery	Pilot program services will be delivered through the existing RCS network, with possible energy modeling and other

Mechanism	assistance provided through the residential new construction program.
Joint Program Administrator Enhancements Planned for 2010 – 2012	Each project completed during the initial phase will be carefully reviewed to identify areas of success and areas where improvements may be made. Depending on outcomes of cost-benefit analysis, the pilot may be expanded into a more full-scale statewide program starting in 2011.
Program Administrator-Specific Elements	To be completed for the October Filing if applicable.
Three-Year Deployment	<ul style="list-style-type: none"> • Publicity from completed Deep Energy Retrofit (“DER”) projects will generate a heightened interest for more home owners to participate. The training of additional DER contractors should also increase awareness and participation. There are a number of other points of entry that can be explored for timely leads including work related to basement remediation, heating system repair and replacement work, siding contractors and others, if the program expands to a broader scale. • Identifying lower cost HVAC and mechanical ventilation as well as build-out approaches are vital to reduce total project costs. HVAC change outs are often required as sealed combustion units are generally required. • There are a number of commercially-viable technologies, including advanced windows, integrated HVAC, ventilation, and water heating, that are ideal for low-energy load homes which are not yet available on the US market. Through DER projects across throughout the Northeast and Canada, the market for these types of technologies will grow and can be tested and adopted by the program. (One example is R7 windows with cork insulation between the metal spacers that are currently only available in Europe.)
Special Notes	Depending on outcomes of cost benefit analysis, the pilot may be expanded into a full-scale electric and gas collaborative statewide program starting in 2011.

Weatherization Program

Primary Objective	The objective of the Residential Weatherization Program is to reduce the amount of natural gas used by residential gas heating customers during the heating season. This is achieved through maximizing the thermal efficiency of existing residentially constructed units.
Program Inception	Some Program Administrators began offering incentives for upgrading insulation in customer homes in the mid 1990's. In 2001, all gas utilities began offering incentive packages and/or rebates for energy efficiency measures.
2010-2012 Savings Target	To be provided with October 2009 Filings.
2010-2012 Budget	To be provided with October 2009 Filings.
Joint vs. Program Administrator-Specific Offering	Joint
Program Design	<p>The residential weatherization program offers an incentive/rebate to existing natural gas heating customers who are retrofitting weatherization measures such as insulation and air sealing. The program complements the one-stop delivery goal of the DOER, as it is delivered in coordination with or piggybacked on the RCS/MassSAVE.</p> <p>Customers are required to have an RCS Site Visit to identify and prioritize all cost effective energy efficiency upgrades prior in order to receive an incentives or program rebate. This will insure that either through a qualified installer or the Program Administrator's RCS vendor installations meet Building Performance Institute standards or similar standards set by the Program Administrators.</p>
Target Market	Residential natural gas heating customers.
Marketing/Strategy Approach	This program will be marketed through the RCS program and by the installing contractors. To reach the target audience, Program Administrators will begin a phased approach of directly marketing to heating customers.

Target End Uses	<p>Target end uses include but are not limited to:</p> <ul style="list-style-type: none"> • Building shell • Heating • Domestic water heating • HVAC/Mechanical systems
Recommended Technologies	<p>Recommended technologies include air sealing, duct sealing, shell insulation, thermostats, ventilation, and heating/cooling systems. Other measures may include heating system controls, super insulation, combined heat and power (“CHP”) technologies, solar DHW systems, and opportunities for piloting “deep retrofit” enhancements of major renovation projects. Customers will see these offerings as an integrated program through the RCS/MassSAVE program.</p>
Financial Incentives	<p>The incentive for recommended major building shell and renewable measures is currently 75% of the cost of installing those measures to a maximum of \$2,000. Incentive levels may be adjusted to respond to market conditions. Measures currently offered directly through the Weatherization program include:</p> <ul style="list-style-type: none"> • Attic insulation • Wall insulation • Pipe insulation • Duct insulation • Programmable thermostats • Air sealing • Domestic hot water measures
Delivery Mechanism	<p>The program is administered by individual Program Administrators and is jointly coordinated regionally through the RCS/MassSAVE program.</p>

Joint Program Administrator Enhancements for 2010-2012	As the program strives for broader awareness and deeper market penetration, the Program Administrators will explore ways to enhance the implementation process for their customers. For example, when an insulation contract is signed, the customer could receive an “instant” rebate towards the cost of the installation rather than receiving a payment after the work has been completed. Another consideration may be to provide higher incentives for renters. These and other proposals will be investigated, discussed, and if determined appropriate, included as part of the program.
Program Administrator-Specific Elements	To be added with the October filing.
Three-Year Deployment	Since the Residential Weatherization Program is “piggybacked” on the RCS/MassSAVE program, the Weatherization program will be flexible to adopt any adjustments the evolution of RCS/MassSAVE’s redesign may require.
Special Notes	The gas Program Administrators will work closely with their electric counterparts as the respective programs move towards integration and facilitating a more customer-friendly experience when installing all types of energy efficient equipment or measures.

Residential New Construction

Primary Objective	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.
Initially Offered	1998
2010-2012 Program Goals	To be provided with October 2009 Filings
2010-2012 Budget	To be provided with October 2009 Filings
Joint vs. Program Administrator-Specific Offering	Joint
Program Design	<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 as well as deeper energy savings where possible. The Program Administrators strive to retain participating builders and recruit new ones.</p> <p>Homebuilders must target ENERGY STAR certification for all homes submitted to the program. However, the Program will also provide incentives for 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 ENERGY STAR qualified compact fluorescent lamps (CFLs) in appropriate hard wired sockets, on-site training, and a final verification inspection is required for all homes participating in the Program.</p>

	<p>In accordance with the Energy Efficiency Advisory Council (EEAC), all projects four units and less will be identified as single family, and all projects five units and greater will be classified as multi-family. Buildings that are five stories or less that are permitted under the residential use group are eligible to participate in the Program and to be certified as an ENERGY STAR qualified Home.</p> <p>Mixed-use (Residential/C&I) Buildings may participate if they are permitted in the commercial use group as long as: (1) the entire structure is five stories or less and (2) each residential unit has its own heating, cooling, and hot water systems separate from the other units.</p> <p>Additional qualifications for Program participation are:</p> <p>ENERGY STAR Certification:</p> <ul style="list-style-type: none"> • 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 (UDRH) of at least 30% and 60% 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. • Meeting the envelope leakage and duct leakage criteria • Successful completion of a Thermal Bypass Inspection Checklist (TBC) and additional checklists as introduced by Environmental Protection Agency for version III of the national ENERGY HOMES standard. • Meeting the EPA’s ENERGY STAR homes qualifications and/or the most rigorous standard available at the time (see www.energystar.gov/index.cfm?c=new_homes.hm_index). • Program required percentage of CFL installations <p>Code Plus Certification:</p> <ul style="list-style-type: none"> • Meeting envelope leakage and duct leakage criteria • Program required percentage of CFL installations
<p>Target Market</p>	<ul style="list-style-type: none"> ▪ Homebuilders ▪ Contractors ▪ Architects/Designers ▪ Trade allies ▪ HERS Raters

Target Market (cont.)	<ul style="list-style-type: none"> ▪ Homebuyers ▪ Realtors ▪ Developers ▪ Low Income and Affordable Housing Developers ▪ Code Officials ▪ Consumers (in the market for new homes and or major renovations)
Marketing Approach	<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>
Target End Uses	<ul style="list-style-type: none"> ▪ Energy-efficient building shell ▪ Proper duct and air sealing techniques ▪ Quality installation of HVAC equipment ▪ Increased use of energy-efficient lighting ▪ Energy efficient water and heating upgrades ▪ Increased Indoor Air Quality (IAQ)

Recommended Technologies	<ul style="list-style-type: none"> ▪ ENERGY STAR qualified heating and cooling systems, lighting, appliances and windows ▪ Increased levels of insulation using better materials, i.e., blown in and/or foam board ▪ Improved construction techniques to minimize air leakage, duct leakage, infiltration, and heat loss ▪ Improved HVAC installation techniques and guidelines ▪ Incorporate mechanical ventilation ▪ Renewable ready-PV/Solar Thermal
Financial Incentives	<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"> • This program will coordinate with other programs such as MassSAVE, GasNetworks, Cool Smart. Please refer to those other filing sections for specifics.

Package	Requirements	Single-Family Incentive ^[1]	Multi-family Incentive ^[2]		
			5-99 units	100-199 units	200+ units
CODE Plus	6 ACH CFM 50, 8 percent duct leakage	\$325	\$225.00	\$225.00	\$225.00
ENERGY STAR I	ENERGY STAR compliance with a minimum HERS Index of 85 or less	\$750	\$650.00	\$500.00	\$350.00

ENERGY STAR II	ENERGY STAR compliance with a minimum HERS Index of 85 or less and 30% improvement or better over the Massachusetts Baseline Home	\$1,250	\$1,150.00	\$850.00	\$550.00
ENERGY STAR III	ENERGY STAR compliance with a minimum HERS Index of 85 or less and 60% improvement or better over the Massachusetts Baseline Home	\$8,000.00	\$4,000.00 ^[3]	\$3,000.00 ^[3]	\$2,000.00 ^[3]
^[1] Starting in 2010 the program will define a single family home as a structure that contains one to four units.					
^[2] Starting in 2010 the program will define a multi-family home as a structure that contains five or more units.					
^[3] ENERGY STAR III Multi-family projects will be reviewed for final fee structure; listed are the maximum incentives paid by Program Administrators.					

Delivery Mechanism	The program is administered by a utility and/or energy efficiency service provider in each service territory and coordinated regionally through the Joint Management Committee (“JMC”). The JMC, through a competitive bid process, selects 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 Sponsors. 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 Administrators may consider continuing to support rater fees for Low Income projects in their service territories.
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<p>Delivery Mechanism (cont.)</p>	<p>The Program Administrators recognize the new 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 contractor will be a HERS Provider of last resort to help new raters become established as part of the open market structure.</p>
<p>Joint Program Administrator Enhancements Planned for 2010-2012</p>	<ul style="list-style-type: none"> ▪ The Program Administrators are currently working together to identify a way to provide complete support to Multi-Family structures five stories or fewer. It is under consideration to allow master metered electric buildings to participate in the program, as they are ineligible currently. ▪ 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 or within new construction will be part of the October filing for the 2010-2012 Three-Year Plan. ▪ 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 program will promote Building Science Technologies which help interested homebuilders construct zero energy homes. <p>Support workforce development efforts through Green Jobs Act by encouraging new raters to enter into the marketplace.</p>
<p>Program Administrator-Specific Elements</p>	<p>To be provided with October 2009 Filings</p>
<p>Three-Year Deployment</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 given 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>Three-Year Deployment (cont.)</p>	<p>For the three-year deployment, the Program Administrators will focus on:</p> <ul style="list-style-type: none"> • Expansion of the current HERS Rater network of 9 competing companies • Moving closer to a fully market-based program where Sponsors reduce and ultimately phase out subsidies to Raters shifting those monies directly to builders who, in turn will negotiate directly with Rater's for associated fees to rate homes • Expansion of the base of participating builders • Continued expansion of existing and new market allies • 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 • Collaboration with Green Communities through technical support • Continued ramp up of consumer awareness
<p>Special Notes</p>	<p>Please refer to the Council's Priorities Resolution dated March 24, 2009. The program design addresses a number of applicable Council priorities, including:</p> <p>2- Coordinating with other programs for outreach communication and marketing strategy</p> <p>20 - Performance based incentive structure, Third Tier</p> <p>22- Comprehensive program delivery through Joint Management Committee integrating gas and electric Sponsors in a fuel blind nature</p> <p>29- Through tier development and refinement informed by the 2008-09 Zero Energy Challenge, the JMC will look to further promote near zero energy homes</p> <p>30- Coordinating with other programs on integrated website</p> <p>31- Market based HERS Rater Model, Trainings and Technical Assistance</p>

Multi-Family Services

Primary Objective	<p>The Program Administrators are currently offering multi-family service offerings in both the new construction and retrofit markets. New construction is served through the state-wide ENERGY STAR Homes program and retrofit services are provided through various natural gas programs implemented by each Program Administrator.</p> <p>While the current programs have resulted in significant energy savings, the Program Administrators recognize that by exploring the recommendations included in the Council’s Priorities Resolution, even greater market coverage and energy savings may be achieved.</p>
Program Inception	<p>Program Administrators have been offering multi-family services through various program channels since the mid-nineties.</p>
2010-2012 Savings Target	<p>N/A – Included in various prescriptive and custom non-low-income and low-income programs.</p>
2010-2012 Budget	<p>N/A – Included in various prescriptive and custom non-low-income and low-income programs.</p>
Joint vs. Program Administrator-Specific Offering	<p>Joint</p>
Program Design	<p>The Program Administrators in collaboration with LEAN, state organizations such as the DHCD, and Community Action Program (“CAP”) agencies, 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>Many of the components to improve the design and delivery of multi-family services are planned as part of an overall 2010-2012 strategic plan. These enhancements are best described in the Joint Program Administrator Enhancements section below.</p> <p>The Priorities Resolution seeks to increase savings from the multi-family sector along two dimensions. By addressing market barriers and improving the customer experience, the Program Administrators may expect to see an increase in participation; and by exploring various strategies to encourage deeper savings, the amount of savings per participant may increase as well.</p>

Target Market	Non-low-income and low-income residential and commercial retro-fit and new construction multi-family housing served by natural gas program administrators.
Marketing/Strategy Approach	<p>The gas program administrators will work with the electric program administrators to develop marketing strategies that focus on:</p> <ul style="list-style-type: none"> • Design and implementation of an outreach and education strategy designed specifically for the multi-family market to encourage program participation. Emphasis will be placed on educating landlords on the benefits of undertaking energy efficiency projects. • Development of a streamlined program application/intake process designed to enhance the customer experience so as to encourage a more comprehensive approach. This process will take into consideration the unique requirements of the multi-family market and the need to reduce administrative burdens for program participants. The process design will be informed by interviews with customers from the multi-family sector. • Direct outreach to building owners and/or property managers.
Target End Uses	<ul style="list-style-type: none"> ▪ Attic and wall insulation ▪ Attic Ventilation to code requirements ▪ All other cost effective weatherization measures ▪ Heating and water heating equipment ▪ Boiler controls
Recommended Technologies	<ul style="list-style-type: none"> ▪ Insulation upgrades ▪ Air sealing ▪ High Efficiency heating and water heating equipment ▪ Boiler reset controls ▪ Solar Thermal hot water

	<ul style="list-style-type: none"> ▪ High Efficiency windows
Financial Incentives	<p>The incentive levels for multi-family residential housing upgrades will vary based on whether the units are new-construction or retrofits and non-low-income or low-income. Some incentives will be prescriptive and some will be considered custom based on the particular installed measure and cost-effectiveness screening. However, the gas Program Administrators will work closely with their electric counterparts to provide a robust and comprehensive package of incentives to promote increased program participation.</p>
Delivery Mechanism	<p>Multi-family services offerings will be administered by individual GasNetworks member and is planned to be jointly coordinated with the electric program administrators.</p>
Joint Program Administrator Enhancements for 2010-2012	<p>The Priorities Resolution seeks to increase savings from the multi-family sector along two dimensions. By addressing market barriers and improving the customer experience, the Program Administrators may expect to see an increase in participation; and by exploring various strategies to encourage deeper savings, the amount of savings per participant may increase as well. To this end, the Program Administrators will research and analyze various options in conjunction with the Consultants, to:</p> <ul style="list-style-type: none"> • Create a common understanding of the term “properties” to ensure consistent treatment within the multi-family sector • Develop program designs that are appropriate for the new construction and retrofit markets. • Identify and build into the program design opportunities to: <ul style="list-style-type: none"> ○ coordinate program offerings ○ ensure greater consistency across service territories ○ address potential issues stemming from the fact that multi-family properties can be served under residential, low-income, commercial or in some cases multiple rate classes, taking into consideration current tariff/rate schedule requirements <ul style="list-style-type: none"> ▪ thoughtful consideration will be given to the treatment of multi-family residential developments billed on residential, low-income and commercial rates so as to optimize development-wide energy performance ▪ strategies will be researched and evaluated for serving low-income multi-family buildings

<p>Joint Program Administrator Enhancements for 2010-2012 (cont.)</p>	<p>in a manner that is fuel-blind, meter-blind and integrates low-income, residential and commercial programs as appropriate, with minimal or no co-payment (pending a review of the budget impacts by each Program Administrator).</p> <ul style="list-style-type: none"> ○ provide some flexibility for scheduling projects than extend beyond a single program year ○ utilize rebate and incentive structures that encourage deeper savings ○ offer technical assistance in the form of audits, design assistance, commissioning, and training in addition to monetary incentives <ul style="list-style-type: none"> ● Assess the “whole building approach” to energy savings, where applicable, to further integrate the delivery of both gas and electric measures ● Explore the potential for including a deep energy savings track by conducting one or more pilots ● Identify other options for pilots, such as PassivHaus, to be implemented by one or more Program Administrator, to provide data for evaluating alternative program designs ● Analyze the potential for using a market-based provider model to deliver technical assistance, audits and turnkey energy efficiency improvement services using market assessment or market research data as applicable ● Assess and document the merits and challenges posed by requiring the accreditation of or specific credentials from all auditors of multi-family facilities and associated contractors based on a review of successful models throughout the country ● Conduct best practices research on program design options based on the experience of NYSERDA and other states’ multi-family programs, factoring into the analysis differences in housing stock and population density as well as any other relevant differences between Massachusetts and other areas in the country.
<p>Program Administrator-Specific Elements</p>	<p>To be added with the October filing.</p>

<p>Three-Year Deployment</p>	<p>While the evolution of updated program delivery services for serving the MF sector will occur over the course of this year, and will be continue to be refined over the three-year period, the Program Administrators have already begun taking significant action steps to ensure timely progress as noted in the Special Notes section below.</p> <p>The gas Program Administrators will work closely with their electric counterparts towards integration and facilitation of a more seamless and customer friendly experience when considering and installing all types of energy efficient equipment or measures.</p> <p>The gas Program Administrators will also work closely with their electric counterparts to support various pilot initiatives where appropriate that promote broader and deeper natural gas energy savings (<i>e.g.</i>, PassivHaus)</p>
<p>Special Notes</p>	<p>To begin the process of improving the delivery of multi-family services and obtaining customer feedback, a focus group was held for staff from the Massachusetts Department of Housing and Community Development. The objective of the meeting was to obtain a better understanding of the needs of the Public Housing Authority (“PHA”) market sector. Participants were divided into two groups, one including medium/large PHAs and the other including small PHAs. It became evident that even within the PHA sector, the needs of medium/large and small PHAs differ fairly dramatically and any new program design will need to address this phenomenon.</p> <p>To obtain further market intelligence, a two-day multi-family workshop including customers, Council members and their Consultants, engineers and other energy professionals, vendors, and Program Administrators was held on April 15 and 16 2009. The objective of the workshop was to capture and synthesize inputs from key stakeholders in order to ensure that the multi-family program offers continuous and comprehensive coverage across the entire multi-family market. Customer input was gathered to ensure that the program will provide a straightforward and easy-to-access interface between the program and its prospective participants.</p> <p>The workshop was comprised of a series of interactive group sessions where teams were charged with tasks including defining market segments, identifying the needs of each segment, and outlining when and how Program Administrators can best assist customers in achieving their energy efficiency goals. Each group shared their ideas with the others, which allowed for continuous improvement in the work product as the workshop progressed over the two days. A final report will be made available to all participants in May, 2009. Using this information, the Program Administrators, working in conjunction with the Council’s Consultants, will develop a work plan that will allow for further exploring options for resolving the issues identified. This work plan is expected to have both short-term and longer term goals that will be achieved over the course of the three-year period.</p>

Special Notes (cont.)	With respect to researching alternative program models, best practice research, Program Administrator representatives participated in a conference call with NYSERDA, their administrative vendor, and the Council's Consultant. Information gleaned from this call, as well as that gathered from an assessment of other programs throughout the country, will be used to inform decisions made during the program design effort.
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2. *Low Income Programs Descriptions*

Residential Low-Income Program

Primary Objective	To increase energy efficiency and reduce the energy cost burden for low-income customers through education and the installation of gas energy efficiency measures.
Program Inception	Some Program Administrators' low-income programs date back to the early nineties. 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.
2010-2012 Program Goals	To be provided with October 2009 Filings
2010-2012 Budget	To be provided with October 2009 Filings
Joint vs. Program Administrator-Specific Offering	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.")
Program Design	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>Program Design (cont.)</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. 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"> • Customer education packages: Common leave-behinds in customer audit packs • Materials for outreach workers (<i>e.g.</i>, hospital intake people, senior centers) • A web link on Division of Unemployment Assistance website • Other outreach opportunities
<p>Target Market</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, fifty percent (50%) 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> <p>Any changes to eligibility will be addressed through the Best Practices Working Group.</p>
<p>Marketing Approach</p>	<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</p>

<p>Marketing Approach (cont.)</p>	<p>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) and maximizing energy savings opportunities (going deeper into each home to find ways to save energy).</p>
<p>Target End Uses</p>	<p>Target end uses include but are not limited to:</p> <ul style="list-style-type: none"> • Comprehensive, whole house approach • Building shell • Heating • Domestic water heating • HVAC/Mechanical systems • General waste heat • New technologies and renewable

<p>Recommended Technologies</p>	<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 low-income customers. Current measures offered through the low-income program include, but are not limited to:</p> <ul style="list-style-type: none"> • Attic insulation • Wall insulation • Pipe insulation • Duct insulation • Air sealing • Domestic hot water measures • Heating system repair and replacement • Major weatherization repairs (<i>e.g.</i>, electrical repairs, roofs, etc.) • Landlord heating system retirement pilot (PA-specific) • Health and safety <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"> • Expanded landlord heating system retirement initiatives • Exterior doors • Super insulated roofs • Solar water heating • Green/hypoallergenic products • Window coverings • Mobile home insulation
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Recommended Technologies (cont.)	<ul style="list-style-type: none"> • ENERGY STAR Clothes washers • Other measures determined on a site-specific basis
Financial Incentives	<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>
Delivery Mechanism	<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>
Joint Program Administrator Enhancements Planned For 2010-2012	<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"> • Work with LEAN, DHCD, and Network agencies to increase qualified contractor participation in the program through training and workforce development. • Continually review and evaluate new measures and technologies through the Best Practices Working Group process • Leverage all applicable revenue streams available to enhance services • Broaden program participation through coordinated marketing and outreach efforts • Deepen efficiency penetration consistent with a comprehensive, whole house approach

Program Administrator-Specific Elements	<p>NSTAR Gas currently administers a Low-Income Multi-family Program and will continue to offer these services throughout the three-year period referenced in this Plan. As part of the Multi-family Assessment, Program Administrators will consider NSTAR’s model in its analysis.</p>
Three-Year Deployment	<p>The Program Administrators, in conjunction with the Council’s 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, with minimal or no co-payment (pending a review of the budget impact by each Program Administrator).</p>
Special Notes	<p>The Residential Low-Income Program will address several of the Council’s Priorities Resolution including:</p> <ul style="list-style-type: none"> • 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 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. • Best Practices. The Program Administrators will continue to work in coordination with LEAN 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 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.

**Special Notes
(cont.)**

- **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 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 low-income 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.
- **Broader/Deeper -** 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 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 potential capital infusion is not yet known, but this issue will be re-visited by the Program Administrators, LEAN, and the EEAC as final, accurate information is available.

3. *C&I Descriptions*

Overview of C&I Efforts

The Commonwealth of Massachusetts is facing an unprecedented opportunity to build upon the past twenty years of effective energy efficiency delivery strategies for commercial, industrial and municipal customers. Indeed, the passing of the Green Communities Act establishes the direction that Program Administrators will adopt going forward to address the new legislation that requires energy delivery suppliers to meet future energy needs through cost-effective energy and demand reduction resources. The strategies to promote greater energy savings and peak demand reductions will build upon existing programs to date, with the intent to move to larger scale delivery of renewable, peak demand and energy efficiency solutions.

The depth of existing programs will significantly expand over the next three years and new initiatives will be introduced to increase participation and savings. Existing programs addressing potential energy and demand savings in both existing buildings and new construction, which have a history of producing significant savings, will be ramped up and new initiatives will be developed and introduced to meet the mandate to increase energy savings. The platform for increasing savings cost effectively is based on pursuing the following principles: 1) integrating gas and electric programs into a portfolio of fuel-neutral programs to the extent reasonable; 2) striving for seamless delivery from the customer's perspective; 3) deeper penetration of energy efficiency and automated load management measures in existing programs combined with the introduction of innovative and targeted approaches and options; and 4) developing an expanded, trained workforce capable of providing consistent program messaging and services, while maintaining high quality levels.

Consistent Messaging

A critical component of integration and seamless delivery is consistent messaging. A statewide website (marketing portal) and marketing approach to make customers aware of program offerings will minimize the market confusion that can result from competing advertising campaigns that may overlap in the mass media. In addition, individual Program Administrators will undoubtedly want to, and should, continue to implement their own complementary marketing initiatives to reinforce and support the overall statewide marketing strategy as well as address unique local conditions and/or sub-markets in their service areas. These individual activities should be undertaken in consultation with, and with the support of, all other Program Administrators in order to avoid inadvertent inconsistent messaging.

Increased Savings Targets

Meeting targeted 2010 through 2012 savings goals will require expanding existing programs and strategies to achieve deeper, more comprehensive savings; introducing and promoting new initiatives and technologies; and increased marketing of all program offerings. Initiatives and approaches that will be expanded in 2010 include, but are not limited to, municipal initiatives; whole building assessment; advanced lighting solutions; and initiatives targeting specific markets, such as the “Office of the Future” approach targeting commercial buildings, as well as an emphasis on increased automation of loads to provide customers with flexible supply opportunities. Each of these initiatives is described in more detail in the C&I program descriptions.

Review of New Technologies

There is a steady flow of new technologies being developed and offered to increase the efficiency of energy use for commercial and industrial customers. Before incorporating new or

unfamiliar technologies in their program offerings, the Program Administrators are responsible for performing a thorough review to ensure that such products or device will provide cost effective energy savings for their customers. To address the need for these reviews, the Program Administrators have established a Standing Technical Committee (“STC”).

The STC consists of key technical staff from each Program Administrator as well as the Consultants. The committee reviews technical issues of statewide interest; it provides documented technical interpretations and technology assessments to the program implementers and is the authority for consistent program interpretation of technical matters for all of the participating administering utilities. The STC has developed a set of protocols for the content of their review and procedures for documenting and disseminating their conclusions and technical interpretations.

Requests for program consideration of a new or unfamiliar technology that come from a vendor or customer are forwarded to the technical committee by the receiving utility. This group can undertake or direct such tasks as:

- Research and analysis of specific measures that are candidates for inclusion in the programs.
- When appropriate and agreed to by the respective Program Administrators, development of common program implementation materials or procedures including: technical specifications, technical study/commissioning protocols, equipment baseline reference sheets, inspection forms, and other technical and administrative support materials, for use by the respective utility program staff and contractors.
- Recommendation of new items or changes to existing items on prescriptive offering lists, adjustments to savings estimations, and additions or modifications to the list of acceptable measures on an annual basis, or on a cycle and through a procedure to be determined.
- As-needed assignments to collect data and/or to produce recommendations which would allow the administering utilities to address unanticipated program implementation issues.

Community-Based Efforts

When thoughtfully designed and executed, community-based efforts can be a key tool in effecting deep, comprehensive penetrations of energy efficiency in a neighborhood, city, or town. The Program Administrators seek to harness the power of communities to achieve broad-based participation in the Commonwealth's programs.

Over the years, both here in Massachusetts and elsewhere, much has been learned about why some community efforts succeed and others fail. The guiding principles of a successful community-based marketing initiative must include at a minimum the following attributes:

Community Engagement

Successful community-based partnerships fully connect communities and utilities; they focus on grass-roots community outreach by providing focused energy education and resources linked to local motivation and empowerment to manage and reduce energy consumption. These partnerships develop and deliver comprehensive and individualized initiatives. The keys to success are understanding and addressing the unique needs and characteristics of partner communities to achieve all cost-effective energy savings including gas and electric opportunities and to reduce greenhouse gas emission. Successful partnerships involve all sectors within the community and may include such activities as:

- Facilitating collaboration among students, teachers, parents, utilities and the greater community to provide energy education fostering long-term energy savings.
- Assisting school systems in developing comprehensive, standards-based curricula, resources, materials and professional development for educators, school facility audits and special events.

- Connecting local businesses with their serving utilities to address the specific challenges each business faces in reducing energy usage, lowering utility bills, cutting greenhouse gas emissions, and educating their tenants, management and facility operations personnel.

In successful programs, the Program Administrator promotes a portfolio of opportunities that addresses all the community's expressed needs--services for new construction, home energy services, and ENERGY STAR products for existing buildings, as well as information and facilitation of renewable energy, including information about combined heat and power, net metering, and interconnection of generators. The Program Administrator provides energy saving tips on everything from heating and air conditioning to water heating and lighting, from cooking to refrigeration.

Community Commitment

Community marketing achieves deeper penetration by adding a "pull" component to the traditional "push" of energy efficiency programs. Successful efforts are truly driven by the community and its recognized leaders, with the Program Administrator providing program project management and technical support in addition to guidance on overall energy savings goals. Without full community ownership, the program will achieve no more success than one driven by a traditional marketing effort.

With this in mind, Program Administrators will seek a significant commitment from local leaders both inside and outside of government. For a community to drive a program, it must own it as well. The paramount goal and measure of success for a community-based initiative is to achieve higher levels of cost-effective energy efficiency penetration than traditional delivery

strategies. Therefore, the same cost-effectiveness criteria will be applied to community-based initiatives as to other initiatives.

Selection of Communities

Proven elements of success have been competition and exclusivity. Thus, the Program Administrators will issue a competitive solicitation to select the communities with the greatest opportunities for success, based on the quality of thought and levels of commitment displayed in their submissions. Because community-based efforts require a substantial and focused effort by both the Program Administrator and the community, the Program Administrators must focus their energies by limiting their initiatives to a few communities at any given time. Thus, the communities selected will be those that display the criteria established above, where local leverage can bring expectations of success beyond current program delivery models.

Workforce Development

Additional staffing resources, both internal and external, will be needed to achieve mandated saving levels. Expanding outreach to customers will be an important factor in increasing participation and the number of completed projects. As the number of participants and projects increase, additional professional contractors will be required for providing technical review of applications, on-site energy analysis, technical and design assistance for comprehensive projects and project commissioning services.

Program Administrators will support workforce development through a number of initiatives including:

- Working with colleges and universities to educate them on industry needs and develop appropriate coursework
- Supporting co-op programs

- Working with vendors on cross-training initiatives

Long-term Goals

The long-term goal is to provide a consistent set of statewide programs and strategies that can be delivered to customers in a seamless fashion, regardless of whether the customer is served by a combined gas/electric Program Administrator, by different gas and electric Program Administrator, or has facilities or projects in multiple utility service areas. Program Administrators will explore ways to accommodate this goal, potentially including providing services under contract to other Program Administrators (particularly in unique circumstances).

For this Plan, the intent is to establish goals and budgets based on current programs and initiatives in progress. The PA-specific plans submitted in October 2009 will contain more detail on market approaches and will address areas of success as well as the ability to expand customer markets and potential and fill gaps requiring new strategies.

Achieving the multiple goals set forth in the Act will take time. In each of the next three years, Program Administrators expect to see increased consistency in participation requirements; available core services and measures; conditions, exclusions and limits; and incentive amounts and/or calculations.

C&I Prescriptive Programs

Primary Objective	The C&I Prescriptive Rebate/Incentive Program is designed to promote the installation of energy efficient gas technologies in C&I properties during the equipment selection process.
Program Inception	1998
2010 – 2012 Program Goals	To be provided with October 2009 Filings.
2010 - 2012 Budget	To be provided with October 2009 Filings.
Joint vs. Program Administrator-Specific Offering	Joint
Program Design	The C&I Prescriptive Rebate/Incentive Program is designed to promote the installation of energy efficient gas technologies in C&I properties. Prescriptive incentives will be targeted primarily toward the small and medium C&I customers as well as multi-family customers. This effort will be supported by the extensive outreach and education effort to contractors, manufacturers, equipment vendors, engineers, as well as promotions directed at customers themselves. As outlined in the program terms and conditions, the Program Administrators reserve the right to negotiate incentives for multiple installations at a single site and/or multiple installations within a portfolio of properties. The Program Administrators also reserve the right to inspect the property for the installation of the measures prior to issuing the rebate.
Target Market	<p>In general, the C&I Prescriptive Rebate/Incentive Program targets all eligible C&I customer classes, as well as installation contractors and equipment vendors and specifiers of equipment. More specifically, the C&I Prescriptive Rebate/Incentive Program reaches out to select industry players based on the equipment type and application.</p> <p>This program directly targets C&I customers, business and facility owners, property management firms, and landlords who provide space and water heating to their businesses with natural gas. The program also targets heating/plumbing contractors who plan/install these systems, as well as the manufacturers, distributors, and wholesalers who bring this equipment to market.</p>

Technologies (cont.)	<ul style="list-style-type: none"> • Programmable thermostats • Energy efficient food service equipment (high efficiency, ENERGY STAR-qualified fryers, steamers and convection ovens, and low-flow, pre-rinse spray valves)
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Financial Incentives	Measure	Qualification	Rebate
	Infrared Heater	Low intensity	\$900 per unit
	Furnaces (forced hot air)	92% AFUE or greater	\$400
	Furnaces (with ECM)	92% AFUE or greater	\$500
	Furnaces (with ECM)	94% AFUE or greater	\$650
	Boiler (forced hot water)	85% AFUE or greater	\$700
	Boiler (forced hot water)	90% AFUE or greater	\$1,500
	Combined High Efficiency Boiler and Water Heating Unit	90% AFUE or greater	\$1,600
	Boiler (Steam w/ electronic ignition)	82% AFUE or greater	\$200
	Indirect Water Heater	Connected to a high efficiency boiler, 30 – 75 gallons	\$500
	On-demand Water Heater	Minimum .82 Energy Factor and no standing pilot	\$1,000

Financial Incentives (cont.)	ENERGY STAR Storage Water Heater	Minimum .62 Energy Factor	\$50
	Condensing Gas Water Heater	Minimum Energy Factor-TBD	\$500
	ENERGY STAR Programmable Thermostat	ENERGY STAR-qualified or equivalent	\$25
	High Efficiency Fryer	ENERGY STAR-qualified or high efficiency large vat fryers	\$1,000
	ENERGY STAR Steamer	ENERGY STAR-qualified	\$1,000
	ENERGY STAR Convection Oven	ENERGY STAR-qualified	\$1,000
	Low-flow Pre-rinse Spray Valve	1.15 gpm or less	No cost to customer
Delivery Mechanism	The program is administered by the GasNetworks member utilities and jointly coordinated regionally through GasNetworks.		
Joint Program Administrator enhancements planned for 2010-2012	Joint Program Administrator enhancements are identified throughout the program description. Examples include developing an integrated website and statewide program marketing and customer outreach campaigns. Program Administrators plan to work together on technologies including CHP, introducing and promoting new and emerging technologies, integrating multi-family program options, and responding to GCA directives.		

Program Administrator-Specific Elements	To be provided with the October 2009 filings.
Three-Year Deployment	There are clear opportunities to integrate natural gas prescriptive programs into delivery mechanisms such as the Advanced Buildings Program for new construction and the C&I Small Business Services offered by electric efficiency programs. A priority for the development of integrated programs is to determine the best practice to include these rebates and services with existing and planned outreach and implementation mechanisms that focus on electric end uses.
Special Notes	<p>To ensure comprehensive consideration of highly efficient technologies, GasNetworks has hired GDS to identify potential gas rebate measures. Results of the study will be utilized in future program design and equipment support.</p> <p>The GasNetworks programs have received numerous national awards and recognition including:</p> <ul style="list-style-type: none"> ■ <i>AESP National Award for Outstanding Achievement in Energy Program Design and Implementation 2007</i> ■ <i>ACEEE Exemplary Portfolio of Energy Efficiency Programs 2007</i> ■ <i>ACEEE Exemplary Program GasNetworks Joint Gas & Electric High Efficiency Furnace Rebate 2004</i> ■ <i>ACEEE GasNetworks Regional Multi-Utility Collaborative Comprehensive Portfolio 2004</i>

C&I Custom Program

Primary Objective	The commercial Custom Program provides natural gas related energy efficiency expertise, services and financial incentives to encourage C&I customers to install energy efficient natural gas equipment and implement natural gas-saving measures. The program also works to develop better building maintenance and operation practices.
Program Inception	Mid 1990's
2010 – 2012 Program Goals	To be provided with October 2009 Filings.
2010 - 2012 Budget	To be provided with October 2009 Filings.
Joint vs. Program Administrator-Specific Offering	Specific to Program Administrators
Program Design	<p>The Custom Program will provide participants with technical assistance through an energy assessment and financial assistance to help defray the cost of an engineering study when warranted, as well as financial incentives to mitigate a portion of the cost of energy-saving measures. Technical assistance services available ranges from custom, site-specific reviews to engineering assistance and new construction design assistance. These services provide C&I customers with information and criteria related to energy efficiency options that can be used when new equipment is specified or enhancements can be made to existing heating, water heating and other natural gas fired mechanical systems.</p> <p>Small and medium sized customers are eligible for basic energy efficiency assessments that determine whether the customer will be best served through the prescriptive program or progress to the custom program. Where applicable, industry and/or site-specific recommendations are made in conjunction with electric-saving opportunities. Customers receive a report with estimated costs and energy savings. The report also guides the customer through the process of implementing the energy efficiency measures through either the</p>

	<p>prescriptive program or custom program.</p> <p>Larger customers and certain applications that require a more comprehensive energy analysis may receive custom audits for specific applications such as combustion controls, heating system redesigns, solar hot water and heat recovery from CHP applications. The custom audit will be developed in collaboration with electric Program Administrators to identify both gas and electric saving measures for larger customers.</p> <p>Comprehensive, whole-building, or specialized energy efficiency assistance beyond a custom audit is served through engineering studies. These studies must be completed by either a Professional Engineer or industry specialist with demonstrated expertise in a particular field or discipline. Customers are encouraged to use engineering firms that are partners in electric efficiency programs or understand whole building performance. Customers who receive this service will receive a detailed report including recommended measures, estimated costs, estimated energy savings potential and incentives available. Coordination with the electric efficiency administrator will ensure fuel integration and a comprehensive energy assessment approach. In application-specific projects, the contracted engineering firm will identify electric savings as appropriate.</p> <p>New construction services support customers through the design process and offer design review services to identify appropriate energy saving measures for new construction. The process works with the customer as a part of the design team and engages the customers at the front end of the new construction process. Customers taking advantage of design assistance must be willing to move forward with the installation of energy efficiency measures with reliable savings and acceptable payback periods. New construction services are coordinated with electric efficiency programs to ensure fuel integration by comprehensively addressing the building performance and efficiency.</p>
Target Market	<p>Target market includes all C&I customers. New construction and existing building will be addressed through the Custom Program. Market actors such as engineers, architects, manufacturers and vendors are also addressed through outreach activities.</p>
Marketing Strategy/Approach	<p>Communication to customers and market actors as well as education of trade allies is critical to the success of the energy efficiency efforts. The statewide media campaign and website design will work to integrate the services to similar target markets within the contractor, engineer, builder, and developer arenas. Ongoing</p>

<p>Marketing Strategy/Approach (cont.)</p>	<p>efforts will continue with brochures, direct mail bill inserts and educational literature on gas use technologies.</p> <p>Opportunities remain to communicate the custom program through personal contact through industry trade shows, chamber events, technology seminars and trade conferences. Marketing and outreach also occurs through channel partners such as manufacturers, distributors, engineers and architects. Deeper savings can be achieved by educating partners of the electric Program Administrators to the gas technologies and program offers to ensure fuel integration when addressing a customer’s energy performance.</p> <p>In addition, customers with multiple properties will be guided through the programs to facilitate improvements in each building and simplify the work process for the customer.</p> <p>Trade ally training works to provide trade allies with technical tools to properly size, install and maintain energy efficient technologies. Market partners and industry experts are brought in through GasNetworks to disseminate information from efficiency programs and the building industry. A fluid, statewide, distribution list of mechanical engineers, contractors and associations such as the Association of Energy Engineers and the Plumbing Heating and Cooling Contractors Association is maintained to send updates on training seminars, code training and new technologies.</p>
<p>Target End Uses</p>	<p>Energy efficient technologies that exceed minimum code and prove reliable, long-term savings are considered in the program. This includes:</p> <ul style="list-style-type: none"> • Building envelope and glazing • Commercially sized space heating equipment • Commercially sized water heating equipment • Buildings and spaces that require large amounts of fresh air • Heat-intensive manufacturing processes • Steam Systems: steam system assessments, steam trap maintenance and replacement programs represent significant savings for large commercial, industrial users

<p>Recommended Technologies</p>	<p>Technologies that should be targeted include:</p> <ul style="list-style-type: none"> • Thermal membrane condenser for large steam systems. • Solar hot water in the right application can present significant energy savings as well as cooling. • System redesigns to allow for modulating burners can provide significant year long savings. • Controls such as O2 trim, parallel positioning • Energy management systems • Commercially sized solar hot water systems • Gas absorption chillers • Demand control ventilation • Heat recovery • Combined Heat and Power (“CHP”) equipment. CHP will continue to be addressed through the Custom Program. Only an appropriately designed and installed system will be managed through the Custom Program. Gas and Electric Program Administrators will conduct custom analyses of potential CHP opportunities. The gas Custom Program will review the heat recovery from the system while the electric program will evaluate electrical reductions. Minimum specifications, historical data, and operating characteristics etc. must be evaluated in a proper framework in order to ensure positive environmental benefits and to ensure energy reductions are realized • Other emerging technologies as they become commercially viable
<p>Financial Incentives</p>	<p>In general, financial incentives will be offered to offset the higher costs associated with the selection and installation of high efficiency equipment or building upgrades. Where applicable, the Gas Program Administrators will work with the Electric Program Administrators to combine and leverage financial</p>

	<p>incentives.</p> <p>In general, Program Administrators will co-fund as much as 50%, up to a predetermined maximum level to offset the cost for engineering studies.</p>
Delivery Mechanism	<p>The Custom Program is primarily delivered utilizing in-house staff for marketing, administration, and program implementation activities, and an implementation vendor to conduct audits. Contractor support includes the following: 1) technical review of some applications, 2) on-site energy analysis, and 3) technical and design assistance for comprehensive projects.</p>
Joint Program Administrator Enhancements Planned for 2010-2012	<p>Opportunities for Program Administrators to work together to market and implement program initiatives that will maximize customers' potential for saving energy (gas and electric) and reducing demand will be explored in order to further integrate gas and electric programs.</p>
Program Administrator-Specific Elements	<p>Technology demonstration projects of gas end uses is an effective way of gaining customer and trade ally awareness of new technologies as well as assessing cost effectiveness of new technologies and identifying barriers to market penetration. Case studies are conducted and shared among program administrators that document the installation process, anticipated savings, while M&V plans demonstrate effectiveness of the application.</p>
Three-Year Deployment	<p>In order to capture broader savings, a market characterization study will identify the customer base by building size, type and age, probable end uses. The market characterization will identify potential vendors and efficient end uses to link customer segments with trade partners and appropriate technologies.</p> <p>Market characterization study will provide a foundation of market intelligence for enhanced, target marketing that will facilitate broader participation and deeper savings by sector.</p> <p>Coordination of gas and electric programs will educate trade allies and market actors to the benefits of both</p>

<p>Three-Year Deployment (cont.)</p>	<p>electric and thermal savings. Comprehensive savings opportunities will be identified with every customer visit and market development will engage actors from all sectors in the pursuit of whole building assessments.</p> <p>The Program Administrators, in conjunction with the Council’s Consultants and LEAN, 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 projects, the assessment will include the evaluation of strategies 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 minimal or no co-payment (pending a review of the budget impacts by each Program Administrator).</p>
<p>Special Notes</p>	

Training & Education Programs

<p>Primary Objective</p>	<p>Training & Education efforts are designed to promote and increase the installation and acceptance of natural gas high efficiency technologies.</p> <p>The gas Program Administrators, through its GasNetworks collaborative, recognized early on that contractor education and training is an integral part of transforming the marketplace to accept new and more efficient equipment technologies. The gas Program Administrators have focused on promoting new technologies, promoting ENERGY STAR-qualified gas heating equipment and providing professional training seminars and programs to contractors and trade allies throughout the region. GasNetworks has been providing state-of-art training programs since 1998. The group has made significant advances in its goal of providing contractors with the necessary knowledge and tools to install and promote ENERGY STAR-qualified gas heating equipment and other energy efficiency natural gas equipment and technologies. In addition to producing its own training programs and providing sponsorship to other energy efficiency efforts, GasNetworks has teamed up with various organizations and manufacturers to promote and sponsor additional professional development training courses. Partnerships have included the MA PHCC, International Associational of Plumbing and Mechanical Officials, American Society of Heating, Refrigeration and Air-Conditioning Engineers (Boston), Honeywell and Weil-McLain among others. The members of GasNetworks have built strong working relationships with manufacturers and distributors of these products, as well as with the plumbing and heating contractor community through their involvement in the marketplace, resulting in increased availability and acceptance of high efficiency equipment. To date, GasNetworks has provided training to over 7,300 contractors and installers.</p>
<p>Program Inception</p>	<p>1998</p>

2010-2012 Savings Targets	N/A
2010-2012 Budget	To be provided with October 2009 Filings.
Joint vs. Program Administrator-Specific Offering	Joint
Program Design	<p>A primary objective of the gas Program Administrators’ training and education efforts has been to transform markets in the Commonwealth and often in the Northeast. The Program Administrators have made significant advances to eliminate or reduce market barriers through their support of training and education for: the Massachusetts Board of State Examiners of Plumbers and Gas Fitters (fuel gas code), consumers, trade allies, building officials and contractors. The gas Program Administrators will continue to expand their highly successful efforts in this very important arena.</p> <p>The education and training programs will be marketed to HVAC contractors, plumbing code officials, homebuilders, building officials, plumbing supply houses and other key market actors through direct-mail promotions, contractor training seminars, brochures and other related collateral at suppliers and wholesalers, the GasNetworks website and newsletters. The Program Administrators will also educate and promote awareness of programs through industry related organizations (<i>e.g.</i>, Massachusetts Board of State Examiners of Plumbers and Gas Fitters, the MA. PHCC, the Consortium of Energy Efficiency, Board of Building Regulations and Standards, and JMC) and other energy efficiency programs (<i>e.g.</i>, ENERGY STAR Homes and RCS).</p>

<p>Program Design (cont.)</p>	<p>The program is designed to increase contractor acceptance and awareness of high efficiency natural gas technologies, provide technical assistance and education related to the proper installation of high efficiency equipment and offer sales and marketing training to contractors so that they are well-equipped to promote high efficiency equipment to their customers. The overarching goal of the training and education programs is to overcome market barriers related to the acceptance, knowledge and installation of high efficiency equipment.</p>
<p>Target Market</p>	<ul style="list-style-type: none"> • Contractors • Trade allies • Equipment manufacturers and distributors • Builders • Architects • Engineers
<p>Marketing Strategy/Approach</p>	<p>The program is jointly marketed by the gas Program Administrators through its highly successful GasNetworks collaborative. The program will be promoted through a variety of marketing channels including, but not limited to: upstream outreach, web advertising, direct mail, trade ally events sponsored by other group and suppliers, sponsorships, and program brochures.</p> <p>The programs will also be promoted through the GasNetworks collaborative website, www.gasnetworks.com, where contractors can learn about the programs in general, find training events, download rebate applications and obtain other valuable energy efficiency information. The website and its functions will be integrated into the unified, statewide website set to be completed by the end of 2009. The site will include:</p> <ul style="list-style-type: none"> • Downloadable application forms for regional market transformation programs • Links to Federal and State agencies as well as other energy efficiency related websites

Marketing Strategy/Approach (cont.)	<ul style="list-style-type: none"> • Consumer tips on saving energy and buying high efficiency heating and water heating equipment • Newsletter registration form • E-mail Blast capability • Industry related ‘News and Events’ and upcoming ‘Contractor Training Seminars’ and ‘Other Training’ sections
Target End Uses	<p>Natural gas savings as a result of the proper installation of high efficiency natural gas equipment and technologies.</p>
Recommended Technologies	<p>Well executed and timely educational events and the dissemination of information to key players.</p>
Financial Incentives	<p>The gas Program Administrators have historically provided significant subsidies so that the training opportunities for contractors and trade allies are very affordable from the large, multiple-employee contractor to the “one-man-shop” contractor.</p> <p>Contractors may also receive incentives for the installation of high efficiency heating equipment to break through the barriers of awareness and understanding with new technology.</p>
Delivery Mechanism	<p>The Program is administered by the Program Administrators of the GasNetworks member utilities and jointly coordinated through GasNetworks.</p>

<p>Joint Program Administrator Enhancements Planned for 2010-2012</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 utilities/energy providers continue educating key market actors such as HVAC contractors, builders and engineers about the benefits of using <u>both</u> high efficiency natural gas equipment and technologies and high efficiency electric technologies such as cooling equipment.</p>
<p>Sponsor Specific Elements</p>	<p>To be provided with October 2009 Filings.</p>
<p>Three-Year Deployment</p>	<p>The gas 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 high efficiency technologies. Thus, the Program Administrators will promote the rebate 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.</p> <p>Program marketing will be supplemented by vendor outreach directly to equipment suppliers and installation contractors. This will provide direct communication on programs and qualifying equipment, as well as maximize exposure to contractor base.</p> <p>The gas Program Administrators will work with the electric Program Administrators to explore the possibility of jointly coordinating training programs that will educate HVAC contractors, builders and engineers and other key market actors about the benefits of using <u>both</u> high efficiency natural gas equipment and technologies and high efficiency electric technologies such as cooling equipment.</p>

Special Notes	<p>The Program Administrators constantly strive to ensure that they remain on the cutting edge of promoting and educating industry players about new technologies as they become available.</p> <p>The gas Program Administrators' GasNetworks programs have received numerous national awards and recognition including:</p> <ul style="list-style-type: none">■ <i>AESP National Award for Outstanding Achievement in Energy Program Design and Implementation 2007</i>■ <i>ACEEE Exemplary Portfolio of Energy Efficiency Programs 2007</i>■ <i>ACEEE Exemplary Program GasNetworks Joint Gas & Electric High Efficiency Furnace Rebate 2004</i>■ <i>ACEEE GasNetworks Regional Multi-Utility Collaborative Comprehensive Portfolio 2004</i>
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G. Special Marketing and Education Activities

In order to achieve the aggressive goals set forth in this Plan, the Program Administrators will undertake a comprehensive marketing and public outreach campaign. The Program Administrators are aware that this is an area of particular interest to the Councilors and look forward to working with the Council to discuss potential strategies and ideas. Core goals of the Program Administrators in any marketing campaign will include: reaching the maximum level of customers possible; providing messages that are not overly technical and that clearly describe the benefits of energy efficiency; exploring targeted marketing to unique communities throughout the state; and utilizing diverse media (*e.g.*, internet, bill inserts, television, radio, billboards) to disseminate consistent and clear messages. The Program Administrators are aware that, in addition to their efforts, the Commonwealth seeks to promote energy efficiency and the Program Administrators will look to coordinate activities with applicable governmental initiatives, such as the efforts contemplated under Section 108 of the Green Communities Act, which provides for a collaborative pilot effort by the DOER and the University of Massachusetts at Boston to establish an educational outreach program, including educational programs provided at community colleges and community centers. The Program Administrators will look to the DOER for further guidance with respect to this pilot effort. The Program Administrators will also continue to work with local schools, including technical vocational high schools and community colleges, to support comprehensive standards-based education in order to promote a more energy-conscious and educated society.

H. Evaluation And Monitoring

This section provides an overview of the types of evaluation and monitoring strategies that are utilized by the Program Administrators and establishes a set of core principles to guide the evaluation and monitoring process during the three-year Plan period, 2010-2012.

1. Background: Types of Evaluation and Monitoring Activity

The Program Administrators utilize several types of evaluation studies including impact and process evaluations, market progress and assessment studies and market-potential studies. Each type of evaluation is defined below. When implemented in relation to the 2010-2012 Plan, these evaluations will collectively generate data that that will facilitate the achievement of the objectives contained in the Green Communities Act and will assist the Council, DOER and the Department in measuring progress toward statewide energy efficiency goals. The types of evaluation studies that the Program Administrators plan to utilize to provide value over the 2010-2012 period are as follows:

An ***Impact Evaluation*** is designed to assess direct and indirect quantitative changes (e.g., kWh, kW, therms) attributable to a specific energy-efficiency program. These studies typically rely on billing-data analyses, end-use metering data and/or detailed on-site engineering assessments to gauge impacts.

A ***Process Evaluation*** is a systematic assessment of an energy efficiency program for the purposes of documenting program operations and identifying and recommending improvements to increase the program's efficiency or effectiveness in achieving energy savings, while maintaining high levels of participant satisfaction. Process evaluations generally include assessment of:

- Level of customer satisfaction through surveys
- Vendor selection process
- Company staff and vendor training
- Effectiveness of the program-delivery mechanism
- Effectiveness of program promotion
- Remaining barriers to program participation including an assessment of why some customers choose not to participate in the program
- Review of measures offered through the program to determine whether measures are acceptable, appealing and valued by customers
- Identification of lessons learned and specific actionable recommendations for program improvement
- A review of program tracking databases to ensure that data that may be necessary to support future program-evaluation efforts (including impact evaluations) are collected

A *Market Progress & Assessment* study is an analysis that provides an assessment of whether, and to what extent, a specific market or market segment is functioning with respect to the definition of well-functioning markets or with respect to other policy objectives. The studies often cover markets where specific market-transformation programs have been implemented or are contemplated. Generally, a Market Progress & Assessment study will include a characterization or description of the specific market or market segments under review, including a description of the types and number of buyers and sellers in the marketplace; the key actors who influence the market; the type and number of transactions that occur on an annual basis, and the extent to which market participants consider energy efficiency as an important part of these

transactions. This analysis may also include an assessment of whether a market has been sufficiently transformed to justify a new market-intervention strategy or the reduction or elimination of specific program interventions. Market Progress & Assessment studies may also be blended with strategic planning analysis to produce recommended programs designs or budgets. A “baseline” Market Progress & Assessment study is used to characterize a particular market before or during a specific intervention in the market for the purpose of guiding the intervention and/or assessing its effectiveness at a future point.

A *Potential Study* is conducted to assess future savings that may be expected for different technologies and customer markets over a specified time horizon. Potential studies are time consuming and tend to be more costly than other evaluations. For this reason, Potential Studies are generally undertaken less frequently than other evaluations or studies. The Program Administrators would recommend that only one Potential Study be conducted in the three-year period commencing January 1, 2010. “Potential” is typically defined in terms of:

- Technical Potential: Technical Potential is defined as “the complete penetration of all measures analyzed in applications where they are deemed technically feasible from an engineering perspective.”⁹
- Maximum Achievable Potential: Maximum Achievable Potential is defined as the maximum penetration of an efficient measure adopted on the basis of estimates of area-specific building stock, useful lifetimes, energy-using equipment saturations and realistic efficiency penetration levels, which are achievable by a date certain if all remaining standard efficiency equipment were to be replaced on burn-out (*i.e.*, at the end of its useful measure life), and where all new

⁹ Economically Achievable Energy Efficiency Potential in New England, May 2005; prepared by Optimal Energy, Inc. for Northeast Energy Efficiency Partnership, Inc.

construction and major renovation activities in the Commonwealth are completed using energy-efficiency equipment and construction/installation practices. In certain circumstances, where early replacement of specific measures is becoming a standard practice, Maximum Achievable Potential includes the retrofit of measures before the end of their useful measure life (*i.e.*, T8 lighting, thermostats, insulation and weatherization of existing homes). This calculation is independent of consideration of cost effectiveness or customer behavior.

- Economically Achievable Potential: The Economically Achievable Energy Efficiency Potential is defined as that portion of the Technical Potential that is cost-effective (either from a customer, societal, or total resource perspective).
- Realistically Achievable Potential or Potentially Obtainable Scenario: A Potentially Obtainable Scenario is defined as an estimate of the potential for the realistic penetration over time of energy efficiency measures that are cost effective, taking customer behavior, priorities and price into consideration.

Each of the foregoing types of evaluation studies has a unique function and will provide distinct benefits in terms of assessing the appropriateness, efficacy and results of programs undertaken in the three-year period of the Plan (2010-2012). The Program Administrators seek to develop the optimal blend of these studies for the Plan period, and will remain flexible in terms of the need to adapt evaluation strategies to address performance of new programs initiated as part of the three-year Plan.

2. Evaluation and Monitoring: Core Principles for 2010-2012

Currently, Program Administrators conduct evaluation and monitoring activities using experienced staff who are specifically trained in evaluation and monitoring techniques, along

with third-party contractors who are hired as a result of periodic, competitive solicitations for the purpose of performing independent assessments of program effectiveness, that are also subject to regulatory review. For the 2010-2012 Plan, Program Administrators plan to work cooperatively with the Council, DOER, and ultimately, the Department, to identify the appropriate process for undertaking evaluation and monitoring activities in an environment of substantially ramped-up efforts on proven energy efficiency programs, as well as newly initiated efforts on programs that are relatively untested by comparison. As stated above, the Program Administrators anticipate that a combination of evaluation methodologies would be optimal in terms of identifying appropriate energy efficiency programs, assessing program efficiency and measuring program results. Specifically, the Program Administrators anticipate a combination of Impact Evaluations, Process Evaluations, Market Progress & Assessment studies, and a Potential Study will be appropriate. To establish the appropriate approach for evaluation and monitoring of energy-efficiency programs and initiatives under the statewide Plan for 2010-2012, the Program Administrators propose the following set of Core Principles:

- Overall Principles: All evaluation and monitoring activities should be designed to promote transparency, consistency, timeliness, objectivity and credibility. The Program Administrators recognize that, given the level of increased expenditures on energy efficiency called for in this Plan, there is a need for full confidence in savings measurements arising from actions taken under the Plan.
- Statewide Evaluation Where Practicable: Program evaluations should be undertaken on a statewide basis where there is uniformity across Program Administrators in terms of program design and implementation. Statewide program evaluations are not practicable where projects or programs have unique characteristics in specific sectors;

where differentiated delivery mechanisms are used by Program Administrators; and/or where material differences in geographical territories or customer demographics have an impact on program implementation or result. Program Administrators estimate that the substantial majority of all evaluation activities can be accomplished on a statewide basis. It is also contemplated that some studies, while conducted as a single statewide study, will be designed to produce Program Administrator-specific results. However, flexibility in the general statewide approach should be maintained for exceptions, such as projects or programs targeted to specific C&I customers, or other “custom” projects such as the Marshfield Energy Challenge, where Program Administrator-specific or smaller group evaluations will necessary and appropriate.

- Coordination of Impact Evaluations: Program Administrators will conduct generally applicable Impact Evaluations through coordination with the Regional Evaluation, Measurement and Verification Forum, administered by NEEP or directly with other Program Administrators in the Commonwealth, as appropriate.
- Transition: Evaluation approaches relating to programs implemented in 2009 should be tailored to existing PA-specific efforts. Statewide evaluations under the 2010-2012 Plan should take effect for evaluations of 2010 programs in 2011. Statewide efforts should begin earlier if a framework already exists to enable the effort, such as GasNetworks efforts, RCS/MassSAVE efforts, and residential lighting.
- Research Areas: Evaluation activities should be divided into multiple, defined statewide research areas, as appropriate. The designated statewide research areas should be oriented to specific target markets (*e.g.*, residential retrofit, large C&I, etc.),

each attended to by a designated Program Administrator, a third-party evaluation contractor and an assigned liaison with the Council, as designated from time to time by the Council.

- Contract Responsibility: As contemplated by the Green Communities Act, Program Administrators will serve as the main mechanism for contracting with the third-party evaluation contractors and will have responsibility for funding and contract management for evaluation activities. Competitive solicitation processes, bid review, analysis and selection, and contract execution should be conducted by the Program Administrators, given the legal responsibility arising from the contracts and the obligation to demonstrate cost-effectiveness and administrative cost-containment efforts to the Department.
- Use of Competitive Solicitations: Program Administrators have an obligation to demonstrate cost-effectiveness and containment of administrative costs to the Department. Therefore, in general, third-party evaluators should be selected by Program Administrators utilizing periodic competitive procurement practices as contemplated in the Green Communities Act. The Program Administrators will consult with the Council and/or its designated liaison to develop selection processes that are designed to foster heightened interest among skilled evaluators and to help develop the pool of qualified evaluators working in the field.
- Evaluation Priorities: Program Administrators will coordinate with the Council and/or its designated liaisons to establish key priorities for evaluation of the 2010-2012 programs, including identification of: (1) candidate programs for evaluation; (2) the desired analytical scope; and (3) the specific data sets to be generated from the

evaluation. For example, different evaluations of the same program can focus on diverse points of information, such as energy savings, greenhouse gas reductions, participation levels, processes for improving the program and market characteristics. Program Administrators will seek to reach a consensus with the Council and/or its designated liaison regarding specific timetables and milestones for prioritized evaluations and Program Administrators will estimate costs and budgets for the prioritized evaluation and monitoring activities. The Program Administrators will provide the Council and/or its designated liaison with the opportunity to comment on proposed scopes of work and interim work product developed as part of the evaluation process, subject to the development of a review process that allows for expeditious completion of identified studies and the production of widely-accepted and useful results. Section 3 below, which is not meant to be an exclusive list, reflects the Program Administrators' suggestions for several key initiatives that should take place in the upcoming three years.

- Establishing Evaluation Priorities: In developing evaluation priorities, consideration should be given to various factors, including but not limited to: the length of time since a program or end-use was evaluated; the maturity of the program and specific measures; the significance of expected savings for the end-use or measure to the overall portfolio of savings; the stability of prior evaluation results for the program aspect under consideration, and the expected costs associated with such activity. Special attention may be given to first time evaluations of new programs after sufficient time has been allowed to create a suitable population for study. The benefits of achieving exact precision in evaluation results should also be balanced

with the cost of obtaining that precision so that objective, reviewable and reliable results are obtained at a reasonable cost.

- Electric and Gas Integration: To the extent practicable, electric and gas evaluation efforts should be integrated over time. Increased integration of delivery of electric and gas energy efficiency programs will be initiated through the upcoming three-year Plan. These efforts are not likely to be sufficiently mature during the first three-year Plan, however, to support a fully integrated evaluation effort, nor are the possible levels of increased administrative costs associated with such an effort warranted at this time given the unlikelihood that useful results would be produced. As the integration of program delivery increases, integrated evaluation activities should be considered and implemented to the extent practicable and where there is a reasonable expectation that reliable information of value will be produced and will warrant the cost.
- Next Steps on Evaluation Framework: The Program Administrators propose that the Council conduct a technical session devoted to the consideration of the evaluation and monitoring framework. The objectives of the technical session would be to: (1) advise the Council of the current program evaluation structure and its strengths and weaknesses; (2) discuss the Core Principles that should be embodied in the statewide evaluation framework, as described herein; (3) discuss the nature and magnitude of the potential costs associated with evaluation activities; and (4) provide an overview of the regional evaluation landscape, including regional efforts being coordinated with ISO-NE, the National Action Plan for Energy Efficiency (NAPEE), and NEEP.

- Consistency with Green Communities Act: The evaluation and monitoring framework should be consistent with the terms of the Green Communities Act, which requires that the electric and gas energy efficiency programs be administered by the electric and gas distribution companies, respectively. *See* G.L. c. 25, §§ 19(a)-(b). Under the Act, Program Administrators are subject to the oversight of the Department and the Department is charged with ensuring that programs are delivered “in a cost effective manner capturing all available efficiency opportunities, minimizing administrative costs to the fullest extent practicable and utilizing competitive procurement processes to the fullest extent practicable.” *Id.*¹⁰ The Core Principles developed by the Program Administrators are designed to balance the roles of the Council, the Department and the Program Administrators under the Act.

This is the first statewide Plan developed pursuant to the Green Communities Act. Accordingly, discussion and collaboration between the Program Administrators, the Council and its Consultants is necessary to develop the parameters of an optimal Evaluation and Monitoring framework. The Program Administrators look forward to discussing these matters further with the Council and would like to emphasize that they have considered carefully the initial evaluation presentation made to the Council by its Consultants on April 21, 2009. This presentation has helped bring into focus essential concepts and the Program Administrators anticipate that a robust and productive discussion will occur on these issues (perhaps through a technical session as recommended by the Program Administrators) following the submission of the Plan to the Council.

¹⁰ The Act further provides that the Department “shall determine the effectiveness of the Plan on an annual basis.” G.L. c. 25, § 21(d)(2).

3. *Specific Evaluation and Monitoring Activities for 2010-2012*

The Program Administrators recommend that the following studies be initiated in 2010 or 2011 on a statewide basis to the extent possible, even in advance of evaluation of the statewide programs proposed in this Plan for 2010-2012. The Program Administrators strongly emphasize that this list is not exclusive, and much more activity will be necessary at the same time as the Program Administrators and the Council develop a mutually agreeable framework for evaluation consistent with the Core Principles described above. Having a list of certain initial activities listed below, however, can help focus review of the Plan and development of an optimal evaluation and monitoring framework.

- C&I market characterization study
- Residential lighting market evaluation (electric only)
- Study revisiting free ridership and spillover survey and process in Massachusetts
- C&I Small Business Services Program--Small business impact evaluation
- C&I Retrofit Program for Existing Buildings--Lighting impact evaluation (electric only)
- C&I Lost Opportunity Program--Unitary HVAC load shape study
- Residential High Efficiency Heating Program - impact evaluation (gas only)

I. Performance Incentives

The Council's Priorities Resolution addressed the development of performance incentive mechanisms to be incorporated by the Program Administrators in their energy efficiency plans.

Specifically, Council Priority #4 states that:

The Commonwealth should employ the right structure and level of performance incentive for PAs who administer and deliver demand-side management programs striking the appropriate balance between fiscal responsibility and positive economic signals for the PAs to achieve strong efficiency performance and

customer value. As set out in the GCA, the PAs shall coordinate with the Council, as part of the development of the statewide and individual three-year electric and gas energy efficiency plans, to develop appropriate performance incentive mechanisms.

The Council's Priority #4 is consistent with the Green Communities Act, which specifies that an incentive mechanism proposal, which is to be designed by the distribution companies and reviewed by the Council, shall be included in an energy efficiency plan. Following the Council's approval and comment on the energy efficiency plan, including the performance incentive, the Act requires the Department to review each distribution company's energy efficiency plan. Given this construct, the Department found, in its order in D.P.U. 08-50-A, that establishing performance incentive principles, rather than a prescribed incentive mechanism, appropriately complied with the Act. Therefore, in reviewing the performance incentive mechanism included in an energy efficiency plan, the Department stated that it will rely on the following principles:

- Performance incentive mechanisms should be designed to encourage distribution companies to pursue all available cost-effective energy efficiency.
- The amount of funds available for performance incentive mechanisms should be kept as low as possible, in consideration of the other principles adopted herein, in order to minimize the costs to electricity and gas customers.
- Performance incentive mechanisms should be designed in such a way as to encourage energy efficiency program designs that will best achieve the Commonwealth's energy goals, particularly with regard to the goals stated in the Green Communities Act.
- Performance incentives should be based on clearly-defined goals and activities that can be sufficiently monitored, quantified and verified after the fact.
- Performance incentives should be available only for activities where the distribution company plays a distinct and clear role in bringing about the desired outcome.
- Performance incentive mechanisms should be as consistent as possible across all electric and gas distribution companies. Any deviations across distribution companies should be clearly justified.

- Performance incentive mechanisms should be created in such a way to avoid any perverse incentives.
- Any modifications to a previously approved performance incentive mechanism should be fully justified at the time they are proposed to the Department. The Department expects that stakeholders will consider and propose performance incentives that are relatively consistent from one three-year energy efficiency plan to the next. Distribution companies may propose modifications to an approved performance incentive mechanism in any subsequent three-year energy efficiency plan, but they must provide sufficient justification demonstrating how the proposed modifications will improve upon the performance incentive mechanism with consideration of each of the design principles listed above.

D.P.U. 08-50-A, at 49-50.

Consistent with the Department's Performance Incentive guidelines and the Council's Priorities Resolution, the Program Administrators have developed a high-level set of guidelines that will support the Program Administrators in developing a more detailed performance incentive proposal over the next few months. These principles are, as follows:

- The very substantial percentage of the savings should accrue to ratepayers
- Utility incentives should align with the Commonwealth's energy policy goals
- Incentive structures for gas and electric programs should align
- Incentives should recognize and reward achievement of aggressive targets
- Incentives should represent meaningful opportunity for shareholders
- Savings and net benefits should be the primary drivers of assessing performance
- Incentive targets should be PA-specific, recognizing differences in service territories
- Incentive models should be performance-based incentives to encourage stretch
- Incentive awards should be based on performance against plan
- The energy efficiency plans should be grounded in well-supported planning assumptions that withstand external scrutiny

- Goals for incentives should be developed annually

Each utility Program Administrator currently plans to file a performance incentive proposal in its PA-specific Plan to be filed in October. It is the goal of these Program Administrators that the framework for each of these proposals will be consistent and based upon the above-referenced guiding principles.

1. *Performance Incentives Summary Table*

The following table is presented for illustrative purposes in accordance with the filing procedures developed in the D.P.U. 08-50 Working Group. It is based upon the assumption that the Program Administrators are eligible for an after-tax return of 5% consistent with current practice for many Program Administrators. This table does not reflect a proposal of the Program Administrators, as the issue of the exact level of performance incentives remains under discussion.

Performance Incentives, 2010					
Program	Total Program Costs (1)	After-Tax Performance Incentives	% of Program Costs (2)	Pre-Tax Performance Incentives	% of Program Costs
Residential	\$19,308,977	\$964,941	5.0%	\$1,587,684	8.2%
Low Income	\$10,339,366	\$516,273	5.0%	\$849,557	8.2%
C&I	\$17,239,032	\$861,358	5.0%	\$1,417,388	8.2%
GRAND TOTAL	\$46,887,374	\$2,342,571	5.0%	\$3,854,629	8.2%

Performance Incentives, 2011					
Program	Total Program Costs (1)	After-Tax Performance Incentives	% of Program Costs (2)	Pre-Tax Performance Incentives	% of Program Costs
Residential	\$29,821,035	\$1,490,324	5.0%	\$2,452,186	8.2%
Low Income	\$17,714,441	\$883,419	5.0%	\$1,453,712	8.2%

C&I	\$22,697,344	\$1,134,037	5.0%	\$1,866,099	8.2%
GRAND TOTAL	\$70,232,820	\$3,507,780	5.0%	\$5,771,996	8.2%

Performance Incentives, 2012					
Program	Total Program Costs (1)	After-Tax Performance Incentives	% of Program Costs (2)	Pre-Tax Performance Incentives	% of Program Costs
Residential	\$40,901,980	\$2,044,123	5.0%	\$3,363,445	8.2%
Low Income	\$25,201,319	\$1,258,754	5.0%	\$2,071,349	8.2%
C&I	\$31,120,107	\$1,554,896	5.0%	\$2,558,621	8.2%
GRAND TOTAL	\$97,223,406	\$4,857,773	5.0%	\$7,993,416	8.2%

Performance Incentives, 2010-2012					
Program	Total Program Costs (1)	After-Tax Performance Incentives	% of Program Costs (2)	Pre-Tax Performance Incentives	% of Program Costs
Residential	\$90,031,991	\$4,499,387	5.0%	\$7,403,315	8.2%
Low Income	\$53,255,126	\$2,658,446	5.0%	\$4,374,618	8.2%
C&I	\$71,056,482	\$3,550,291	5.0%	\$5,842,108	8.2%
GRAND TOTAL	\$214,343,600	\$10,708,124	5.0%	\$17,620,041	8.2%

(1) Total Program costs do not include costs associated with performance incentives, or with the RCS program.

(2) The rate of 5% after-tax is a placeholder, recognizing this may change once the performance incentive calculation has been determined.

J. Cost Recovery

The Program Administrators emphasize that cost recovery, including the recovery of LBR and performance incentives (or through implementation of a Department-approved decoupled rate structure), is a critical element of this Plan. In order for the Program Administrators to pursue the aggressive goals set forth herein – which goals have not been achieved on a statewide basis in any other jurisdiction to the Program Administrators’

knowledge – it is essential that cost recovery be well understood and that the cost-recovery process provide a full and fair opportunity for the Program Administrators to be made economically whole for aggressively pursuing sales-reducing energy efficiency efforts and to earn a reasonable return on this investment based upon their performance and achievement.

As contemplated in the Act, recovery of all costs associated with the materially increased energy efficiency effort reflected in the Plan, as well as recovery of LBR consistent with the established guidelines of the Department, and the opportunity to earn a performance incentive, are integral elements of this Plan. Accordingly, the gas Program Administrators propose to continue their energy efficiency cost recovery relating to their energy efficiency efforts, as discussed herein.

The Department is directed by the Act to ensure that electric and natural gas resource needs are first met through the use of all cost-effective energy efficiency and demand resources. G.L. c. 25, § 21. To that end, the Act directs electric companies, gas companies and municipal aggregators to include in their Plans “a fully reconciling funding mechanism which may include, but which shall not be limited to, the charge authorized” by the Department pursuant to G.L. c. 25, § 19. *Id.*

Moreover, after reviewing a Program Administrator’s Plan, the Department is directed by the Act to approve recovery of all expenditures for the Program Administrator’s energy efficiency measures that are screened through the cost-effectiveness test described herein in Section II.D. *Id.* In the event that program costs exceed available revenue sources, the Department must approve a fully reconciling funding mechanism to ensure that the costs for all cost-effective energy efficiency measures are recovered from customers. *Id.* Therefore, in reviewing a Program Administrator’s proposed Plan, the Department must assure that the

Program Administrator is able to implement all Plan offerings that are found to be cost-effective, even if the costs associated with providing those offerings are in excess of the established funding sources provided for in the SBC and through other sources.

In this context, and consistent with the standard that governs the calculations for and recovery of LBR, the gas companies have each filed with the Department their calculation of LBR in conjunction with their energy efficiency plan filings. For gas companies, LBR is defined as the non-gas-cost portion of a gas utility's base rates that is lost between rate cases as a result of reduced sales cause by the implementation of demand-side management programs. *Boston Gas Company*, D.P.U. 90-17/18/55, at 139 (1990). Consistent with longstanding practice, the Department allows gas distribution companies to recover LBR. *See, e.g., Colonial Gas Company*, D.T.E. 01-73, at 6, 14 (2002); *Colonial Gas Company*, D.T.E. 97-112, at 33 (1999); D.P.U. 90-17/18/55, at 139. The collection of LBR was recently and expressly re-affirmed by the Department in its *Order on Decoupling*, D.P.U. 07-50-A, at 83-84 (2008), where the Department specifically found that gas distribution companies may continue to collect LBR through the term of their initial three-year energy efficiency plans. D.P.U. 07-50-A at 84.

The costs associated with LBR will continue to be reconciled through the conservation charge ("CC") decimal calculation included in each company's local distribution adjustment clause. The CC is applied to therm sales of a particular company to recover from firm ratepayers any demand side management program costs and associated expenditures. Included in that calculation is a determination of the Company's lost margins, determined by multiplying the rate category therm savings by the respective rate category recovery rate. Where applicable, the gas Program Administrators will include their LBR calculations for calendar year 2010 in their respective PA-specific Plan filings with the Department in October 2009, and will submit new

LBR calculations annually for calendar years 2011 and 2012 during the course of the implementation of this three-year statewide Plan.

The purpose of the LBR calculation is to address the financial impact (lost base revenue) experienced by each of the Program Administrators as a result of implementing sales-reducing energy efficiency programs, initiatives, and measures. Generically, the LBR calculation is performed on a periodic basis for each type of measure installed in connection with the relevant rate class. The calculation begins with engineering benchmarks for therm savings of pre-approved measures installed by customers that participate in the energy efficiency programs offered by the Program Administrators. The therm savings used in the calculation are generated by a number of sources, including but not limited to each Program Administrator's administrative and energy auditing vendors who determine the energy savings. These vendors utilize software that has been approved by the DOER, or alternatively, use industry-accepted energy modeling software and practices. Additional sources include technical potential studies and impact evaluations performed by independent consultants. The annual energy saving values are transferred into the Program Administrator's LBR calculation model.

Given that it is not possible to forecast the precise mix of measures that will be installed by participating customers, and that it is difficult to anticipate the exact time during the year that a measure will be installed by participating customers and thereby project the annual value of LBR to be collected relative to these measures, it is difficult to isolate the exact value and provide an exact estimate of a Program Administrator's LBR related to the 2010 – 2012 proposed programs. The following table provides a preliminary, statewide estimate of LBR recovery for 2010-2012 in accordance with the filing processes developed by the D.P.U. 08-50 Working Group.

1. *Calculation of Lost Base Revenue*

Lost Base Revenue, 2010-2012 (1)					
Program	2009 (2)	2010 (2)	2011 (2)	2012 (2)	Total LBR for 2010-2012
Residential	\$1,190,419	\$2,441,281	\$1,237,529	\$1,449,183	\$5,127,993
Low Income	\$176,527	\$247,427	\$155,283	\$177,438	\$580,148
Commercial & Industrial	\$1,119,306	\$2,135,728	\$1,070,218	\$1,236,221	\$4,442,166
GRAND TOTAL	\$2,486,252	\$4,824,436	\$2,463,029	\$2,862,842	\$10,150,307

Notes:

(1) Program Administrators emphasize that these numbers are estimates. Actual amounts will vary significantly by Program Administrator and will be presented, where applicable, on a PA-specific basis in the October 2009 filings.

(2) Total LBR being collected using the Rolling Period Methodology established in D.T.E. 97-112. LBR may not be applicable for all utilities.

K. Mid-Term Revisions

Although the Program Administrators have endeavored to anticipate and analyze a wide range of possibilities in devising the Plan, it is not only inevitable, but indeed desirable, that the Program Administrators retain flexibility to make ongoing revisions and enhancements to the Plan during its three-year term (“Term”) in order to reflect in-the-field conditions, technological advances and state-of-the-art new techniques. During the Term, the Program Administrators will monitor and evaluate the effectiveness of various programs, and may determine that certain enhancements, reallocations or modifications are appropriate to best achieve the Plan’s energy efficiency goals. Likewise, the Program Administrators need to be able to incorporate technological advances as they become available without being unduly inhibited by the need to seek advance regulatory review and approval (with accompanying administration costs and implementation delays). While the Program Administrators propose to retain significant flexibility to make ongoing revisions and refinements, the Program Administrators also appreciate the importance of transparency and oversight.

The Department has balanced these interests in formulating the governing guidelines for Plan modifications, as set forth in its order in D.P.U. 08-50-A. As stated in D.P.U. 08-50-A, the Department “expect[s] that Program Administrators will make minor modifications as a matter of course but that significant modifications will require Department review and approval.” More specifically, as expressly authorized in D.P.U. 08-50-A, during the Term, the Program Administrators will have the authority to make modifications, reallocations and enhancements to their individual plans (including, without limitation, budgetary reallocations and additions or subtractions of program measures). However, in accordance with D.P.U. 08-50-A, any such modification, reallocation or enhancement will be submitted to the Department (with a copy to the Council) for the Department’s review and approval (with the advance opportunity for the Council to comment and work with the Program Administrators) if the contemplated modification, reallocation or enhancement meets any of the following prescribed conditions:

- (1) the addition of a new program or the termination of an existing program; (2) a change in a program budget of greater than 20 percent; (3) a program modification that leads to an adjustment in savings goals that is greater than 20 percent; or (4) a program modification that leads to a change in performance incentives of greater than 20 percent.

D.P.U. 08-50-A at 64.

With specific respect to the process for material modifications that fall within the D.P.U. 08-50-A standards, the Program Administrators propose to utilize the exact process set forth in D.P.U. 08-50-A, with one clarification/adjustment as highlighted below:

A Program Administrator that seeks to make such a modification shall submit its proposal for review by the Council and submit a request for approval as part of its annual energy efficiency report filing to the Department **or, if appropriate under the circumstances on account of timing concerns, through a separate proposal filed in advance of its annual energy efficiency report filing.** Any such request must be accompanied with (1) a justification for why the modification is appropriate, and (2) a description of how the modification was reviewed and decided upon by the Council.

D.P.U. 08-50-A at 64 (bold materials added).

This clarification/adjustment is appropriate in order to accommodate, in special circumstances, requests for program modifications that may be time sensitive or necessary to address potential lost opportunities and that, therefore, should not be delayed pending the filing of a Program Administrator's annual report (which typically is made in the summer). This limited clarification/adjustment to the process set forth in D.P.U. 08-50-A adds a reasonable degree of flexibility for unique circumstances, ensuring that customers can benefit in a timely fashion from material enhancements (as opposed to delaying the implementation of such enhancements until after an annual report filing). The Program Administrators expect that any usage of this timing exception would be rare. The Program Administrators would also recommend that the Council and the Department each adopt a 45-day standard timeframe (that can be exceeded as may be necessary) for a decision on any proposed mid-course modification. Such a 45-day standard timeframe seeks to balance the need for prudent review with the need for implementation of material program enhancements on as timely a basis as reasonably practicable.

The Program Administrators note that, in adopting the appropriate flexibility provided by the Department in D.P.U. 08-50-A, they are not proposing that such flexibility apply to any of the mandatory low-income program funding levels established in G.L. c. 25, Section 19(c). Any modification of such levels would only be undertaken with advance approval from the Department after an opportunity for Council participation and after discussions with LEAN.

The Program Administrators believe that the 20 percent bandwidth adopted by the Department will permit the Program Administrators to make the sort of on-the-ground assessments and refinements that are necessary to promote innovation and efficiency. Indeed,

retaining the flexibility to make changes and reallocations within that bandwidth is critical. Further, requiring review for all modifications would carry a substantial administrative cost and would have the unfortunate effect of inhibiting valuable innovation. The balance struck by the Department in D.P.U. 08-50-A ensures regulatory oversight while permitting the Program Administrators to remain agile and responsive in implementing state-of-the-art energy efficiency programs for the benefit of customers during the Term.

III. GREEN COMMUNITIES ACT – DEPARTMENT OF PUBLIC UTILITIES

A. Acquisition of All Available Cost Effective Energy Efficiency

Please refer to Section II.A. above in this Plan.

B. Allocation of Funds

1. *Minimum Requirement for Low Income*

In compliance with the Green Communities Act Section 19(c), “...at least 20 percent of the amount expended for gas energy efficiency programs shall be spent on comprehensive low-income residential demand side management and education programs.” Based on the budget figures set forth in this Plan, 21% will be allocated to the low-income residential subclass in 2010, and 24% and 25% in years 2011 and 2012 respectively. Furthermore, the low-income sector represents 15% of the customer contribution to the CC charge in 2010 and 19% and 20% in years 2011 and 2012, respectively. See Table below.

Gas Minimum Allocation to Low Income, 2010				
Sector	Program Costs	% of Program Costs	Customer Contribution (1)	% of Total Contribution
Residential	\$20,874,259	42%	\$23,969,337	49%
Low Income*	\$10,325,981	21%	\$7,230,903	15%
C&I	\$17,967,702	37%	\$17,967,702	37%
TOTAL	\$49,167,942	100%	\$49,167,942	100%

Gas Minimum Allocation to Low Income, 2011				
Sector	Program Costs	% of Program Costs	Customer Contribution (1)	% of Total Contribution
Residential	\$32,155,481	44%	\$35,615,826	48%
Low Income*	\$17,695,857	24%	\$14,035,511	19%
C&I	\$23,791,584	32%	\$23,791,584	32%
TOTAL	\$73,642,922	100%	\$73,442,922	100%

Gas Minimum Allocation to Low Income, 2012				
Sector	Program Costs	% of Program Costs	Customer Contribution (1)	% of Total Contribution
Residential	\$43,797,130	43%	\$48,623,548	48%
Low Income*	\$25,176,691	25%	\$20,350,273	20%
C&I	\$32,764,158	32%	\$32,764,158	32%
TOTAL	\$101,737,979	100%	\$101,737,979	100%

Gas Minimum Allocation to Low Income, 2010-2012				
Sector	Program Costs	% of Program Costs	Customer Contribution (1)	% of Total Contribution
Residential	\$96,826,870	43%	\$108,208,711	48%
Low Income*	\$53,198,529	24%	\$41,616,688	19%
C&I	\$74,523,445	33%	\$74,523,445	33%
TOTAL	\$224,548,843	100%	\$224,348,843	100%

This table does not include RCS program

Notes:

(1) Customer Contribution are collected thru the following rate classes:

Residential	R-1, R-3
Low Income	R-2, R-4
Comm. & Ind.	G-41, G-42, G-43, G-51, G-52

C. Minimization of Administrative Cost

Section 19(a) of the Green Communities Act requires the Department, when authorizing energy efficiency programs, to ensure that such programs minimize administrative costs to the fullest extent practicable. Administrative costs, also commonly referred to as Program Planning & Administrative costs, have traditionally been defined as all in-house and outsourced costs associated with planning activities and program administration. These include costs associated

with developing program plans, and day-to-day program administration, including labor, overhead costs, and any regulatory costs associated with energy efficiency activities.

As has been their historical practice, each of the Program Administrators is fully committed to pursuing both internal and external opportunities to streamline the administration of their energy efficiency programs and thus their associated administrative costs. To this end, and within the context of the D.P.U. 08-50 Working Group, the Program Administrators, the Department, the DOER, the Attorney General's Office, and other interested parties have begun discussions to review the definition of administrative costs and the classification of the costs in this category to ensure that all Program Administrators report such costs consistently. The results of this effort, when completed, will allow all interested stakeholders to review administrative costs in an objective manner.

The Program Administrators also emphasize that, especially in light of the increased levels of activity contemplated under the Act, it is necessary and appropriate for all Program Administrators to maintain a skilled and dedicated administrative staff in order to ensure that: programs are delivered successfully; that the Act is complied with; that the directives of the Council, Department and DOER are all responded to in a timely manner; and that substantial savings are achieved and documented. In sum, the Program Administrators seek to balance the need to minimize administrative costs to the extent prudent with the need to maximize program quality and oversight.

1. Competitive Procurement Process

As set forth on Section 19(b) of the Act, the Department "may approve and fund gas energy efficiency programs proposed by gas distribution companies including, but not limited to, demand side management programs." G.L. c. 25, § 19(b).

In approving such programs, the Department shall “ensure that they are delivered in a cost-effective manner capturing all available efficiency opportunities, minimizing administrative costs to the fullest extent practicable and utilizing competitive procurement processes to the fullest extent practicable.” *Id.* The Program Administrators are committed to utilizing the competitive procurement process to the fullest extent possible and expect to have more to report after the first year of the plan and as the three-year plan develops. Historically, the Program Administrators have utilized the competitive procurement process for retaining contractors and vendors for activities including but not limited to; audit delivery, quality control, monitoring and evaluation, marketing and website design.

Therefore, consistent with past practice in the procurement of energy efficiency services, the Program Administrators anticipate that they will issue requests for proposals to engage the appropriate third-party contractors and vendors for providing energy efficiency activities, will consider the input and direction of the Council and its Consultants with respect to the retention of necessary Consultants, and where necessary will work collaboratively to ensure that energy efficiency services have been procured in a manner that minimizes cost to the ratepayers while maximizing the associated return on that investment.

IV. GREEN COMMUNITIES ACT – ENERGY EFFICIENCY ADVISORY COUNCIL

A. Additional Benefits

1. Reduction in Peak Load

Please refer to discussion of demand response in Section II.A.5 above.

2. Economic Development and Job Growth/Retention

The economic development and job creation benefits of energy efficiency are well documented. In developing this three-year Plan to meet the ambitious goals set forth in the

Green Communities Act, the Program Administrators recognize the importance of thoughtful planning in ensuring that these benefits are fully realized by the Commonwealth and its citizens.

In its April 2007 report, “Massachusetts Saving Electricity: A Summary of the Performance of Electric Efficiency Programs Funded by Ratepayers Between 2003 and 2005,” the DOER provides a compelling overview of the fact that the benefits that accrue as a result of these programs are many times the initial investment. Indeed, the report indicates that for an investment of \$371 million in ratepayer funds over the three-year period (2003-2005), the lifetime economic impacts of the efficiency investments made during those years will stimulate over 11,000 job years, increase personal disposable income by \$650 million, and will add almost \$1.4 billion to the Gross State Product.

Assuming the gas energy efficiency programs accrue economic development benefits at the same rate going forward as electric programs did between 2003 and 2005, the economic development benefits of this three-year plan are 7,010 job years (which equates to approximately 690 jobs) and approximately \$890,000,000 in Gross State Product.

Energy efficiency puts cash in the pockets of consumers and helps free up capital for local businesses in multiple ways. First, customers who implement measures may see an immediate impact in terms of bill savings. In this Plan, the Program Administrators have proposed a number of measures to help defray upfront investment costs and deliver net savings from the beginning. One important example is the Small Business Services delivery model—which includes both direct installation and innovative financing practices that limit or reduce upfront cost share—that has been held up as a national model to address the deep and broad savings potential in this market. Second, load reductions contribute to lower wholesale energy prices. According to the DOER analysis, over the three years analyzed, Massachusetts efficiency

programs delivered a cumulative benefit of \$19.5 million. As a result, funds that were going primarily to pay for natural gas and other fuels (a majority of which likely left the state and even the country) are available to contribute to local economic development. Energy efficiency investments save money for the consumers, who can reapply those savings to other investments, which impact the economy.

One of the most important economic impacts of energy efficiency is job growth and job retention. States that pursue energy efficiency spur job growth. Energy efficiency investments create jobs most directly through the work required to produce and install energy-efficiency products. A majority of the workforce needed to implement energy efficiency by necessity is local, as much of the work involved requires on-site construction and installation.

In Massachusetts, for example, an annual growth rate of 20 percent is expected in industries related to clean energy. The largest sector of this industry is jobs associated with energy efficiency and demand response, representing 44 percent of the sector. The Clean Energy Census performed by the Massachusetts Renewable Energy Trust and Global Insight notes that the job creation is quite broad-based, with a number of clean energy businesses in the Berkshires, around Springfield and Worcester, and up and down the Massachusetts coastline. Moreover, this study notes that the job creation associated with clean energy requires workers at every level of the economic spectrum, from Ph.D. researchers to solar panel installers, energy auditors, and maintenance technicians for wind turbines.

This three-year Plan represents a tremendous opportunity for job growth in Massachusetts. While this is one of the most highly anticipated positive results of the significant ramp up in energy efficiency spending, Program Administrators recognize that significant effort

will be needed to ensure that demand for talent is consistently matched with supply of available labor.

Initial analysis indicates there is indeed potential for a labor shortfall over the next three years. Data suggest the largest sector impacted by job growth will be the construction trades. The Governor's task force on the *Mobilization for Federal Recovery Infrastructure Investment Report* cautioned of the potential for short-term workforce shortages in energy efficiency contractors in place to do construction. In order to better understand these trends, support has been provided to the New England Clean Energy Council's workforce development task force which is currently conducting a state assessment of job demands and job availability. The results of this study will help Program Administrators target workforce development initiatives at appropriate target markets.

One of the key roles played by Program Administrators is to interface with the energy efficiency service provider community (*e.g.*, builders, contractors, electricians and other trade allies) to communicate growing demand in specific areas and work together to identify and address potential gaps. Indeed, the Program Administrators have been participating in this type of dialog for many months to ensure sufficient infrastructure is in place to meet the savings targets included in the Program Administrators' respective 2009 plans.

Furthermore, the Program Administrators recognize that training will be essential to ensuring the availability of a highly qualified and well staffed network of efficiency providers. Many in the workforce will need to have skills upgraded or developed. The Program Administrators will look to cooperate with the DOER and other state agencies interested in job training and workforce development over the three-year term of the Plan. The Program

Administrators recognize this workforce challenge and have addressed it in their plans by supporting and allocating funds for workforce growth and training initiatives.

The Program Administrators believe that a three-year planning horizon will make it much easier to forecast and communicate demand relative to the previous one-year planning process (for electric Program Administrators). Without adequate assurances that work will be available over a significant period of time, individuals will be reluctant to invest in training and businesses will be slow to hire for fear of needed to turn around and downsize in the next season.

Job retention will be achieved with consistent, sustainable funding of energy efficiency programs. Sustainable level of programs refers to programs which do not run out of either markets to serve or energy efficiency products with which to serve those markets. Achieving a sustainable level of programs and associated spending, implies that a consistent work effort is achieved and maintained for the long term.

This three-year Plan represents a rapid growth in energy efficiency savings and programs. It is important to note that for job retention, a sustainable level of spending on energy efficiency programs is imperative. Inconsistent program spending creates uncertainty in the marketplace, leading to workforce and material shortages and oversupplies associated with spending that fluctuates unpredictably. Hence, a foundation for job retention will be to reach a sustainable level of program activities which signal on-going work demand to the marketplace.

V. APPENDICES

A. Glossary of Defined Terms

Appendix A

GLOSSARY OF DEFINED TERMS	
Act	An Act Relative to Green Communities, Chapter 169 of the Acts of 2008. Signed into law on July 2, 2008.
ACEEE	American Council for an Energy Efficient Economy
AESP	Association of Energy Service Professionals
AFUE	Annual Fuel Utilization Efficiency
BCR	Benefit/Cost Ratio
Blackstone	Blackstone Gas Company
CC	Conservation Charge
CFL	Compact Fluorescent Lamps
CHP	Combined Heat and Power
C&I	Commercial and Industrial
Consultants	Consultants employed by the Energy Efficiency Advisory Council
Council	Energy Efficiency Advisory Council
DER	Deep Energy Retrofit

GLOSSARY OF DEFINED TERMS

Department	Massachusetts Department of Public Utilities.
DHCD	Massachusetts Department of Housing and Community Development
DHW	Domestic Hot Water
DOER	Massachusetts Department of Energy Resources
D.P.U. 08-50-A	<u>Investigation by the Department of Public Utilities on its own Motion into Updating its Energy Efficiency Guidelines Consistent with An Act Relative to Green Communities</u> issued on March 16, 2009.
ECM	Electronically Commutated Motor
EEP	Energy Efficiency Plan
ENERGY STAR [®]	Brand name for the voluntary energy efficiency labeling initiative sponsored by the U.S. Environmental Protection Agency and Department of Energy.
EPA	U.S. Environmental Protection Agency
GCA	An Act Relative to Green Communities, Chapter 169 of the Acts of 2008. Signed into law on July 2, 2008.
GHG	Greenhouse Gas Emission
GWSA	Global Warming Solutions Act
HEHE	High Efficiency Heating Equipment
HERS	Home Energy Rating System

GLOSSARY OF DEFINED TERMS

HVAC	Heating, Ventilation, and Air Conditioning
JMC	Joint Management Committee
LEAN	The Low-Income Energy Affordability Network
LBR	Lost Base Revenue
NEEP	Northeast Energy Efficiency Partnerships
PAs or Program Administrators	Utilities and municipal aggregators that offer energy efficiency programs. Gas Program Administrators in Massachusetts include: Bay State Gas Company, The Berkshire Gas Company, Blackstone Gas Company, Fitchburg Gas and Electric Light Company d/b/a Unutil, National Grid, New England Gas Company, and NSTAR Gas Company.
PHA	Public Housing Authority
PHCC	Plumbing Heating Cooling Contractors Association
Plan	Statewide natural gas efficiency investment plan submitted to the Energy Efficiency Advisory Council on April 30, 2009.
Priorities Resolution	The Energy Efficiency Advisory Council's "Resolution Concerning Priorities to Guide the Development, Implementation and Evaluation of the PA Efficiency Plans" dated March 24, 2009.
RCS	Residential Conservation Services
Term	Three-year term of the energy efficiency plan
TA	Technical Assessment

GLOSSARY OF DEFINED TERMS

TBC	Thermal Bypass Inspection Checklist
TD	Transmission and Distribution
TRC	Total Resource Cost
Websites	Refers to the websites www.richmaylaw.com/eeplan (interim) and www.ma-eeac.org (permanent)

B. Proposed Council Timeline

Appendix B

*Note: This is a working draft of the planning schedule

Electric and Gas Energy Efficiency Plan Filings, 2010-2012

Three Phases: to April 30, May 1 to July 29, and July 30 to October 31

Proposed Timeline, with Proposed Revisions by the Program Administrators

April 30, 2009 (revised draft)

Phase I: Development of Statewide Energy Efficiency Plans

- February 10/24, 2009 - Council meetings. Council develops and communicates draft priorities (Council Resolution) for the three-year Plans and considers initial responses from Program Administrators.
- March 5, 2009 - Consultants develop and DOER distributes draft outline and draft timeline for the April 30 statewide Plans (Electric and Gas), for Council consideration. Additional documents for Council review and consideration distributed prior to the Council meeting.
- March 10, 2009 - Council meeting. Council reviews (1) outline and (2) timeline for the April 30 statewide Plans. (3) Council, with the support of the Consultant presentation, reviews MA energy and environmental policies, including the GCA and GWSA statutes, and considers electric energy savings necessary to achieve the policy goals and GCA requirements. (4) PAs present highlights and themes of some proposed key program strategies as an informational update, with Consultant recommendations, for Council discussion. (5) Council reviews and discusses revised Resolution.

- March 24, 2009 - Council meeting. Council reviews additional progress on key concepts and information for the April 30 Plans, primarily: (1) updates on the Plan outline and timeline; (2) summary of 08-50-A decision; (3) Council Resolution; (4) the program strategies for “broader and deeper” savings, including those strategies that respond to the Council Resolution; (5) preliminary electric energy savings levels developed by the Consultant, at the portfolio and sector levels (and for at least some major market segments), and initial estimates of electric benefits, costs, and net economic benefits; (6) preliminary gas savings levels; (7) the proposed approach for the GCA-required assessment of the potential for all available cost-effective energy efficiency; and (8) initial concepts for other related Plan topics (e.g., evaluation/M&V, performance incentives, etc.).
- April 14, 2009 - Council meeting. Council reviews additional progress on key concepts and information for the April 30 Plans, primarily: (1) summary of DPU 08-50-A Decision from Commissioner Tim Woolf; (2) environmental benefits and economic analysis background; (3) Three-Year Plans: schedule, process, and template (Plan Template from 08-50 working group process, schedule for development of April 30 Statewide Plans with update from the PAs, and process and timeline for review of April 30 Statewide Plans focusing on the April 30 through July 29 period); (4) electric bill impact analysis, preliminary approach from EEAC Consultants; (5) gas energy savings estimates and initial economic analysis by the EEAC Consultants; (6) follow up on key program strategies for “deeper and broader” savings (customer repayment/on-bill financing, and electric and gas integration); (7) performance incentives, review of current electric mechanism; (8) scope and process for the assessment of all available cost-effective potential; and (9) Council website update.
- April 21, 2009 - Council meeting. Council reviews additional progress on key concepts and information for the April 30 Plans, primarily: (1) Three-Year Plans: process and schedule, revised timeline (process

and revised timeline for review of the April 30 Statewide Plans focusing on the April 30 through July 29 period; May 5th PA briefing on April 30 Statewide Plans, with a Council working session in the afternoon); (2) bill impact analysis, working group process and schedule; (3) evaluation (EM&V) administration and framework; (4) performance incentives: overview of incentive designs and practices in other states; (5) scope and process for the assessment of all available cost-effective potential; (6) proposed process for addressing new measures (technologies and strategies); and (7) marketing, education, and outreach.

- April 30, 2009 - Initial filing of (1) statewide Electric three-year energy efficiency Plan, and (2) statewide Gas three-year energy efficiency Plan. Electronic filing of the Plans with the Council (with hard copies to follow).

Phase II: Council Review of Initial Plans and Development of Updated Efficiency Plans

Some Council meetings might need to be longer or be scheduled in two parts, with a technical working session (or working groups) as well as the regular meeting, to allow for more detailed discussions of specific topics. For example, working groups on specific topics could be scheduled immediately prior to the regular Council meetings, at 1:00/1:30 pm (or in the morning), and the working groups could report to the full Council during the regular meeting. Also, some of the discussions will be iterative, with interactions and communications outside of formal technical sessions, e.g., there will likely be some working groups and some PA/Consultant meetings to address details.

- May 5, 2009 - PA Briefing on 2009 Statewide Plans (morning) and Council Working Session (afternoon).
- PA briefing and overview of Electric and Gas Plans; PA presentations with questions and initial Council discussion (10:00 to noon).
 - Council working session (1:00 to 4:15). Council asks additional questions, discusses the statewide Plans, and identifies topics or issues to address during its review. Consultants compile initial list of topics and issues to address during the Council's review. Consultants provide initial review comments.

- May 12, 2009

 - Council meeting and possible technical working session or working groups. Council identifies and reviews initial list of topics and issues to address during its review of the Plans (list compiled by Consultants with input from Councilors), and develops Council work plan and schedule for the review. Council Consultants provide review comments, following up on the May 5 briefing, for Council consideration. Council asks additional questions, discusses the statewide Plans, and provides initial comments orally.

- May 15, 2009

 - Council distributes/posts the work plan and schedule for its review of the Plans, and notifies PAs regarding areas of interest/topics for review in further technical working sessions or working groups.

- May 13-26, 2009

 - Working groups continue discussions.

- May 26, 2009

 - Council meeting and possible technical working session or working groups. PA responses to questions (those that required follow up) and identified topics and issues. Council identifies any additional questions or information needed from the PAs. Council discusses the Electric and Gas Plans, and develops preliminary comments on the Plans. [Other topics TBD.]

- May 29, 2009

 - Council distributes/posts its preliminary comments on the statewide Electric and Gas Plans. Additional questions or requests for additional information issued by the Council. (Requests for information can also be issued before this date, and the PAs will seek to respond within 10 days as a general rule.)

- June 9, 2009

 - Council meeting and possible technical working session or working groups. Council follow-up on outstanding topics and issues, PA responses to requests for information, and PA responses to preliminary Council comments. Council continues drafting its written comments on the Plans. [Topics TBD.]

- June 23, 2009 - Council meeting and possible technical working session or working groups. Council completes its written comments on the (then current) statewide Plans. [Topics TBD.]
- June 26, 2009 - Council distributes/posts its comments on the statewide Plans.
- July 9, 2009 - Updated draft statewide Plans (Electric and Gas) submitted by PAs (addressing Council comments and suggestions).
- July 14, 2009 - Council meeting. Council reviews updated draft statewide Plans and provides any additional comments and suggestions.
- July 23, 2009 - Updated revised/final statewide Plans submitted by the PAs.
- July 23-28, 2009 - Council reviews updated revised/final statewide Plans (Electric and Gas) and completes drafting of its comments on the Plans.
- July 29, 2009 - Council submits approval, conditional approval, or comments on the updated statewide Electric and Gas Plans.

Phase III: Development of Program Administrator-Specific Plans

(Note: Process and specific schedule to be developed further at a later date. Add interactive and review steps between July and October 31. Council Consultants will be working with the PAs on the development of the individual PA Plans. The Council should review work products and have the opportunity to ask questions and provide comments during the development process. Also, the Council should review and comment on a draft of each of the PA-specific Plans prior to the Plans being filed with the DPU. This interactive and iterative process will be filled out at a later date.)

October 31, 2009 - PA-specific Plans filed at the DPU.

October 31, 2009 - Updated, integrated statewide Plans (Electric and Gas) filed that include any updated information revised through the process of developing the separate PA-specific October 31 Plans filed by the PAs.

January 1, 2010 - PA-specific three-year Plans go into effect.

- Notes:
- 1) In the period between July 29, 2009 and October 2009, the PAs will be able to prepare refined PA-specific plans and address any items in Council comments due on July 29, 2009.
 - 2) DPU review of the October 2009 filings is being addressed by the DPU separately and is beyond the scope of this draft timeline.

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D. Evolving Trends in Costs/Budgets

1. Market EE Activity Table

Gas PA's Master Summary																										
Year	Sector	TRC Benefits (\$)					TRC Costs (\$)			TRC B/C Ratio	Net Benefits	Savings						Avg Measure Life (yrs.)	TR Energy Cost (\$/Life-time-Therm saved)	GHG Reductions (Tons)			Participants			
		Gas	Electric		Non-gas Non-elec Resource	Non-Resource	TOTAL BENEFITS	PA	Customer			TOTAL	Gas (Therms)		Electric Energy (kWh)		Electric Capacity (KW)			Non-gas non-elec Resources (MMBTU)		NOx		SOx	CO2	
			Capacity	Energy									Annual	Lifetime	Annual	Lifetime	Annual			Lifetime	Annual					Lifetime
	Residential	\$93,191,122	\$1,091,235	\$1,487,922	\$0	\$0	\$95,770,278	\$22,368,864	\$12,828,286	\$35,197,150	2.72	\$60,573,128	4,809,455	75,177,977	960,390	15,012,134	265	4,136	NA	NA	15.6	\$0.47	NA	NA	NA	NA
	Low Income	\$12,897,474	\$0	\$0	\$0	\$6,103,678	\$19,001,152	\$11,166,248	\$0	\$11,166,248	1.70	\$7,834,904	544,349	12,247,844	-	-	-	-	NA	NA	22.5	\$0.91	NA	NA	NA	NA
	C&I	\$111,467,893	\$0	\$14,153	\$0	\$0	\$111,482,046	\$18,630,163	\$15,175,260	\$33,805,423	3.30	\$77,676,624	6,617,465	116,339,523	8,645	151,977	-	-	NA	NA	17.6	\$0.29	NA	NA	NA	NA
2010	Total	\$217,556,489	\$1,091,235	\$1,502,075	\$0	\$6,103,678	\$226,253,476	\$52,165,274	\$28,003,546	\$80,168,821	2.82	\$146,084,656	11,971,269	222,314,306	969,035	15,164,111	265	4,136	NA	NA	18.6	\$0.36	NA	NA	NA	NA
	Residential	\$115,967,859	\$1,427,128	\$1,851,649	\$0	\$0	\$119,246,636	\$33,853,345	\$15,195,348	\$49,048,693	2.43	\$70,197,942	5,895,854	93,237,977	1,200,488	18,984,557	331	5,230	NA	NA	15.8	\$0.53	NA	NA	NA	NA
	Low Income	\$15,183,645	\$0	\$0	\$0	\$7,629,597	\$22,813,243	\$19,139,261	\$0	\$19,139,261	1.19	\$3,673,982	640,457	14,410,286	-	-	-	-	NA	NA	22.5	\$1.33	NA	NA	NA	NA
	C&I	\$137,290,205	\$0	\$18,186	\$0	\$0	\$137,308,391	\$24,530,782	\$18,466,191	\$42,996,973	3.19	\$94,311,419	8,119,015	142,140,158	11,143	195,076	-	-	NA	NA	17.5	\$0.30	NA	NA	NA	NA
2011	Total	\$268,441,710	\$1,427,128	\$1,869,835	\$0	\$7,629,597	\$279,368,269	\$77,523,387	\$33,661,539	\$111,184,927	2.51	\$168,183,343	14,655,326	272,692,184	1,211,630	19,179,633	331	5,230	NA	NA	18.6	\$0.41	NA	NA	NA	NA
	Residential	\$146,650,643	\$1,840,632	\$2,314,414	\$0	\$0	\$150,805,689	\$45,999,177	\$18,039,518	\$64,038,696	2.35	\$86,766,993	7,309,200	117,526,530	1,500,609	24,128,688	413	6,648	NA	NA	16.1	\$0.54	NA	NA	NA	NA
	Low Income	\$18,913,558	\$0	\$0	\$0	\$9,536,996	\$28,450,554	\$27,237,254	\$0	\$27,237,254	1.04	\$1,213,300	793,595	17,855,888	-	-	-	-	NA	NA	22.5	\$1.53	NA	NA	NA	NA
	C&I	\$170,959,233	\$0	\$23,497	\$0	\$0	\$170,982,730	\$33,638,571	\$22,190,774	\$55,829,345	3.06	\$115,153,385	10,009,284	175,233,238	14,383	251,807	-	-	NA	NA	17.5	\$0.32	NA	NA	NA	NA
2012	Total	\$336,523,433	\$1,840,632	\$2,337,911	\$0	\$9,536,996	\$350,238,973	\$106,875,010	\$40,230,293	\$147,105,294	2.38	\$203,133,678	18,112,365	338,615,993	1,514,993	24,380,495	413	6,648	NA	NA	18.7	\$0.43	NA	NA	NA	NA
	Residential	\$355,809,624	\$4,358,995	\$5,653,984	\$0	\$0	\$365,822,603	\$102,221,386	\$46,063,153	\$148,284,539	2.47	\$217,538,063	18,014,509	285,377,376	3,661,487	58,125,379	1,009	16,014	NA	NA	15.8	\$0.52	NA	NA	NA	NA
	Low Income	\$46,994,677	\$0	\$0	\$0	\$23,270,271	\$70,264,948	\$57,542,762	\$0	\$57,542,763	1.22	\$12,722,184	1,978,401	44,514,018	-	-	-	-	NA	NA	22.5	\$1.29	NA	NA	NA	NA
	C&I	\$419,717,331	\$0	\$55,836	\$0	\$0	\$419,773,167	\$76,799,515	\$55,832,225	\$132,631,740	3.16	\$287,414,288	24,745,765	433,832,982	34,170	598,860	-	-	NA	NA	17.5	\$0.31	NA	NA	NA	NA
GRAND TOTAL		\$822,521,632	\$4,358,995	\$5,709,821	\$0	\$23,270,271	\$855,860,718	\$236,563,663	\$101,895,379	\$338,459,042	2.53	\$517,401,675	44,738,674	833,229,996	3,695,657	58,724,239	1,009	16,014	NA	NA	18.6	\$0.41	NA	NA	NA	NA

GHG for information purposes only; it is not included in TRC test