mass save
Savings through energy efficiency

2013-2015

Massachusetts
Joint Statewide Three-Year
Electric and Gas Energy Efficiency Plan
April 30, 2012 Submission to EEAC

nationalgrid

NSTAR

Columbia Gas of Massachusetts
A NiSource Company

Western Massachusetts Electric
The Northeast Utilities System

Cape Light Compact

berkshire gas
A UIL HOLDINGS COMPANY

New England Gas Company

Unitil

BLACKSTONE GAS COMPANY

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I. EXECUTIVE SUMMARY

A. Overview

The gas and electric distribution companies and municipal aggregators ("Program Administrators" or "PAs") are pleased to submit this 2013-2015 three-year energy efficiency plan (the "Plan") in accordance with An Act Relative to Green Communities, Chapter 169 of the Acts of 2008 (the "Green Communities Act" or "Act"). The Program Administrators' objective is to set aggressive, sustainable goals for the next three years while considering short-term customer bill impacts and longer-term benefits expected from proposed efforts. Based on the goals set forth in this Plan, the Program Administrators expect that the net present economic value of the benefits to be achieved under the Plan is greater than **$8.58 billion** statewide over the three years of the Plan.

In the following two pages, utilizing the same single page summary format adopted by the Energy Efficiency Advisory Council (the "Council") with respect to the initial three-year plans of the Program Administrators for 2010-2012 for each of gas and electric, the Program Administrators are pleased to provide statewide summaries of certain key aspects of the targets for their three-year energy efficiency plan for 2013-2015. The first summary table addresses statewide electric savings and budget targets, and the second summary table addresses statewide gas savings and budget targets. The Program Administrators have worked collaboratively among themselves and with the Council, the Council's consultants ("Consultants"), and other stakeholders to develop these statewide targets and their individual PA-specific proposals. The proposals provide for sustainably aggressive energy efficiency efforts to be implemented over the three-year period 2013-2015, resulting in economic and environmental benefits for Massachusetts residents and businesses for many years to come.

Statewide Electric Targets Summary:

	2013 Target	2014 Target	2015 Target	Total 2013-2015
Savings Target as % of Retail Energy Sales	2.5%	2.5%	2.5%	
Annual Energy Savings in GWh	1,194	1,211	1,224	3,629
Performance Incentive ($ million)	29.5	29.5	29.5	88.5
Threshold to Begin Earning Incentives	75%	75%	75%	
Performance Incentive Cap ($ million)	TBD	TBD	TBD	
Program Costs ($ million)	$515	$513	$522	$1,551
Cost Per Annual kWh Saved	$0.43	$0.42	$0.43	$0.43

PA proposals are intended to provide flexibility for one or more individual PAs to allow for savings goals reasonably lower or higher than the savings target (with detailed justification), but with the statewide savings targets (set forth in GWh above) remaining the same. Cape Light Compact and Unitil have appropriate variances from the statewide targets because of the unique characteristics of their service areas which will be presented to the Council.

Incentive pool is allocated to individual PAs based on the dollar benefits target each year.

Incentive mechanism provides higher incentives for the higher savings targets.

Incentive pool of $88.5 million is the maximum pool at the target savings level for the three years.

Savings basis determinations (including for Performance Incentives) would be based upon an updated PA proposal to be presented in Joint Comments in D.P.U. 11-120 Notice of Investigation with subsequent confirmation of the effects of upcoming Evaluation, Monitoring and Verification results on savings goals.

Performance Incentives approach would be based upon current approach.

Program cost to achieve is less than 2012 MTM costs.

Program consolidation as per Residential Management Committee and C&I Management Committee.

For cost-effectiveness, use 2011 Avoided Energy Supply Cost and current Non-Energy Impacts ("NEIs") studies, with potential update on certain NEIs based upon ongoing discussions with LEAN, Consultants, and PAs. Carbon compliance cost issues would be decided on a separate track as determined through DPU review process- any new values applied prospectively.

PAs to perform defined follow-up study on 2011 Avoided Energy Supply Cost Study (*e.g.*, confirming DRIPE).

These values are statewide targets; as indicated in tables provided with this Plan, not all PAs propose to achieve these targets because of their unique service area characteristics. Targets may require adjustments in the event of new legislation, material new EM&V results or any material regulatory framework changes.

Statewide Gas Targets Summary:

	2013 Target	2014 Target	2015 Target	Total 2013-2015
Savings Target as % of Retail Energy Sales	1.1%	1.125%	1.150%	
Annual Energy Savings (therms)	21,510,000	24,190,000	24,870,000	70,570,000
Performance Incentive ($ million)	5.6	5.6	5.6	16.8
Threshold to Begin Earning Incentives	75%	75%	75%	
Performance Incentive Cap ($ million)	TBD	TBD	TBD	
Program Costs ($ million)	$167	$180	$184	$531
Cost Per Annual Therm Saved	$7.78	$7.43	$7.41	$7.53

PA proposals are intended to provide flexibility for one or more individual PAs to allow for savings goals reasonably lower or higher than the savings target (with detailed justification), but with the statewide savings targets (set forth in therms above) remaining the same. New England Gas, Unitil, Columbia Gas, Blackstone Gas, and Berkshire Gas will have appropriate variances from the statewide targets because of the unique characteristics of their service areas which will be presented to the Council.

Incentive pool is allocated to individual PAs based on the dollar benefits target each year.

Incentive mechanism provides higher incentives for the higher savings targets.

Incentive pool of $16.8 million is the maximum pool at the target savings level for the three years.

Savings basis determinations (including for Performance Incentives) would be based upon an updated PA proposal to be presented in Joint Comments in D.P.U. 11-120 Notice of Investigation with subsequent confirmation of the effects of upcoming Evaluation, Monitoring and Verification results on savings goals.

Performance Incentives approach would be based upon current approach.

Program cost to achieve assumes continued low gas costs in 2013-2015, requiring some increased incentives to meet aggressive savings targets.

Program consolidation as per Residential Management Committee and C&I Management Committee.

For cost-effectiveness, use 2011 Avoided Energy Supply Cost and current Non-Energy Impacts ("NEIs") studies, with potential update on certain NEIs based upon ongoing discussions with LEAN, Consultants, and PAs. Carbon compliance cost issues would be decided on a separate track as determined through DPU review process- any new values applied prospectively.

These values are statewide targets; as indicated in tables provided with this Plan, not all PAs propose to achieve these targets because of their unique service area characteristics. Targets may require adjustments in the event of new legislation, material new EM&V results or any material regulatory framework changes.

B. Procedural Background

1. The Green Communities Act

The Green Communities Act was signed into law on July 2, 2008. The legislation promotes enhanced energy efficiency throughout the Commonwealth and requires the Program Administrators 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). Pursuant to the Act, electric and gas Program Administrators, respectively, are required to submit a statewide electric efficiency investment plan and a statewide natural gas efficiency investment plan on or before April 30, 2012 to the Council.[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., at § 21(b)(1)-(2). In meeting that statutory deadline, the Massachusetts gas and electric Program Administrators worked collaboratively to prepare a Plan that represents the collective efforts and objectives of the Program Administrators. On April 30, 2012, the electric and gas Program Administrators submit their second three-year energy efficiency plan for the Council's review and approval.

Following this submittal, the Program Administrators will remain engaged in a collaborative process with the Council and its Consultants, as well as other interested stakeholders, to further develop and refine the statewide Plan. In accordance with the Act, the Program Administrators are required to file their respective PA-specific three-year plans, "together with the Council's approval or comments and a statement of any unresolved issues, to the Department . . . on or before October 31." G.L. c. 25, § 21(d).

Although this Plan responds to the directives of the Green Communities Act, the Program Administrators are also cognizant of the role that the statewide electric and gas efficiency investment plans occupy in the Commonwealth's broader policy objectives. With a series of additional legislative enactments in 2008, the Commonwealth has signaled its commitment to ensuring that the Commonwealth is a worldwide leader in developing the green economy through the Global Warming Solutions Act, St. 2008, c. 298 ("GWSA"), and the Green Jobs Act, St. 2008, c. 307. 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 provided by this new three-year Plan to further 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.

[1] The Energy Efficiency Advisory Council is an advisory body consisting of eleven voting members of diverse backgrounds and expertise, a non-voting member from the heating oil industry, a non-voting member from the energy efficiency business, and a non-voting member from each Program Administrator. G.L. c. 25, § 22.

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

After the passage of the Green Communities Act, and in conjunction with the Program Administrators' well-established energy efficiency programs, the Department of Public Utilities (the "Department") opened an investigation to update the Department's energy efficiency guidelines, as previously established in Investigation to Establish Methods and Procedures to Evaluate and Approve Energy Efficiency Programs, D.T.E. 98-100 (2000) (the "D.T.E. 98-100 Guidelines"), to ensure that they were consistent with the Green Communities Act. In that proceeding, 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, D.P.U. 08-50 (2008), the Department issued revised energy efficiency guidelines, to address issues such as: (1) funding sources; (2) budgets; (3) cost-effectiveness test; (4) evaluation plans; (5) performance incentives; (6) review of three-year plans; and (7) mid-term modifications.

During the Department's proceedings in D.P.U. 08-50, it solicited comments from the Program Administrators, governmental bodies, and other interested stakeholders. The resulting first Order, D.P.U. 08-50-A (March 16, 2009), provided a 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. In D.P.U. 08-50-A, the Department mandated that the Program Administrators seek Department approval for certain specified mid-term modifications. As a result, the PAs have filed mid-term modifications for 2011 and 2012 in accordance with D.P.U. 08-50-A and D.P.U. 08-50-B, discussed below.

The Program Administrators have participated with the Department, the Department of Energy Resources (the "DOER"), and other interested stakeholders in the various D.P.U. 08-50 Working Group sessions convened and moderated by the Department. The format of today's filing, including the organization of the Plan, statistical tables, and the bill impact review model, reflect the collaborative process that occurred in the context of the D.P.U. 08-50 Working Group.

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

The Department supplemented its 08-50-A Order with the issuance of D.P.U. 08-50-B (October 26, 2009), which includes further directives clarifying how the Program Administrators are to conduct and present their bill impact analysis and evaluation, monitoring and verification measures, and established the energy efficiency guidelines which the PAs now rely upon for such matters as the annual report filings and mid-term modification filings or notifications (the "D.P.U. 08-50-B Guidelines"). Through Orders D.P.U. 08-50-A and D.P.U. 08-50-B, the Department established standards that sought to balance the need for Program Administrators to make improvements to energy efficiency programs during the course of a three-year plan, with the need for adequate regulatory review and stakeholder input of significant changes to the Program Administrators' planning assumptions and parameters.

4. D.P.U. 08-50-C

Following its Order in D.P.U. 08-50-B, the Department established a working group to review existing practices and develop an Annual Report template for review and comment, resulting in an Order in D.P.U. 08-50-C (2011), which established a template for Energy

Efficiency Annual Reports.

The Department noted that the purpose of the Annual Report template is: (1) to clearly identify the information that a Program Administrator is required to provide to fully review the PA's energy efficiency program performance for a particular year; and (2) to specify the format for providing the required information. D.P.U. 08-50-C, at 13-14. The PAs have used the Annual Report template, in preparing their respective annual reports filed with the Department each year on or about August 1st, and in compliance with the Green Communities Act.

5. D.P.U. 09-116 to D.P.U. 09-128

On October 31, 2009, the Program Administrators filed their respective PA-specific three-year plans, together with the Council's Resolution of October 27, 2009 (which Resolution constituted the Council's approval, comments and statement of any unresolved issues) with the Department. G.L. c. 25, § 21(d). The plans sought to capture all available cost-effective energy efficiency for the three-year period beginning January 1, 2010, with the consideration of factors and concerns noted at the Council, including, but not limited to, bill impacts, environmental benefits, and the need for a reasonable ramp-up schedule.

On January 28, 2010, the Department issued Orders on the Plans in dockets D.P.U. 09-116 through D.P.U. 09-120 ("Electric Order") and D.P.U. 09-121 through D.P.U. 09-128 ("Gas Order") (together, the "Orders"), approving the Plans subject to limited specified exceptions and directives. The Program Administrators have provided quarterly reports to the Council, and the Council in turn has provided an annual report to the Department. G.L. c. 25, § 22(d). The Department is required to determine the cost-effectiveness of each Program Administrator's plan on an annual basis. Id., § 21(d)(2).

As approved by the Department and as implemented by the PAs, these three-year plans have supported the development of an enhanced energy services delivery infrastructure in Massachusetts, promoted job creation throughout the Commonwealth in the energy efficiency services sector, and enhanced program designs in order to provide a seamless experience for customers seeking energy efficiency services from both gas and electric Program Administrators. Further, these joint efforts of the PAs, the Council, the state regulators, and other interested stakeholders, have taken Massachusetts to the forefront of energy efficiency efforts in the nation, leading the American Council on an Energy Efficient Economy to name Massachusetts the most efficient state in the nation in 2011. Similar coordination by the Program Administrators and the Council through this next three-year plan should allow for the continued achievement of aggressive, sustainable, achievable, deeper and broader levels of savings at customer homes and facilities, all in a cost-effective manner. In turn, increased savings over time will continue to provide economic and environmental benefits to all customers.

6. D.P.U. 10-106

While § 3.8.2 of the D.P.U. 08-50-B Guidelines describes the conditions that require a filing of a mid-term modification, that section did not state whether the 20 percent thresholds should be applied on a three-year or an annual basis. On August 13, 2010, Cape Light Compact (the "Compact") filed a request with the Department for a mid-year modification of its 2010-

2012 Three-Year Plan, consisting of an adjustment of its 2010 program budgets. The Compact sought Department approval for a program budget change that was 20 percent greater than the program's annual budget. On January 10, 2011, the Department issued an Order in Cape Light Compact, D.P.U. 10-106 stating that the three-year plan review process should move away from routine mid-term modifications, and clarifying that D.P.U. 08-50-B "Guidelines § 3.8.2 should be interpreted such that Department approval is required for a program budget change that is 20 percent greater than the program's three-year budget." D.P.U. 10-106, at 7-8. Additionally, the Department noted that the D.P.U. 08-50-B Guidelines are not fixed and are intended to be updated over time. Id. at 8-9.

7. D.P.U. 11-120

On November 29, 2011, the Department opened an investigation to examine issues associated with the Program Administrators' three-year energy efficiency plans. Investigation by the Department of Public Utilities on its own Motion into Updating its Energy Efficiency Guidelines, D.P.U. 11-120. In the first phase of the investigation, the Department announced that it will examine the following issues associated with energy efficiency program benefits that are included in the cost-effectiveness determination: (1) the method used to calculate program net savings; and (2) the method used to calculate reasonably anticipated environmental compliance costs, in particular those associated with the emission of carbon dioxide ("CO_2"). D.P.U. 11-120, at 3. The Department stated that its investigation did not mean that a change to the long-standing treatment of these benefits is either necessary or appropriate at this time. D.P.U. 11-120, at 3. Instead, the Department solicited comments in order to determine whether such changes are necessary and, if so, when and how such changes should be incorporated into the measure of cost-effectiveness. D.P.U. 11-120, at 3-4.

Following the opening of the investigation and the submittal of comments and reply comments from interested stakeholders, the Department held a technical session on March 28, 2012, to discuss: (1) the extent to which the existing approaches used to estimate net savings produce accurate and reliable results; and (2) alternate ways to determine net savings estimates that may improve upon the existing approaches. Reply comments on these savings issues will be filed by May 7, 2012. As this proceeding continues and as any decision shapes the development of the PAs' 2013-2015 three-year planning process, the Program Administrators will remain engaged in the D.P.U. 11-120 process and will inform the development of their three-year plans accordingly.

C. Core Goals for 2013-2015

In the 2013-2015 Plan, the Program Administrators seek to build on the lessons learned from the initial Three-Year Plan, including both its success and challenges, and are refining the Plan to best achieve the Commonwealth's goals with respect to energy efficiency. Another key goal of the 2013-2015 Plan is to address the Council Priorities set forth in the Council's Resolution of February 14, 2012. PAs continue to work on gas and electric integration in order to provide consistent messaging and seamless delivery in all sectors. A PA objective for the 2013-2015 Plan is to implement the Plan as one three-year plan rather than three one-year plans where practicable, which would provide greater flexibility and allow the PAs to build upon lessons learned and best practices developed throughout the course of the Plan. The PAs will put

renewed efforts into best practice review, including seeking out information on the customer experience for both planning and implementation purposes.

The PAs are setting aggressive, but achievable goals that build on the success of the 2010-2012 three-year plan savings. The 2010-2012 Three-Year Plan laid the foundation for continuing growth in energy efficiency efforts in the Commonwealth and the PAs propose to continue to build on these efforts in 2013-2015. The PAs are also combining multiple initiatives into fewer programs in order to allow for fluidity of resources, to reduce customer confusion, and to seek deeper savings in all sectors. Additionally, the PAs will seek to improve cost-efficiency of program delivery and pursue available funding and financing options to maximize benefits. The PAs are also committed to consistently addressing market barriers, including accessibility and affordability, as well as any tenant-landlord or unique service territory barriers, through their programs, potential pilots, community engagement efforts, and hard-to-measure programs. Specifically, the PAs are currently implementing an initiative to study possible solutions to pre-weatherization barriers, and will apply these lessons learned to 2013-2015. For reporting purposes, PAs will continue to explore data management and analytics that provide benefits to the PAs and multiple stakeholders; active, ongoing discussions on data matters are ongoing.

D. Significant Updates/Changes from 2010-2012

1. Enhanced Integration of Gas and Electric Energy Efficiency Services Plan

The Program Administrators continue to refine their program designs to reflect the enhanced integration of gas and electric efforts. Regular communication and interaction with each other allows the Program Administrators to share best practices and lessons learned, and the ability to provide gas and electric information to customers in an integrated manner in order to promote comprehensive installations. Analysis will continue to be conducted with regard to any remaining differences between electric and gas programs. The PAs will strive to develop effective strategies and seek further synergies to provide customers with a streamlined experience, where electric and gas opportunities are provided to customers simultaneously. The filing of one joint electric and gas statewide Plan for 2013-2015 speaks to the commitment and success of the Program Administrators in embracing seamless program delivery for customers.

2. Program Consolidation

The Program Administrators plan to consolidate the residential sector programs into two primary categories: Whole House and Products.[2,3] Similarly, the Program Administrators also plan to consolidate the commercial & industrial ("C&I") sector programs into two primary categories: New Construction and Retrofit. The primary purpose and benefit of this consolidation is greater implementation flexibility to address shifts in market conditions and consumer demand. For purposes of transparency, and to satisfy the priority placed by the

[2] Throughout the 2013-2015 Plan, the residential low-income sector will remain a separate budget sector and retain the consolidated program categories the Program Administrators proposed in their 2012 Mid-Term Modification filings.

[3] Pilot programs will retain individual budget line item status and specific names throughout the 2013-2015 Plan.

Council on data, the Program Administrators will continue to track and report spending and savings associated with each major initiative within each program, but overall program level reporting will be done in the aggregate.

3. Budget/Savings Goals: Comparison to 2010-2012

For electric Program Administrators, the proposed three-year annual savings for the period 2013-2015 is more than one million megawatt hours ("MWh") greater than the combined 2010-2012 levels. The 2013 planned savings is somewhat higher than 2012 (75,000 MWh). As compared to 2010-2012, this Plan includes a budget of approximately an additional $1 billion in order to increase savings and reach the Commonwealth's energy efficiency goals. Electric budgets in 2013 include a $15 million increase over 2012. These changes equal an additional $2.36 billion in projected benefits in 2013-2015 as compared to 2010-2012.[4]

For gas Program Administrators, the proposed three-year annual savings for the period 2013-2015 is almost 19,000,000 therms greater than the combined 2010-2012 levels. The 2013 planned savings relates closely to 2012 MTM savings levels to account for the setting of challenging but achievable goals. As compared to 2010-2012, this Plan will include just under $230 million dollars in additional budget in order to increase savings and reach the Commonwealth's energy efficiency goals. Gas budgets in 2013 include a less than $40 million increase over 2012. These changes equal an additional $277 million in projected benefits in 2013-2015 as compared to 2010-2012.

In setting their goals, the Program Administrators sought to set goals that are challenging and aggressive, but sustainable, in accordance with the Council's priorities. The total projected additional benefits in this 2013-2015 Plan is over $2.63 billion more than the benefits in 2010-2012.

4. Efforts Remain Challenging

The Program Administrators seek to ensure that the goals remain aggressive and sustainable, and that the programs continue to grow and seek greater efficiencies, all while complying with the provisions of the Act.

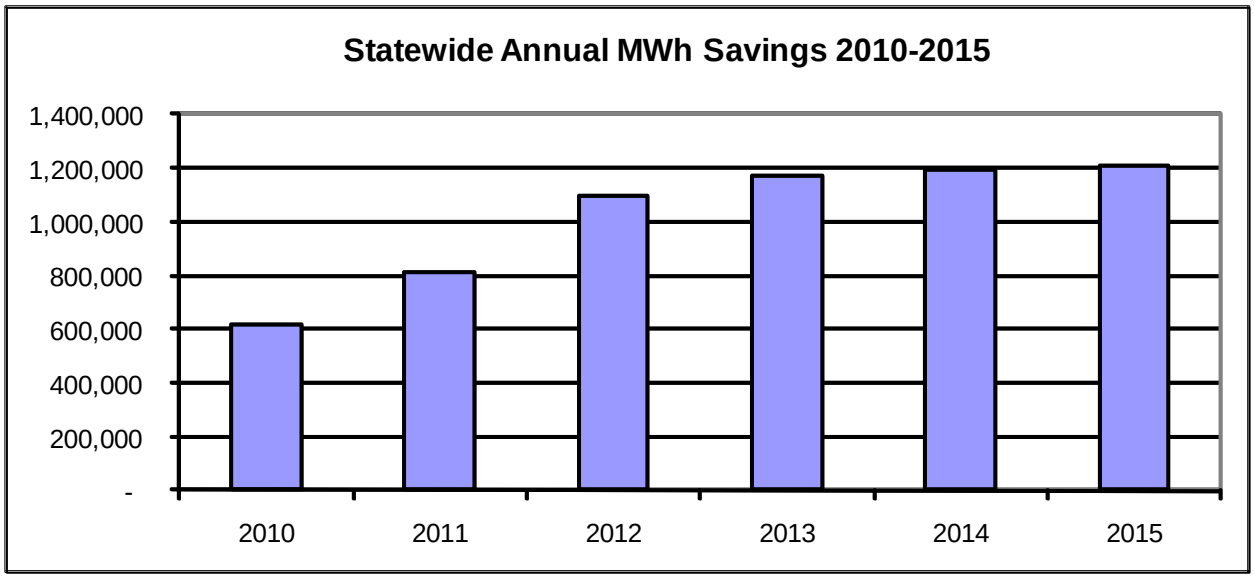
E. Overview of the Key Aspects of the Plan

1. Savings and Core Benefits

The Program Administrators are seeking an aggressive and sustainable level of savings from their energy efficiency activities. Based upon the statewide values representing the aggregation of each Program Administrator's proposals for 2013-2015 (set forth in the tables provided with this Plan), the 2013-2015 Plan calls for electric savings on an overall statewide basis of 3,574,423 MWh over the three-year period and 41,750,715 lifetime MWh savings. This Plan also calls for gas savings on an overall statewide basis of 69,181,272 therms over the three-

[4] The figures in this section are based upon "rolled-up" Program Administrator proposals for 2013-2015, as set forth in the Excel spreadsheets included with this Plan.

year period and 1,011,225,373 lifetime therm savings. As a direct result of these savings, CO2 emissions will be reduced by approximately 25,518,635 short tons over the life of those savings. This achievement is comparable to the environmental benefits achieved by taking approximately 4,539,238 cars off the road or by recycling 8,066,242 tons of waste instead of sending it to the landfill. Please see the following tables for a graphical comparison of annual savings from 2010 through 2015.



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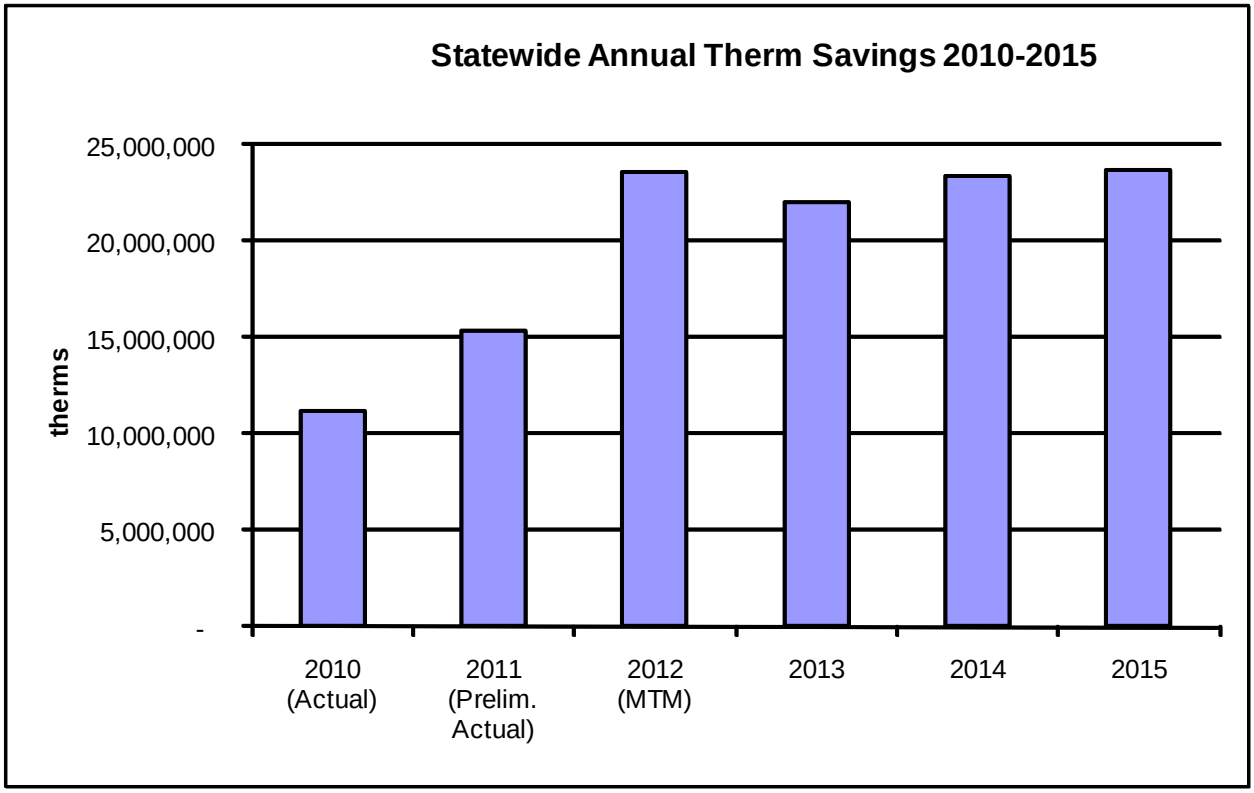
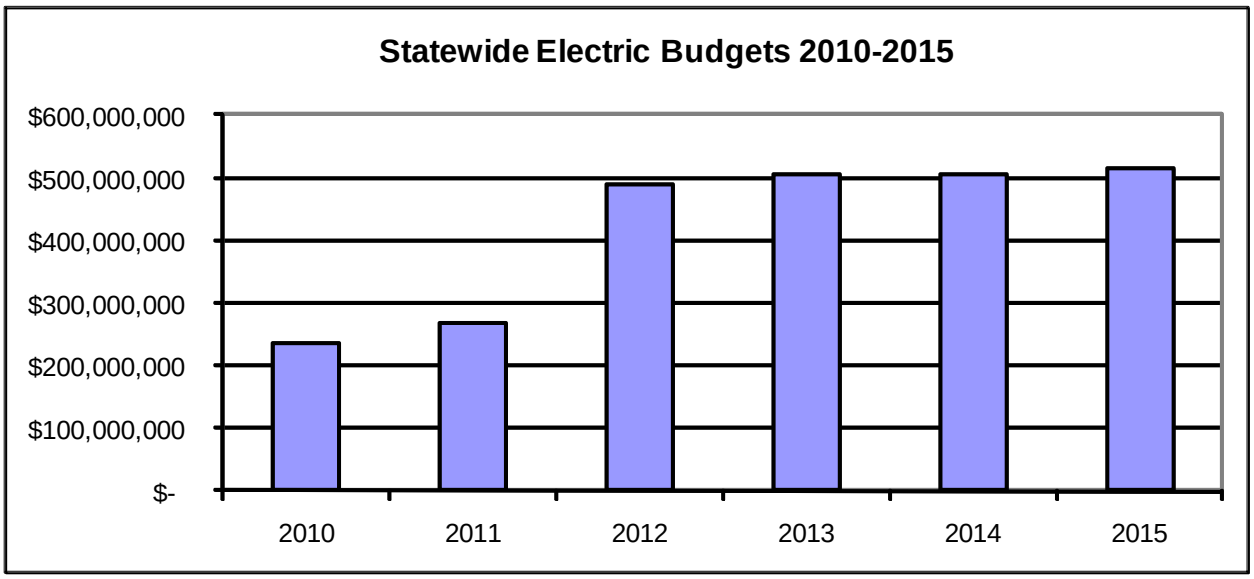
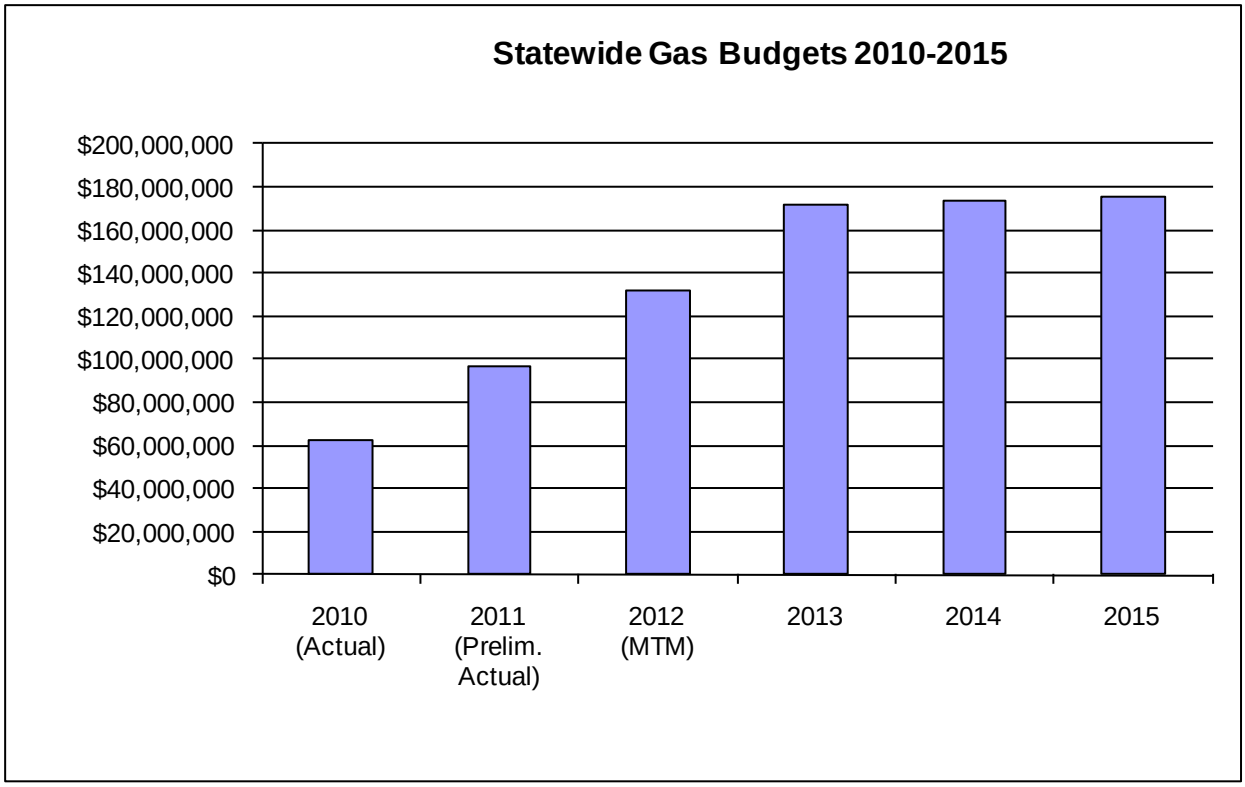


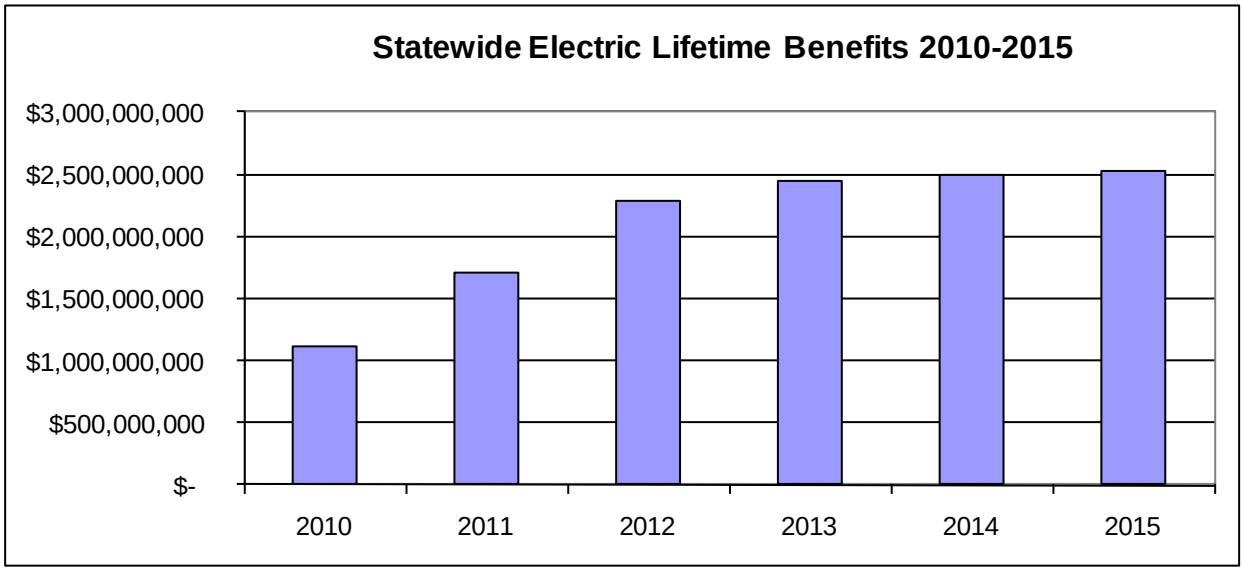
Section II.D of this Plan provides more detail on savings and benefits of the Plan.

2. Program Budgets

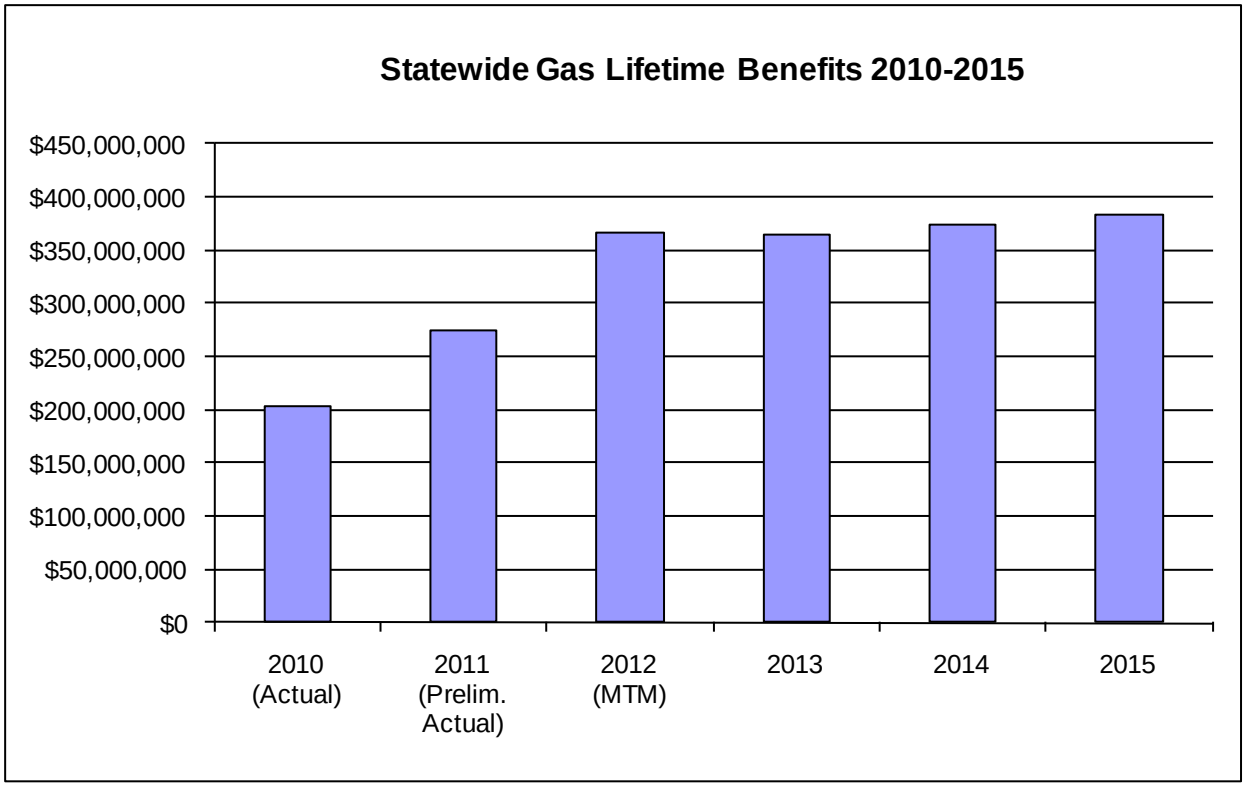
The Program Administrators' proposed energy efficiency budgets for the period 2013-2015 are provided in this Plan at the sector level, and were based on the PAs' desire to set aggressive, sustainable energy efficiency goals, making progress on identified Council priorities, all while remaining mindful of bill impacts (highlighted in Section II.E of the Plan). The PAs note that proposed budgets reflect economies realized through prior efforts in 2010-2012. Detailed program-level budgets will be provided to the Council by July 1, 2012. As graphically illustrated below, based upon "rolled-up" Program Administrator proposals for 2013-2015, this 2013-2015 Plan calls for cumulative electric expenditures on an overall statewide basis of $1,527,328,759 over the three-year period, and cumulative gas expenditures on an overall statewide basis of $521,013,354 over the three-year period. While the planned expenditures on energy efficiency under the Plan are significant, the net present economic value of the benefits to be achieved under the Plan greatly outweighs expected costs. The magnitude of these expected benefits, with a statewide electric and gas value of $8,585,729,658, demonstrates the exceptional value of the increased energy efficiency expenditures called for in the Plan. Please see the graphical comparison of the 2010-2015 budgets and benefits below.







(Actual) (Prelim. Actual) (MTM)



Section II.D of this Plan provides more detail on budgets and benefits of the Plan.

3. Cost-Effectiveness

Consistent with the statutory mandate that the Plans "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)), the Program Administrators have conducted cost-effectiveness screening associated with the energy efficiency programs and services they plan to administer in 2013-2015 using the Total Resource Cost ("TRC") test, consistent with Department's directive in D.P.U. 08-50-A at 14. This test has been reviewed and approved by the Department. Electric Order at 48; Gas Order at 47.

The Program Administrators have undertaken a preliminary statewide-level screening of the cost-effectiveness of the implementation of the 2013-2015 Plan using the Department's TRC test at the sector level. The results of this testing indicate that, at a statewide level, the proposed Plan is projected to be cost-effective. Consistent with the schedule developed with the Council for the 2013-2015 Plan, program level cost-effectiveness screening results will be provided to the Council by July 1, 2012. The Program Administrators emphasize that the sector level cost-effectiveness screening provided in this Plan is preliminary and will be updated at the program level as noted above, but that the screening herein illustrates in an overall, directional manner the solid cost-effectiveness of this Plan.

Section II.A.3 of this Plan provides more detail on cost-effectiveness in 2013-2015.

4. Progress Toward Green Communities Act Requirements and Goals

The PAs are committed to meeting all of the requirements and achieving the goals set forth in the Green Communities Act in the 2013-2015 Plan, including the attainment of all available cost-effective energy efficiency, and the mandate 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. G.L. c. 25, § 21(b)(1). In determining the level of savings to achieve in order to satisfy these mandates and to provide the optimal value for customers and the Commonwealth, the Program Administrators took into account various assessments and other evaluation studies. In this Plan, the PAs also discuss certain key factors, challenges and market barriers that have factored into their assessment of the achievable level of energy efficiency set forth in the Plan. The PAs also seek to meet requirements and goals related to coordination and integration of efforts, low-income funding, minimization of administrative costs, competitive procurement processes, and demand response.

5. Programs

The Plan sets forth general program descriptions as well as detailed strategies for coordinated program implementation in the residential, low-income, and C&I sectors. The program descriptions represent the results of collaboration and cooperation among the Program Administrators, Council members, Consultants, and other interested parties. The program designs reflect comprehensive proven strategies that provide for: (1) greater consistency in offerings throughout the Commonwealth; (2) an enhanced customer experience, including seamless delivery strategies that integrate gas and electric efforts; (3) an expanded, diverse, and well-trained workforce; and (4) the delivery of new state-of-the-art technologies.

Section II.F of this Plan provides more detail on statewide electric and gas programs for 2013-2015.

6. Evaluation, Monitoring and Verification

The proposed EM&V framework in this 2013-2015 Plan is designed to build on the extensive EM&V achievements accomplished in 2010-2012, and reflects both the core principles of the Council Resolution on Evaluation, Measurement, and Verification approved on September 8, 2009 ("EM&V Resolution") and key lessons learned over the last three years. For the 2013-2015 Plan, the Program Administrators, after discussion with the Council's independent expert EM&V consultant, are proposing several enhancements to the current EM&V framework, including the reduction of research areas from six to three and the continuation of the Evaluation Management Committee ("EMC") that was created in 2012. These enhancements are intended to improve the EM&V framework based upon actual experience in order to make evaluation efforts more streamlined and transparent, with the goal of improving the precision and usefulness of the studies. The EMC provides a forum for statewide evaluation issues, and provides guidance, planning and direction to each of the evaluation research areas.

Section II.I of this plan provides more detail on the enhancements to the current evaluation framework that are being proposed.

7. Cost Recovery and Performance Incentives

Cost recovery, including the recovery of lost base revenues ("LBR") for those PAs without a Department-approved decoupling mechanism, or through implementation of a Department-approved decoupled rate structure, in all events including the ability to recover performance incentives, is a critical element of the Plan. The Plan sets forth 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 seeks to ensure that, prior to the collection of funds from customers, the Program Administrators have fully accessed other potential available sources of funding, such as funds available from the Regional Greenhouse Gas Initiative ("RGGI"), the Forward Capacity Market ("FCM") (which are available to electric PAs), and other sources.

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 to earn a modest return associated with these efforts based upon their actual performance compared to approved goals. In this regard, directly patterned on the approach reviewed and approved by the Department for the 2010-2012 Plan, the Program Administrators have set savings targets that provide for an incentive pool of $35.1 million in each year of the Plan, for a total three-year incentive pool of $105.3 million statewide. The Program Administrators propose to maintain the performance incentive models applicable to their initial three-year plans as a basis for the 2013-2015 performance incentive model and allocations. The proposed model maintains the Savings Mechanism, the Value Mechanism, and Performance Metrics with uniform payout rates for all electric PAs (excluding Cape Light Compact), and for all gas PAs, in the Savings and Value Mechanisms. Overall, the performance incentive mechanism currently in place has functioned well and has been retained for 2013-2015.

Section II.K and Section II.L of this Plan provide more detail on performance incentives and cost recovery.

8. Mid-Term Modifications

In D.P.U. 08-50-A and the D.P.U. 08-50-B Guidelines, the Department directed the Program Administrators to seek Department approval for certain specified Mid-Term Modifications, including adding or terminating a program, and changes in a program budget, savings goals, or performance incentives of greater than 20 percent. D.P.U. 08-50-A at 64; D.P.U. 08-50-B Guidelines at § 3.8.2.

Subsequent to D.P.U. 08-50-A, the Department provided further guidance regarding the need for Department approval of proposed mid-term program modifications. Specifically, in Cape Light Compact, D.P.U. 10-106 (2011), the Department clarified that Program Administrators are required to seek Department approval only for a program budget modification that is 20 percent greater than the program's three-year budget. As such, the Program Administrators propose to apply the D.P.U. 08-50-B Guidelines, as clarified by the Department in D.P.U. 10-106, *supra*, to program modifications that lead to savings adjustments during the three years of the Plan. This will allow Program Administrators continued flexibility to make

adjustments to programs that are necessary to promote innovation and efficiency without being unduly burdened by the administrative process.

Section II.M of this Plan provides more detail on mid-term modifications in 2013-2015.

9. Economic Development and Job Growth

An important element of the Plan is the economic impact of energy efficiency on the Commonwealth and its citizens, including job creation and retention stemming from energy efficiency programs. One way that energy efficiency affects consumers and businesses is by reducing energy costs, thereby allowing the money saved to be spent elsewhere, thus stimulating the economy. Additionally, energy efficiency programs create a wide variety of jobs, many of them tied to local communities. To quantify the job creation impacts of its energy efficiency programs, the Program Administrators engaged the New England Clean Energy Foundation ("NECEF") to update NECEF's analysis of workforce requirements and impacts associated with utility energy efficiency programs.

The Program Administrators are committed to job training for emerging clean energy industries, as well as sustainable funding of energy efficiency programs in order to maintain a consistent workforce.

Section II.A.5.b. of this Plan provides preliminary results of NECEF's research.

10. Conclusion

The Plan represents the ongoing results of an unprecedented collaboration among all the Program Administrators in Massachusetts, both gas and electric, as well as diverse interested parties, and fully complies with the bold initiatives required under the Green Communities Act. The Program Administrators thank the Council, its Consultants, and other interested participants in the Plan development process 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 that produce economic and environmental benefits throughout Massachusetts.

F. Council Priorities

In its February 14, 2012 Resolution Concerning Its Priorities for 2012, the Council articulated its priorities for program planning, analysis, implementation, and evaluation. The PAs are committed to these priorities, including building on the initial plan, setting aggressive, but achievable goals, while staying focused on bill impacts, cost efficiency and integrated program delivery. The PAs are also committed to seeking outside financing and funding and addressing any barriers to energy efficiency, where possible.

With respect to statewide data management and analytics priorities, the Program Administrators will continue to collaborate with the Council to explore and develop options that are timely, appropriate and efficient for all users. The PAs are committed to developing

solutions that provide benefits to both the PAs and the Commonwealth in general. Data items are under active, ongoing discussions with the DOER and other interested parties.

For ease of reference, the PAs provide the following chart detailing various activities and outcomes that were identified as Council priorities along with the location in this document where the Program Administrators discuss strategies to focus explicitly on these activities and outcomes.

Council Priority	**Location in this Document/Notes**
• ***Support the achievement of the savings goals set in the 2010-2012 program plans and the maximization of benefits.***	Section I.C. *(PA Note: intense in-the-field efforts are ongoing, as documented in periodic reports to the Council.)*
• ***Set Aggressive and Achievable Targets for 2013-2015 plans.***	Sections I.A, I.E.1, II.A (*PA Note: goal of $8.58 billion in benefits is aggressive, but PAs believe it can be achieved. Goals reflect experience-based knowledge from Initial Three-Year Plan.)*
• ***Continue to Improve the Cost Efficiency of Program Delivery***	Section II.A., II.B., II.C. *(PA Note: the Program Administrators meet actively in the Residential Management Committee, the C&I Management Committee, the EM&V Management Committee and the Low-Income Best Practices Group to review best practices and technologies in order to enhance cost-effectiveness. Upstream initiatives are a good example of efforts to enhance cost-effectiveness.)*
• ***Provide Support on Key Program Development and Implementation Needs***	Sections II.F and II.G *(PA Note: These sections describe integration successes and plans. Broadly supported pre-weatherization approach is underway and will guide final 2013-2015 approach. Tenant-landlord barriers and hard-to-reach are also being targeted in Community Engagement Strategies in Section II.G.1*
• ***Identify Best Practices***	Section II.A. (*PA Note: ongoing work of Residential Management Committee and C&I Management Committee, EM&V Management Committee, and Low Income Best Practices Working Group)*

II. THE THREE-YEAR PLAN

A. Core Benefits and Cost-Effectiveness

1. Energy and Demand Savings

The savings goals and program budgets set forth in this Plan are presented on an aggregate, statewide basis by sector (*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, 2013, consistent with the overall goals and budgets developed in the statewide Plan review process. The Program Administrators note that this phased process first requires the filing of a joint statewide plan by all Program Administrators in April 2012, followed in October 2012 by individual PA-specific plans, after the conclusion of the review process of the statewide plans at the Council. G.L. c. 25, §§ 21(b)-21(d). (For the Council's convenience, and in a spirit of transparency, the Program Administrators provide with this Plan the current "by-PA" proposals for 2013-2015 in electronic tables.)

In developing the proposed statewide goals and budgets in this Plan, 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 presentations made at the Council meetings by the Consultants. The savings goals and budgets presented on a statewide basis by the Program Administrators in this Plan represent the results of that collaborative process. It is likely that the Program Administrators' proposals will be adjusted (either upwards or downwards) based on the statutorily mandated three-month review and approval/comment process by the Council, evaluation findings available by August 2012, and stakeholder input from the Appreciative Inquiry Summit on May 15-16. G.L. c. 25 § 21(3)(c). 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 2012 filings.

While each Program Administrator is increasing its three-year saving goals and budgets relative to historic levels, the levels of these increases will not be directly proportionate across all Program Administrators. The increases that will be set forth 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. The Program Administrators' goal and plan is that the aggregate savings goals and budgets presented individually by the Program Administrators in their October 2012 PA-specific filings will be consistent with, and flowing out of, the overall goals developed in the statewide Plan review process.[5] Please see Section II.D for the annual

[5] Program Administrators are not required to make all changes or revisions recommended by the Council in filing their October PA-specific plans. 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

savings goals proposed by the Program Administrators in this Plan, on a per sector basis, by year and in total.

2. Environmental Benefits

In addition to economic benefits, energy efficiency resources bring significant environmental benefits including reduced air pollution and improved air quality in Massachusetts and in the region from the reduction in the amount of electricity and natural gas required to run the Commonwealth's economy, as well as other resource benefits such as oil savings and water savings. The more efficient homes, businesses and schools are, the less energy and other resources they consume. Decreasing energy consumption results in less demand for energy from fossil fuel power plants and natural gas pipelines. By reducing plant operation time, emissions of air pollutants and greenhouse gases can be reduced. In addition, Massachusetts can become a more cost-efficient place to live and work in.

Generating electricity from non-renewable fossil fuels (*e.g.*, coal, oil, natural gas) produces nitrogen and sulfur oxides - two of the six "criteria pollutants" defined by the Clean Air Act and identified as air quality indicators by the U.S. Environmental Protection Agency. 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. Reducing the amount of fossil fuel needed to run power plants through the adoption of energy efficiency 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 in the form of the reduction in greenhouse gas emissions.

Collectively, the programs contained in this Plan are expected to provide three-year electric annual savings of 3,574,423 MWh and electric lifetime savings of 41,750,715 MWh, and three-year gas annual savings of 69,181,272 therms and gas lifetime savings of 1,011,225,373 therms. Based on the region's average power plant emissions rate, these lifetime savings are the equivalent to reductions in air emissions of 25,518,635 short tons of CO2 (GHGs), 35,615 short tons of SO_2, and 12,944 short tons of NOx. In addition, these programs will provide non-electric and non-gas benefits such as reductions in fuel oil and water use.

Under climate cap and trade programs such as RGGI and a potential federal program, and the Commonwealth's climate change initiatives under the GWSA, investment in energy efficiency is recognized as the most effective cost-containment and climate protection tool of the Commonwealth. Indeed, the Program Administrators expect that some portion of the three-year Plan's funding will come from the proceeds of the sale of RGGI allowances. Investing cap and trade proceeds 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.

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consistent with the best interests of its customers, but it is the goal of Program Administrators that their October PA-specific filings be built upon and consistent with the statewide Plan.

3. Net Benefits and Cost-Effectiveness

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 the 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." D.P.U. 08-50-A at 14. 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. 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 in the program.

The tables below summarize the expected benefits, costs, and BCRs at the sector level for the portfolio of programs the Program Administrators propose to implement over the three-year period. For more detailed information on savings, budgets, and benefits, please see tables in Section II.D below.

Electric Program Administrators

Sector	2013			2014			2015			2013-2015		
	Total Costs	Total Benefits	BCR	Total Costs	Total Benefits	BCR	Total Costs	Total Benefits	BCR	Total Costs	Total Benefits	BCR
Residential	$181,281,148	$ 675,720,735	3.73	$186,418,471	$ 700,574,160	3.76	$191,086,157	$ 717,521,227	3.75	$ 558,785,776	$2,093,816,122	3.75
Low-Income	$ 55,778,905	$ 114,104,414	2.05	$ 55,150,468	$ 111,733,580	2.03	$ 56,511,147	$ 112,854,735	2.00	$ 167,440,520	$ 338,692,730	2.02
C&I	$420,142,054	$1,656,703,512	3.94	$422,914,159	$1,677,150,688	3.97	$439,832,335	$1,698,939,538	3.86	$1,282,888,549	$5,032,793,738	3.92
TOTAL	$657,202,107	$2,446,528,661	3.72	$664,483,098	$2,489,458,429	3.75	$687,429,640	$2,529,315,500	3.68	$2,009,114,845	$7,465,302,590	3.72

Gas Program Administrators

Sector	2013			2014 in 2013$			2015 in 2013$			2013-2015 in 2013$		
	Total Costs	Total Benefits	BCR	Total Costs	Total Benefits	BCR	Total Costs	Total Benefits	BCR	Total Costs	Total Benefits	BCR
Residential	$107,300,460	$182,572,547	1.70	$112,053,351	$190,770,530	1.70	$116,345,977	$197,438,496	1.70	$335,699,787	$570,781,573	1.70
Low-Income	$34,435,145	$41,959,033	1.22	$34,969,631	$42,493,683	1.22	$35,354,643	$43,271,123	1.22	$104,759,418	$127,723,839	1.22
C&I	$86,148,374	$138,431,844	1.61	$85,623,389	$140,796,580	1.64	$84,539,422	$142,693,232	1.69	$256,311,184	$421,921,656	1.65
TOTAL	$227,883,978	$362,963,424	1.59	$232,646,371	$374,060,793	1.61	$236,240,041	$383,402,851	1.62	$696,770,390	$1,120,427,068	1.61

These sector level results are preliminary and meant to provide an overall, directional indication of the solid cost-effectiveness of the 2013-2015 efforts proposed by the Program

Administrators. More refined and accurate, by-program screening will occur on or before July 1, 2012. The Program Administrators note that for cost-effectiveness screening purposes they are utilizing the 2011 Avoided Energy Supply Cost Study ("AESC Study") and current Non-Energy Impact ("NEI") study. Certain NEIs are undergoing ongoing review by the Program Administrators, the Council's Consultants and LEAN. If updated values are determined, they would be applied in the October Plan filings. With respect to carbon compliance cost items, the current AESC Study is being utilized, and carbon compliance issues would be decided on a separate track as determined through the ongoing Department review in docket D.P.U. 11-120 with any resulting new values ultimately being applied prospectively. Also, the Program Administrators will review possible approaches to coordinate updates or new avoided cost studies in an optimal manner.

4. Gas and Electric Program Integration and Coordination

a. Focus on Seamless Delivery

Over the next three years, the Program Administrators plan to continue working collaboratively toward more seamless delivery of gas and electric energy efficiency programs. The electric and gas PAs will ensure communication while continuously seeking consistency in the process of interacting with customers. Participation in Management Committee meetings by each Program Administrator allows for regular communication and real time refinement of programs and the streamlining of work with regard to conducting such refinements. In addition, the Program Administrators continue to improve the working group structures dedicated to each program delivery area to more accurately match new "go-to-market" strategies (*i.e.*, the mechanism by which the Program Administrators propose to deliver energy efficiency to customers) and program needs. Most recently, the Program Administrators have introduced a combined gas and electric working group for the C&I sector to handle and improve upon any program discrepancies or communication issues between gas and electric program delivery.

An additional key element of greater gas and electric integration will be expanding the network of capable trade allies through more active vendor training and outreach. The program descriptions set forth in Section II.F illustrate many of the ways in which the Program Administrators have implemented a coordinated gas and electric delivery system. The PAs will continue to work toward a seamless delivery process throughout the next three-year plan.

b. Ongoing Work of Management Committees

The Program Administrators have developed a management committee structure to facilitate the process of enhanced integration and coordination between gas and electric programs. Through development of the Residential Management Committee ("RMC") structure and Commercial and Industrial Management Committee ("C&IMC") structure, the Program Administrators are effectively able to work toward implementation of more seamless program designs and delivery strategies to achieve savings goals. In addition, the EM&V Management Committee ("EMC") provides a forum for EM&V discussions and decision making, and the Low-Income Best Practices Committee continues to offer opportunities for various stakeholders to discuss program implementation, new measures and other matters related to the PAs' low-income programs.

Meeting bi-weekly (or as needed), the Program Administrators are able to: (a) stay abreast of the key energy efficiency activities of other Program Administrators; (b) integrate and coordinate energy efficiency implementation activities and efforts by all Program Administrators; (c) develop statewide marketing and media campaigns with easy-to-understand communications for all customers; and (d) review and discuss best practices and integration/coordination efforts in other jurisdictions to maximize collaboration efforts and build on the experiences in other regions.

The joint management committees established by the Program Administrators over the past three years play an integral part in the continued improvement and offering of gas and electric program integration and coordination. These management structure and decision making processes will allow the Program Administrators to focus efforts more proactively over the course of the next three-year plan, specifically with regard to exploration of new program delivery models and expanded service offerings for customers.

5. Additional Benefits

a. Reduction in Peak Load

Energy efficiency efforts often provide capacity savings in addition to energy savings. These capacity savings and benefits are reflected under the cost-effectiveness screening efforts described in Sections II.A.3 above.

b. Economic Development and Job Growth/Retention

The Program Administrators have engaged NECEF to quantify the job creation impacts of the approved programs for residential and C&I energy efficiency. This study is augmenting and updating NECEF's 2009 analysis of Massachusetts' workforce requirements and impacts associated with utility energy efficiency programs, through two separate reports. The first report will update NECEF's 2009 residential study with refreshed inputs that reflect actual 2011 program results and the current design of residential and low income energy efficiency programs in Massachusetts. The second report will be a new quantitative analysis of job creation attributable to actual 2011 C&I programs and investments. The study is in the process of determining the number of full-time equivalent workers that have been employed as a result of energy efficiency programs in Massachusetts.

Representatives of the PAs and NECEF met in January 2012 to review the PA data listed in the project scope of work and agreed to focus the analysis of PA data on 2011. In February, most of the larger electric and gas PAs provided significant data in response to NECEF's request for 2011 residential and low-income participation and expenditures, along with email addresses for most of the Independent Installation Contractors ("IICs"), Home Performance Contractors ("HPCs") and residential lead vendors. In May, data from one or two additional gas PAs are expected along with clarifications on some of the PA data already received and new data for the multi-family programs. Employment and program data have been provided by the agencies responsible the largest low income programs, and Davis Bacon data has been assembled on 2011 expenditures and total employment generated for the low income weatherization program.

Telephone and on-line surveys are currently underway to collect employment and additional information from contractors.

Information gathered to date is providing preliminary indications of the following patterns and trends, which are subject to revision based on further data and analysis:

- Mass Save Home Energy Services® insulation contractors do not limit their work to the program, but also perform a significant number of low-income Weatherization Assistance Program ("WAP") weatherization jobs, and even some insulation jobs outside of the PAs' energy efficiency programs (*i.e.*, with no rebates, including construction and renovation jobs).
- The number of insulation contractors who perform a relatively large number of installations has increased in the period from 2008 through 2011 (600-800/year through Home Energy Services, or 1,000-1,250 through Home Energy Services and the WAP programs together).
- The average cost of a Mass Save Home Energy Services insulation job appears to be somewhat lower than had been expected in the 2009 workforce report, with lower than expected customer "co-pay" payments.
- The productivity of one Mass Save Home Energy Services insulation worker or one WAP weatherization worker appears to have been somewhat better in 2011 than anticipated in the 2009 workforce report, measured as the number of homes insulated or weatherized in one year per employee.
- Some larger contractors report greater productivity than smaller contactors.
- Due to the decline in American Recovery and Reinvestment Act of 2009 ("ARRA") spending beginning in mid-2012, there will be a significant reduction in 1-4 shell workforce needs. Many of the smaller contractors who perform 1-4 unit shell work do not provide services for multi-family buildings (5 units and above) such as HVAC and lighting, so they may not readily be able to shift into the expanding low income multi-family buildings market.
- Initial surveys of 1-4 unit low income contractors indicate that they have an adequate supply of workers for their crews.
- Preliminary survey results suggest that Mass Save Home Energy Services insulation contractors:
    - find new hires more often from advertising job openings than directly from training programs or educational institutions;
    - are more familiar with the PA-sponsored "boot camps" than with other training programs, and have hired recent graduates more often from the boot camps than from any other training program;
    - report that it is somewhat difficult to find employees with recent specialized training for insulation work, but not as difficult as finding dependable employees with the right attitude for insulation work; and

- indicate that the types of training which are most needed are for (a) workers with no experience with insulation or contracting, to increase the pool of workers to meet growing demand and (b) workers who have construction/contracting experience to teach them about insulation and air sealing.

These preliminary results will be refined with additional data and analysis, and 2011 PA expenditure and participation data will be utilized to develop a final report which is anticipated to be ready in July 2012.

B. Progress towards Green Communities Act Requirements and Goals

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

Consistent with the Act, this Plan seeks to capture all available cost-effective energy efficiency for the three-year period beginning January 1, 2013 with the consideration of factors and concerns noted at the Council, including, but not limited to, bill impacts, environmental benefits, and the need for a reasonable and sustainable ramp-up schedule. 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, (3) the Department's Order in D.P.U. 08-50-A (including preliminary bill impact considerations); (4) the Department's Order in D.P.U. 08-50-B; (5) assessments of all available cost effective energy efficiency noted below; (6) multiple studies and reports; and (7) 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. The Program Administrators also engaged in a very productive and rigorous series of discussions with the Consultants, which have helped establish statewide savings targets, performance incentives, and projected program costs. While discussion is ongoing and a final agreement on all these elements is not yet in place, the goals represent an unprecedented collaboration on the part of the Program Administrators, Council, and its Consultants.

a. Experience in Field

First and foremost, the Plan has been designed based on the in-depth experience of the Program Administrators in designing and implementing energy efficiency programs over more than 20 years, and, more specifically, in the course of implementing the first three-year plans for the period 2010-2012.

b. Point 380 Market Characterization

NSTAR and National Grid have led an effort to characterize the market for energy efficiency during the term of the 2013-2015 Plan through a study performed by the consulting firm Point 380; Western Massachusetts Electric Company has similarly engaged Point 380. The Point 380 study results will be used to inform the "go-to-market" strategies that the PAs are deploying. Point 380 materials were shared with all Program Administrators, who have each benefitted from this effort.

c. Synapse Economic Assessment

The Plan has also been informed by a study performed by Synapse Energy Economics of C&I customer perspectives on energy efficiency opportunities in Massachusetts. The primary purpose of the study was to assess the extent to which C&I customers are likely to participate in Massachusetts energy efficiency programs over the next few years.

d. Review of EM&V Results

Working collaboratively and with the Council, the Program Administrators will continue to undertake extensive EM&V efforts designed to ensure accuracy and accountability in program planning and implementation and to guide the PAs as they focus on improving energy efficiency program efforts. Section II.I of the Plan includes information regarding the comprehensive EM&V studies that have been undertaken to date, which have informed the Program Administrators' program designs and savings goals for 2013-2015.

e. Appreciative Inquiry Summit

The Plan will also be informed by the results of an Appreciative Inquiry Summit to be hosted by the Program Administrators in May 2012. This PA-hosted summit, independent from the efforts of the Council, will provide a venue for key stakeholders, including customers, contractors, key trade allies, energy efficiency experts, and others to provide the PAs with insights that will support energy efficiency efforts in both the short and long-term and that will help to guide efforts that are designed to create a culture of sustainability in the Commonwealth.

f. Council Meetings

The Program Administrators have also sought to consider presentations and materials presented at Council meetings both by the Consultants (*see e.g.*, Consultant assessments of March 13, 2012 and April 10, 2013) and by stakeholders at Council meetings. While not always agreeing with all aspects of such presentations, the Program Administrators have valued this important input.

2. Key Factors, Challenges and Market Barriers

While seeking all available energy efficiency and demand reduction resources that are cost-effective or less expensive than supply, the PAs considered certain key factors, challenges and market barriers in their assessment of the achievable level of energy efficiency set forth in the Plan. The significant level of energy efficiency savings outlined in this Plan requires a continued strong infrastructure to provide the Commonwealth and its residents (including businesses and low-income customers) with all realistically achievable cost-effective energy efficiency.

a. Market Barriers

This Plan, which strives to obtain all realistically achievable energy efficiency, is also grounded in an understanding of market barriers and deliberately strives to address significant market barriers and policy concerns.

To be successful in energy efficiency, the programs must bridge the five major market barriers of awareness, availability, accessibility, affordability, and aversion to risk. These barriers affect customers' adoption of energy efficiency measures and the ability of Program Administrators to achieve and obtain savings. This Plan outlines many initiatives that Program Administrators feel are critical in bridging these five major market barriers.

- **Awareness** is a barrier that historically was not confronted on a large scale, given capped budgets, marketing, and outreach. This Plan recognizes that continued strong public education, marketing, and outreach, including community-based efforts, 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. This deeper 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 promotion strategies, this Plan incorporates other strategies to overcome awareness barriers, with the goal of sustaining and 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, including economically marginalized communities and groups where English is not the first language.

- **Availability** is a barrier when manufacturers either do not produce or do not effectively market sufficient quantities of energy efficient products and services. Availability may also be constrained by limited workforce or delivery mechanisms. The challenge for manufacturers in the energy efficiency sector is to respond not only to the Commonwealth's demand for more efficient products, but also to demands for such products spanning the entire nation or even globally. This challenge is compounded by the recent economic crisis which reduced manufacturers' willingness to make additional investments. From a workforce perspective, Program Administrators recognize that continued workforce training and deployment is required 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 continue to connect with mid-stream market actors, such as distributors, to help ensure that products are displayed and stocked in sufficient quantity. The program descriptions set forth in this Plan provide for continued work with key market actors, and include campaigns for training and marketing, as well as proposed community mobilization outreach strategies.

- **Affordability** is a market barrier resulting from the initial cost of energy efficiency solutions. Program Administrators are concerned that affordability remains a major barrier and one that is more difficult to predict as customer buying patterns have changed dramatically with the advent of more limited credit. The Plan attempts to mitigate this barrier through the use of incentives and loan mechanisms, as well as through the use of broadly accessible financing In some cases, particularly with respect to gas energy efficiency efforts, the PAs are proposing to increase incentives for measures so that the

low commodity cost of natural gas does not impede investments in cost-effective gas energy efficiency measures and services.

- **Aversion to Risk** is a market barrier that describes customers who are unwilling to take a chance on technologies that they perceive to be unproven. In order to address this barrier, the Program Administrators seek to provide detailed, clear information to customers about the direct benefits of energy efficiency measures. In some cases, this information will be provided to customers in the form of a case study that highlights the performance of proposed measures, helping to reduce the perceived risk associated with energy efficient measures and practices.

b. Policy Issues

In addition to market barriers, it is important to also understand the policy issues that need to be addressed to secure all achievable energy efficiency. These include economic, sustainability, and regulatory issues.

- **Economic** obstacles continue to be relevant in today's environment. The Program Administrators recognize the Plan's tremendous value, but also understand that it is important to consider the short-term rate impacts of the ramp-up of these programs. Given the sensitivity to the cost of the programs, this Plan discusses the associated preliminary expected bill impacts of program implementation. Traditional incremental bill impact analyses are provided at the sector level for each Program Administrator at Section III, Appendix A. Detailed bill impact analyses for each Program Administrator using the new bill impact model being developed under the auspices of the Department will be provided in the October Plans and will also contain the information required by the Department's orders in D.P.U. 08-50-A and D.P.U. 08-50-B.

- **Sustainability** of the programs is an important consideration for the Plan and an express priority of the Council. Many advocates, including the Program Administrators and the Attorney General, stress that in achieving all available energy efficiency, the annual efforts must also strive to be sustainable for the long term. This sustainability is vital to support the health of the economy, and the growth of the workforce and infrastructure needed to ensure the long-term benefits of these efforts.

- **Regulatory Guidance** includes the support of strong regulatory frameworks that complement the Program Administrators' ramp-up of programs. These frameworks create a healthy regulatory infrastructure by which Program Administrators can confidently 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 Investigation by the Department of Public Utilities on its own Motion into Updating its Energy Efficiency Guidelines, D.P.U. 11-120, is an ongoing example of the strong commitment to regulatory guidance in Massachusetts, and the Program Administrators will incorporate any outcomes from this proceeding into their plans as soon as practicable after an Order is issued. The Program Administrators will look to the Council, the DOER, the Department, and other interested stakeholders for a continuation of their guidance and policy making.

c. Assessing technical potential

As noted above, the Program Administrators used multiple resources to build a robust understanding of the potential for all available cost-effective energy efficiency and demand-reduction resources.

These efforts 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. 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

Economically Achievable Energy Efficiency Potential ("EAEEP") is defined as that portion of the technical potential that is cost-effective (either from a customer, societal, or total resources perspective). This Plan aggressively targets all cost-effective energy-efficiency resources, but the Plan is also grounded by realistic constraints to achievable program implementation such as market and policy barriers. Such barriers led to this Plan's focus on obtaining all available or realistically achievable potential in a manner that allows for a sustained effort and that does not create unacceptable 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. It, therefore, recognizes both the market and policy barriers. After more than 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 concerns to inform this Plan. The program incentive design, delivery models, and support infrastructure developed by the Program Administrators and discussed throughout this Plan are grounded in a careful review of different types of potential.

3. Allocation of Funds for Low-Income Programs and Education

Energy efficiency funds shall be allocated to customer classes in proportion to their contributions to those funds, and, "… at least 10 percent of the amount expended for electric energy efficiency programs and 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." G.L. c. 25, § 19(c). Based on the budget figures set forth in this Plan, for electric Program Administrators, 11.02 percent of the total budget will be allocated to the electric low-income residential subclass in 2013, 10.88 percent in 2014, and 10.97 percent in 2015. Based on the budget figures set forth in this Plan, for gas Program Administrators, 20.09 percent of the total budget will be allocated to the gas low-income residential subclass in 2013, 20.10 percent in 2014, and 20.11 percent in 2015.

4. Minimization of Administrative Cost

General Laws c. 25, § 19(a) 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 & Administration ("PP&A") 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 that end, and within the context of the D.P.U. 08-50 Working Group, the Program Administrators initiated discussions in 2010 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 result of this effort is that, with one limited exception of the categorization of employee salaries and related expenses[6], consistent statewide cost categories are in place across all Program Administrators. This allows all interested stakeholders to review administrative costs in an objective manner.

Perhaps the best example of the efforts undertaken by the Program Administrators to minimize administrative costs is the statewide process used by the Program Administrators to address many regulatory reporting requirements. Sharing of these costs, which would otherwise be borne by each Program Administrator individually, results in economies of scale that reduce the cost for each Program Administrator. Examples of shared costs include: preparation for regulatory filings, coordinated program delivery and reporting mechanisms, joint EM&V studies, and statewide marketing.

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.

5. Competitive Procurement Process

The Program Administrators utilize competitive procurement processes to engage and retain contractors and vendors to perform activities including, but not limited to: audit delivery; quality control; monitoring and evaluation; marketing; and website design. The Program Administrators are committed to continuing to utilize competitive procurement practices to the fullest extent practicable throughout the implementation of the 2013-2015 Plan. Therefore,

[6] For certain PAs, employee labor and related expenses are included in the PP&A, Marketing-Advertising, Sales, Technical Assistance & Training, and Evaluation & Market Research categories, depending on the employee's responsibility; for other PAs, all employee labor costs and related expenses are included in the PP&A category. This one limited difference is due to different historical practices and differing staff sizes and staff assignments, as well as internal tracking mechanisms.

consistent with past practice, the Program Administrators anticipate that they will issue Requests for Proposals to engage appropriate third party vendors to provide energy efficiency services, 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. In order to build upon the progress made in the 2010-2012 Plan, the Program Administrators will continue to work to expand the pool of qualified program vendors, promote the entry of new market actors into contractor and subcontractor roles, and ensure the transparency of the contractor bidding process and selection criteria used to evaluate proposals.

6. Demand Response

Electric energy efficiency efforts deployed in the proposed Plan will produce both energy savings and demand savings. Expected demand savings from these efforts help to defer the need for capacity additions in the region. Over time, measures that reduce energy use and that also provide for more active load control may be offered through the proposed programs.

C. Funding Sources & Financing Initiatives

The Program Administrators seek to leverage available funding sources and financing initiatives in order to increase the benefits of the Plan. The following funding sources and financing initiatives are currently available to the Program Administrators.

1. System Benefit Charge (electric only)

The System Benefit Charge ("SBC") is calculated consistent with G.L. c. 25, § 19(a) which states: "The department shall require a mandatory charge of 2.5 mills per kilowatt-hour for all consumers, except those served by a municipal lighting plant, to fund energy efficiency programs including, but not limited to, demand side management programs."

2. Forward Capacity Market ("FCM") Proceeds (electric only)

Pursuant to G.L. c. 25, § 19(a), electric Program Administrators' energy efficiency plans shall be funded in part by "amounts generated by the distribution companies and municipal aggregators under the Forward Capacity Market program administered by ISO-NE, as defined in section 1 of chapter 164."

The Program Administrators propose to allocate FCM funds across customer sectors according to each sector's percentage of contribution to SBC funds. Each Program Administrator's projection of individual FCM revenues is based on its respective FCM bidding.

Bid levels are based on projected and historic achieved annual peak period MW reductions from a PA's energy efficiency programs, as well as ongoing studies and evaluations that may affect savings. Bids into the FCM must be submitted three years in advance. Therefore, the PAs develop bids based on estimates using the best information available at the

time. The PAs also must balance the goal of maximizing FCM revenue with the financial risk to program funding if projected peak savings are not achieved.

3. Regional Greenhouse Gas Initiative Proceeds (electric only)

The electric Program Administrators have estimated the proceeds they expect to receive from Massachusetts' participation in the RGGI based on the following assumptions.

In 2013, the electric Program Administrators will be allocated revenues from all RGGI auctions held during 2013. In 2014, the electric Program Administrators will be allocated revenues from all RGGI auctions held in 2014. And, similarly, in 2015, the electric Program Administrators will be allocated revenue from all auctions held in 2015. The Program Administrators take into account potential delays in receipt of the funds.

Eighty percent of the Massachusetts proceeds from RGGI auctions will be allocated to energy efficiency Program Administrators, consistent with the Green Communities Act's directives that cap-and-trade pollution control programs including, but not limited to, not less than 80 percent of amounts generated by the carbon dioxide allowance trading mechanism established under the RGGI Memorandum of Understanding and the NOx Allowance Trading Program, will be made available for energy efficiency program expenditures. G.L. c. 25, § 19(a).

Electric Program Administrators will receive RGGI proceeds in proportion to the amount of funding required to fund their energy efficiency programs above the SBC and FCM.

The electric PAs expect that DOER will continue to pay the electric Program Administrators' portion of the costs of the Council's Consultants retained pursuant to G.L. c. 25, §22(c) out of the 80% of RGGI auction proceeds that are allocated to the PAs. This assumption is reflected in anticipated RGGI proceed amounts, which take into account the reduction of proceeds receivable by the PAs by the amount payable to the Consultants. Because the Consultant fees will be paid by DOER directly out of the RGGI proceeds, the electric PAs' proposed budgets do not include separate expense amounts for Council Consultant costs.

Additional assumptions used by the Program Administrators with regard to the number of Massachusetts allowances sold in each year and the clearing price of future auctions are provided in the table below.

Forecast: RGGI Allowance Sales & MA EE Funding

	2013	2014	2015
Allowance Price ($/Ton)	1.97	2.01	2.05
Projected Allowance Sales (million tons)[1]	118	118	113
Total RGGI Proceeds ($M)	232	236	231
MA RGGI Proceeds ($M)	37	38	37
MA EE RGGI Funds ($M)[2]	**30**	**31**	**30**

(1) Allowance sales forecast based on 2012 RGGI Intergrated Planning Model (IPM) results & historical sales patterns
(2) 80% of MA RGGI proceeds dedicated to energy efficiency (EE)

4. Energy Efficiency Reconciliation Factor ("EERF") (electric only)

In the event that program costs exceed other available revenue sources, a fully reconciling funding mechanism, the EERF, ensures that the costs for all cost-effective energy efficiency measures will be funded. The EERF recovers and reconciles energy efficiency costs for a particular program year with the revenue an electric PA receives through: (1) the SBC; (2) participation in the FCM; (3) proceeds from participation in cap-and-trade programs such as RGGI; (4) for electric PAs without a Department-approved decoupling mechanism, LBR; and (5) proceeds available from other private or public funds that may be available for energy efficiency or demand resources.

5. Carryover Information

In determining its Energy Efficiency Surcharge, a Program Administrator takes into account funds carried over from the previous year's program, whether positive or negative. These "fund balances" are used to adjust projected funding levels in the Plan.

6. Outside Funding Levels

The 2013-2015 Plan does not contain specific outside funding level assumptions given the absence of material viable funding sources. The Program Administrators actively continue to seek new sources of outside funding.

7. Financing Initiatives

During the course of the last two years, the Program Administrators have developed and deployed several financial products in conjunction with the Massachusetts Bankers Association and Credit Unions. The financial products are offered to customers through various Massachusetts banks and credit unions, with roughly fifty financial institutions participating. The new Mass Save financing program is offered through multiple financial institutions. The Program Administrators expect to have enough capital infusion from the diverse Massachusetts lending community to meet customer demand for financing in the next three years.

The HEAT Loan program also remains available, which provides qualified customers with zero percent interest loans up to $25,000 with terms up to seven years and can be applied towards certain specified energy efficiency upgrades. With the support of DOER, a portion of the HEAT Loan may be used to finance the mitigation of barriers preventing the installation of energy efficient measures (*i.e.*, pre-weatherization measures). For 2013-2015, certain gas PAs are proposing additional budgetary dollars in the weatherization program to make the HEAT Loan available in support of gas energy efficiency efforts in service territories where electricity is supplied by a municipal light plant.

Financing allows customers, who may not be able to raise enough capital to pay for their customer contribution, to borrow funds in order to invest in energy efficiency. Customer financing does not reduce the amount of money necessary to be collected from ratepayers because it does not reduce the Program Administrators' energy efficiency budgets. To the extent

that access to low-cost capital is a barrier for certain customers, financing can alleviate that and encourage energy efficiency investments.

The Program Administrators are continuing their efforts to understand the nature of barriers, for different customer segments, which may be related to accessing capital, and to explore financing products/solutions to address them, particularly for C&I customers who have not taken advantage of the financing mechanism described above in great numbers as has been the case for residential customers. In addition, some of the Program Administrators are proposing to provide customers with the ability to repay their share of program costs with zero percent interest over a two year period.

D. Summary of Budgets, Savings, and Benefits

For the 2013-2015 Plan, the Program Administrators have sought to balance savings and budgets; therefore, savings goals are aggressive in order to acquire all available cost-effective energy efficiency, but sustainable, and planned with consideration of bill impacts. The Program Administrators have integrated planning and implementation in order to achieve sustainable savings. Based on prior experience, in this Plan, the Program Administrators have taken note of EM&V factors and trends when planning savings goals. In order to present reliable data, the Program Administrators have focused on program-driven savings, which is the savings achieved through the efforts of the PAs. The PAs intend to incorporate any results of the proceedings in D.P.U. 11-120 as soon as practicable after an Order is issued.

Planned budgets in this Plan take into account statutory low-income expenditure requirements, and reflect economies realized through prior efforts. In 2013-2015, the PAs are placing an increased focus on benefits. In determining target benefits, the PAs have sought to accommodate the effect of changed avoided costs.

The budgets, savings, and benefits tables presenting in this Plan are preliminary, and will necessary evolve based on (1) impact evaluation results to be finalized on June 1, 2012 for the 2011 Annual Report and by July 13, 2012 for this Plan; (2) proposed legislation, if passed; (3) any (currently unexpected) changes in regulatory policy, such as cost recovery and incentive plans; (4) planning refinements; and (5) program level data.

The Program Administrators plan to provide D.P.U. 08-50 tables to the Council by July 1, 2012 following the finalization of several new impact evaluations. These tables will include revised program names, updates to clarify programs/pilots/hard-to-reach initiatives, and general refinements of the template and data.

1. ELECTRIC Statewide Budget, Annual Savings, Lifetime Savings, and Benefits

BUDGET ($)

Sector	2010 (Actual)	2011 (Prelim. Actual)	2012 (MTM)	2013	2014	2015	2013-2015
Residential	$ 83,122,425	$ 103,326,779	$ 142,256,336	$ 153,306,846	$ 155,974,483	$ 158,049,863	$ 467,331,192
Low-Income	$ 26,055,142	$ 30,776,567	$ 53,574,298	$ 55,744,295	$ 55,114,957	$ 56,474,996	$ 167,334,248
C&I	$ 126,707,599	$ 134,099,342	$ 294,175,015	$ 296,909,472	$ 295,439,018	$ 300,314,829	$ 892,663,319
TOTAL	$ 235,885,166	$ 268,202,688	$ 490,005,649	$ 505,960,614	$ 506,528,458	$ 514,839,688	$ 1,527,328,759

ANNUAL SAVINGS (MWh)

Sector	2010 (Actual)	2011 (Prelim. Actual)	2012 (MTM)	2013	2014	2015	2013-2015
Residential	166,246	252,798	291,291	292,366	307,401	307,916	907,684
Low-Income	17,186	22,391	33,824	33,224	33,375	33,473	100,072
C&I	436,207	538,971	771,016	846,503	854,518	865,647	2,566,667
TOTAL	619,638	814,160	1,096,132	1,172,093	1,195,294	1,207,036	3,574,423

LIFETIME SAVINGS (MWh)

Sector	2010 (Actual)	2011 (Prelim. Actual)	2012 (MTM)	2013	2014	2015	2013-2015
Residential	1,349,932	1,761,919	1,762,163	1,936,430	1,980,651	2,005,467	5,922,547
Low-Income	238,074	281,855	307,712	827,754	870,873	872,295	2,570,922
C&I	5,748,574	8,453,978	10,004,505	10,960,458	11,083,993	11,212,794	33,257,246
TOTAL	7,336,580	10,497,753	12,074,379	13,724,642	13,935,517	14,090,555	41,750,715

BENEFITS ($)							
Sector	**2010 (Actual)**	**2011 (Prelim. Actual)**	**2012 (MTM)**	**2013**	**2014**	**2015**	**2013-2015**
Residential	$ 316,935,244	$ 469,821,966	$ 648,818,955	$ 675,720,735	$ 700,574,160	$ 717,521,227	$ 2,093,816,122
Low-Income	$ 85,795,386	$ 88,713,248	$ 108,909,170	$ 114,104,414	$ 111,733,580	$ 112,854,735	$ 338,692,730
C&I	$ 705,167,807	$ 1,142,102,223	$ 1,530,079,373	$ 1,656,703,512	$ 1,677,150,688	$ 1,698,939,538	$ 5,032,793,738
TOTAL	$ 1,107,898,437	$ 1,700,637,437	$ 2,287,807,498	$ 2,446,528,661	$ 2,489,458,429	$ 2,529,315,500	$ 7,465,302,590

* All of these tables reflect “rolled-up” proposals of the individual Program Administrators for 2013-2015.

2. GAS Statewide Budget, Annual Savings, Lifetime Savings, and Benefits

BUDGET ($)

Sector	2010 (Actual)	2011 (Prelim. Actual)	2012 (MTM)	2013	2014	2015	2013-2015
Residential	$36,338,668	$54,202,538	$68,070,397	$74,317,405	$78,074,764	$81,286,933	**$233,679,101**
Low-Income	$11,921,603	$19,300,965	$29,157,115	$34,419,468	$34,960,754	$35,352,905	**$104,733,128**
C&I	$14,236,172	$23,684,849	$34,317,304	$62,601,204	$60,882,935	$59,116,987	**$182,601,126**
TOTAL	**$62,496,444**	**$97,188,352**	**$131,544,816**	**$171,338,077**	**$173,918,453**	**$175,756,825**	**$521,013,354**

ANNUAL SAVINGS (therms)

Sector	2010 (Actual)	2011 (Prelim. Actual)	2012 (MTM)	2013	2014	2015	2013-2015
Residential	4,777,423	7,179,279	11,143,053	9,384,908	10,572,439	10,715,848	**30,673,195**
Low-Income	573,920	1,168,729	1,248,899	1,265,431	1,283,924	1,311,995	**3,861,349**
C&I	5,894,326	7,005,046	11,195,014	11,385,719	11,563,505	11,697,504	**34,646,727**
TOTAL	**11,245,670**	**15,353,053**	**23,586,965**	**22,036,058**	**23,419,867**	**23,725,347**	**69,181,272**

LIFETIME SAVINGS (therms)

Sector	2010 (Actual)	2011 (Prelim. Actual)	2012 (MTM)	2013	2014	2015	2013-2015
Residential	93,036,167	94,024,585	144,577,743	141,936,152	146,679,929	152,176,413	**440,792,494**
Low-Income	9,099,679	20,618,567	25,328,452	25,531,272	25,926,365	26,537,311	**77,994,948**
C&I	103,827,996	110,717,706	161,564,072	161,438,506	164,343,669	166,655,756	**492,437,931**
TOTAL	**205,963,842**	**225,360,857**	**331,470,267**	**328,905,930**	**336,949,963**	**345,369,479**	**1,011,225,373**

BENEFITS ($)							
Sector	**2010 (Actual)**	**2011 (Prelim. Actual)**	**2012 (MTM)**	**2013**	**2014**	**2015**	**2013-2015**
Residential	$79,515,003	$115,953,875	$182,665,928	$182,572,546	$190,770,530	$197,438,496	**$570,781,572**
Low-Income	$23,148,877	$39,535,716	$42,343,032	$41,959,033	$42,493,683	$43,271,124	**$127,723,840**
C&I	$101,621,973	$118,482,673	$141,840,553	$138,431,844	$140,796,580	$142,693,232	**$421,921,656**
TOTAL	**$204,285,853**	**$273,972,264**	**$366,849,512**	**$362,963,423**	**$374,060,793**	**$383,402,852**	**$1,120,427,068**

* All of these tables reflect “rolled-up” proposals of the individual Program Administrators for 2013-2015.

E. Bill Impacts

The PAs have sought to balance the value of the long-term benefits expected from proposed energy efficiency efforts with short-term customer bill impacts. Proposed budgets reflect these considerations along with a focus on the equitable distribution of costs and benefits for customers. Please see Section III, Appendix A for preliminary sample residential, low-income, and small C&I bill impacts using the traditional bill impact model, which show incremental bill impacts.

Through the D.P.U. 08-50 Bill Impacts Working Group, the Program Administrators, the Department, and interested stakeholders, including the DOER and the Attorney General, are developing a common analytic model for billing analysis, which reflects both the costs of energy efficiency efforts as well as the multi-year benefits of such efforts on Massachusetts ratepayers. The proposed bill impact model seeks to quantify the Three-Year Plan's costs and benefits over the long term (*e.g.*, for the average life of efficiency measures), in order to capture the full effect of planned energy efficiency initiatives, impact of DRIPE for electric PAs, as well as comparison of effects among program participants and non-participants. In addition, the new bill impact model will compare energy efficiency programs in place to a zero efficiency case with no energy efficiency program, and, for electric Program Administrators, to an incremental case without additional EERF funding. These models are still in the active development and testing phase, and will be completed by the October filing.

F. Statewide Programs

1. Strategic Overview of Residential, Low-Income, and C&I Programs and Program Consolidation

Throughout this 2013-2015 Three-Year Plan, the Program Administrators intend to expand upon strategies to promote greater energy savings and peak demand reductions by building on existing programs and services. The PAs intend to continuously improve the methods by which programs are delivered by keeping the focus on evolving the suite of measures and practices in order to remain relevant over time. The Program Administrators will proactively pursue new technologies and incentive structures to encourage expanded and more comprehensive program participation. Consistent with Council priorities, the depth of existing programs will also continue to expand over the next three years as new initiatives are introduced to increase participation and savings. Programs that address 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 within those broader efforts.

In the 2013-2015 Plan, the PAs are providing consolidated programs, with several initiatives available under each program. This consolidation will allow for increased flexibility to address market conditions and maximize savings, reduced customer confusion, and potentially reduce the need for mid-term modifications.

2. Consistent Messaging

A critical component of integration and seamless delivery is consistent messaging. The Program Administrators continue to improve and expand the statewide website (marketing portal) and marketing approach to increase customer awareness of program offerings and the Mass Save® brand as a representation of the consistency across all Program Administrators.[7] Continued use of the Mass Save brand as the umbrella under which all Massachusetts energy efficiency programs operate will reinforce that the Program Administrator offerings across the state are seamless and uniform. Consistent with evaluation findings, the PAs will continue their practice of co-branding by using the Mass Save brand concurrently with the Program Administrator logo, which represent highly recognizable local entities that are trusted by customers. The Program Administrators will continue their practice of communicating to customers that Mass Save is brought to them through the local utility or municipal aggregator. Individual Program Administrators 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 all other Program Administrators in order to avoid inadvertent inconsistent messaging.[8]

3. Same Delivery Mechanism for Gas and Electric

The Program Administrators will continue to utilize uniform delivery mechanisms for gas and electric programs. While delivery will remain seamless across the state, the Program Administrators plan to continue to examine additional ways to reach new gas and electric customers. New delivery mechanisms for gas and electric will be explored from a statewide prospective (*e.g.*, with C&I customers, the feasibility of introducing a self service portal for smaller customers, personal conduits via web-based chat or telephone assistance, and provision of fee-based on-site assessments for C&I customers). In addition, the Program Administrators plan to expand upon current delivery mechanisms which have proven successful including expanding upstream offerings to include other gas and electric equipment within the replacement on failure market. Coordination and consistency among and between electric and gas PAs will continue to be a point of emphasis, including in the process of interacting with customers.

4. Review of New Technologies

There is a steady flow of new technologies being developed and offered to increase the efficiency of energy use for residential and C&I 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 devices will provide cost-effective energy savings for their customers. To address the need for these reviews, the Program Administrators have established the Massachusetts Technical Assessment Committee ("MTAC").

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[7] Mass Save is a registered trademark of the Program Administrators and all rights thereto are reserved.

[8] Program Administrators have used the Energy Star, GasNetworks, and COOL SMART brands on a consistent basis for applicable equipment initiatives in order to help drive participation.

The MTAC consists of key technical staff from each Program Administrator as well as a representative of the advisor hired by the PAs to act as a facilitator for this committee. The MTAC reviews technical and incentive issues of statewide interest and is coordinated by a project manager designated by the Program Administrators represented in the committee. MTAC 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 Program Administrators. The MTAC has developed a set of protocols for the content of their review and procedures for documenting and disseminating their conclusions and technical interpretations. The MTAC meets as needed to address specific issues and during the annual Program review and planning periods.

Requests for program consideration of a new or unfamiliar technology that come from a vendor or customer are forwarded to the MTAC by the receiving Program Administrator or through the Mass Save website. This group can undertake or direct such tasks as:

- Research and analysis of specific measures that are candidates for inclusion in the programs.
- Determination whether a specific new technology should be approved as a) a prescriptive measure eligible for all appropriate PA programs or b) a measure whose eligibility is limited to custom projects where savings and cost effectiveness are to be determined on a site-specific basis.
- 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 Program Administrators' staff and contractors.
- Development and maintenance of statewide uniform "custom express" software applications which provide an expedited approach to calculating savings and incentives for certain custom technology projects.
- 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 Program Administrators to address unanticipated program implementation issues.

5. Long-term Goals

The Plan's 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 Administrators, or has facilities or projects in multiple utility service areas.

Program Administrators will continue to explore ways to achieve this goal.

In line with increasing savings goals, the Program Administrators are looking to garner participation throughout market sectors that have had historically low participation rates in Massachusetts programs, while identifying ways to provide customers who are more active in Mass Save programs packaging of services to encourage the pursuit of more comprehensive projects.

Over this Three-Year Plan, the Program Administrators are committed to a continued focus on deeper savings, exploring ways to effectively encourage customers and trade allies to focus on more long-term, comprehensive and advanced energy efficiency solutions. The PAs also recognize that reducing or eliminating barriers to customer and vendor participation is an important driver of successful program operations, and the PAs will work to implement findings from process evaluations to streamline and improve programs. In addition, the Program Administrators will continue to improve delivery mechanisms to encourage statewide participation in energy efficiency programs by all customer segments.

6. Program Descriptions

a. Residential Program Descriptions

RESIDENTIAL WHOLE HOUSE PROGRAM

Description:

This program focuses on comprehensive gas and electric energy efficiency opportunities associated with mechanical, electrical and thermal systems in existing residential single homes and multi-family facilities. It offers energy assessments and provides technical assistance and incentives in a variety of initiatives to encourage whole house or whole building upgrades of measures and equipment with a higher efficiency product. The program also includes new construction opportunities in conjunction with retrofit efforts for residential customers in the Commonwealth.

Program services include technical assistance (to identify and quantify opportunities), and financial incentives, typically based on a percentage of project costs (both material and labor) that make upgrades attractive to building owners, home owners, tenants and new construction builders. The Program Administrators also partner with advocates, building scientists, and regulators to ensure that the best practices in building design and equipment specifications introduced and propagated by the program are ultimately built into the evolution of better building requirements.

For the 2013-15 Plan, the Program Administrators are proposing to include all whole house initiatives (*i.e.*, HES, Multi-Family Retrofit, Residential New Construction) within the overall Residential Whole House Program. As the name implies, this program targets residential single family homes and residential multi-family dwellings by addressing the entire home or facility with energy efficiency opportunities. The initiatives offer incentives, for recommended retrofit measures including lighting, refrigeration, insulation and air sealing, and coordinates with

the Residential Products Program to incorporate technologies such as heating and cooling equipment, controls, and programmable thermostats. In addition to the financial incentives, the HES and Multi-family Retrofit initiatives allow participants to qualify for interest-free loans for the customer portion of project costs.

Initiative 1: **Home Energy Services (HES)**

The Mass Save® Home Energy Services ("HES") initiative provides fuel-blind energy efficiency services to residential, single family (1-4 family) customers. Services offered include Home Energy Assessments ("HEA"), direct install measures, air sealing, insulation, and consumer education. The initiative has in place a market model with two categories of participating contractors: Independent Installation Contractors ("IICs") and Home Performance Contractors ("HPCs").[9] IICs implement weatherization services for either customers who received an HEA through a lead vendor hired by a PA to administer the program for that PA ("Lead Vendor"), or customers they acquired and brought into the initiative. HPCs offer turnkey services, from providing HEAs through recommended measures.

***Enhancements/Additions to HES*:**

Based on the lessons learned in 2012, the Program Administrators are considering the incorporation of enhancements such as an early retirement heating equipment incentive and a pre-weatherization barrier offer in the 2013-2015 Three-Year Plan. In addition, the Program Administrators are proposing to make the Heat Loan available to support gas energy efficiency efforts. In addition, the suite of prescriptive deeper savings or lost opportunity measures is being reviewed.

Initiative 2: **New Construction (MNHES)**

The Massachusetts New Homes with ENERGY STAR® ("MNHES") Initiative strives to increase the production and market penetration of energy efficient homes that exceed the state's energy code and minimum ENERGY STAR specification guidelines. To address the barriers of changing codes and a downturn in the housing market, the Program Administrators will look to incorporate the lessons learned from the past three years and the associated initiative pilots (lighting design, major renovations, and multi-family 4-8 stories) to increase participation and increase energy savings.

***Enhancements/Additions to MNHES*:**

Currently, the Program Administrators are looking into incorporating the findings from the pilots mentioned above, and will consider cost-effectiveness and suitability to the program. The Program Administrators are also reviewing additional initiative enhancements such as prescriptive offerings for homes exceeding code (as an alternative to the current tiered performance structure) and a mechanism that captures energy savings through a normalized

[9] Due to its unique circumstances, Unitil does not utilize the market model because the Company administers the program without a lead vendor. Rather, Unitil uses contractors/vendors that provide turnkey auditing and weatherization services.

consumption methodology. These additional initiative enhancements and pilot findings will build on the current initiative structure to increase participation and increase energy savings.

Initiative 3: **Multi-Family**

The Multi-Family initiative offers energy assessments to eligible multi-family facilities located in participating PA territories. Incentives are offered for eligible cost-effective improvements that improve gas and electric efficiency (including, but not limited to lighting, hot water measures, shell improvements, and controls).

***Enhancements/Additions to Multi-Family*:**

The Program Administrators are considering enhancements to achieve deeper savings in the 2013-2015 Plan such as differentiated services for condominium owners in multi-family settings allowing for greater participation from the condominium population. Also, the Program Administrators plan to review and incorporate additional emerging technologies (such as demand control circulation devices) and to consider a modified weatherization incentive to master-metered gas heated properties, creating greater consistency across the entire multi-family sector. Further, Program Administrators will explore expanding offerings to certain multi-family market segments to allow customers to receive incentives for fuel-blind efficiency improvements from their electric PA.

RESIDENTIAL PRODUCTS

Description:

The Residential Products program is designed to optimize the efficiency of lighting, heating and cooling equipment used by residential customers served by the Program Administrators. In the 2013-15 Plan, the Program Administrators are proposing to include all the product-focused initiatives (*i.e.*, Residential Heating, Water Heating, Cooling, and ENERGY STAR Lighting and Appliances) within the broader Residential Products Program. In this Program, the Program Administrators partner with retailers, manufacturers, distributors, and trade allies to ensure the highest quality, energy efficient products are introduced and promoted to the residential consumer market. The initiatives offer incentives, for a variety of cost effective, qualified lighting products, ENERGY STAR qualified appliances, high efficiency heating and water heating equipment, programmable thermostats and controls, all within the Residential Products Initiatives.

Initiative 1: **Lighting and Products**

The ENERGY STAR Lighting & Products Initiative provides consumer education about the benefits of ENERGY STAR-qualified lighting and products to increase consumer acceptance of those items and to encourage them to look for and purchase ENERGY STAR-qualified models when they shop.

***Enhancements/Additions to Lighting*:**

The Program Administrators continue to investigate ways to mitigate program attribution issues related to efforts focused on efficient lighting. With a changing market, the group intends to refine incentive levels to better align with the changing incremental costs. The Program Administrators will continue to implement educational approaches to help consumers understand product choice as a result of the federal Energy Independence and Security Act of 2007. The Program Administrators will also strategically promote the adoption of qualified LED lighting.

Enhancements/Additions to Products:

The Retail Products element of this initiative will continue efforts in promoting ENERGY STAR appliances that pass evaluation testing, and continue to research opportunities to promote higher-tiered white goods. The working group will continue to monitor the Super Efficient Dryer Initiative ("SEDI") to understand the potential supply of, and demand for, efficient dryers in Massachusetts.

The initiative will explore various program and incentive models (up-stream, mid-stream, and/or mail in rebates) for consumer electronics as well as new technologies.

Initiative 2: **Residential Heating and Cooling (Electric) - HVAC**

The initiative, also known as HVAC COOL SMART™, offers rebates for residential central air conditioning, air source heat pumps and Electronically Commutated Motor ("ECM") furnace fan systems (in conjunction with the residential gas heating and hot water initiative). The initiative also promotes the sale of ENERGY STAR qualified high-efficiency air conditioning equipment and supports and promotes best installation practices, as promulgated by the Air Conditioning Contractors of America ("ACCA") and the Environmental Protection Agency's ENERGY STAR Quality Installation Program ("QIV"). This initiative provides customer rebates for the installation of ENERGY STAR qualified HVAC equipment, as well as a "voluntary" QIV incentive for those customers who work with a COOL SMART trained contractor to install and properly test their rebate eligible equipment.

***Enhancements/Additions to HVAC COOL SMART*:**

The Program Administrators' proposed enhancements to this initiative for the 2013-2015 Plan include an early replacement package offer, which provides ECM Furnace with Central Air Conditioning. Also, the Program Administrators are expanding the Heat Pump Water Heater ("HPWH") incentives to include oil and propane fuel retrofits, and are partnering with HPWH leasing companies to increase participation and savings. Emerging technologies such as residential climate controls, geothermal heat pumps and drain water heat recovery systems will be reviewed and considered for implementation.

Initiative 3: **Residential Heating and Hot Water (Gas)**

The Residential Space Heating and Water Heating initiative offers customer rebates for installing high efficiency heating, hot water equipment, thermostats and reset controls in the new construction and replacement market (*i.e.*, high efficiency gas furnaces and boilers). In collaboration with the COOL SMART electric efficiency initiative, this initiative also offers a dual electric/natural gas rebate program for high-efficiency furnaces equipped with Electronically Commutated Motor ("ECM") or equivalent advanced furnace fan systems. Further, this initiative can be combined with the HES initiatives' Early Retirement promotion by offering an incentive to target old, inefficient, but still operating, heating equipment for replacement with high efficiency equipment.

Enhancements/Additions to Residential Heating and Hot Water (Gas)

The Program Administrators plan on reviewing the lessons learned from the Early Retirement efforts to consider fully implementing this incentive into the initiative during the 2013-2105 Plan. The Program Administrators will work to enhance integration and cross promotion efforts with COOL SMART and the HES program and will monitor and explore emerging technologies, such as Wi-Fi thermostats and controls, to determine if they can be cost effectively added to the initiative.

b. Low-Income Program Descriptions

LOW INCOME RETROFIT

Low-Income Retrofit

The objective of the Low-Income Retrofit program is to deliver deeper and broader energy efficiency services and products directly to the homes of income eligible customers and multi-family facilities through a comprehensive whole building approach, with the goal of lowering energy usage. The program is designed to minimize or eliminate co-payments, integrate gas and electric program delivery, and integrate funding across all sectors that serve low-income customers to the greatest extent possible. In 2012, the Program Administrators began implementing a consolidated Low-Income Retrofit Program in place of the separate Low-Income Single Family Retrofit Program and the Low Income Multi-Family Retrofit Program, allowing for greater flexibility in serving the low-income population.

The Low-Income Retrofit program offers the following measures: insulation, air sealing, domestic hot water measures, CFLs/energy efficient fixtures, LEDs, heating system repair and replacement, major weatherization repairs (*e.g.*, electrical repairs, roofs), refrigerators, room air conditioners, smart power strips, and health and safety measures.

***Enhancements/Additions to Low-Income Retrofit*:**

- **New Measures:** The Program Administrators will continue to work with the Low-Income Best Practices Working Group to identify new cost-effective energy efficiency

services, measures and technologies (such as LED Lighting and Common Area lighting controls) that are appropriate to offer to income eligible customers.

- **"For Profit" Properties:** The Low-Income Multi-Family Program services properties that have five or more dwelling units with at least 50 percent of the occupants at or below 60 percent of the median income level. Currently, the Low Income Multi-Family Advisory Committee, comprised of LEAN, Community Development Corps and the Massachusetts Department of Housing and Community Development (representing public housing authorities), and other nonprofit owners of low-income non-institutional multi-family housing, are tasked with prioritizing low-income multi-family projects to receive energy efficiency upgrades. The Program Administrators plan to extend the program to serve "for profit" properties under the same prioritization guidelines, where at least 50 percent of the occupants are at or below 60 percent of the median income level. Previously, some income-eligible customers paying into the fund had been excluded from the program.

- **Explore "Fuel Blind":** Currently the Low-Income Multi-Family Program serves properties that are heated by gas and electricity; however, multi-family facilities heated by delivery fuels are excluded from participating in all of the available energy efficiency measures that are offered within the program, specifically weatherization improvements and heating system repairs and replacements. The 2013-2015 program will explore the potential of offering all available measures and incentives to any qualified low-income multi-family facility, regardless of fuel type.

c. C&I Program Descriptions

C&I NEW CONSTRUCTION

Description:

The C&I New Construction program is designed to optimize the efficiency of equipment, building design and systems in new construction and renovation of commercial, industrial, institutional and government facilities. Other "lost opportunities" are also addressed through this program, including the initial purchase of equipment and equipment replacement upon failure. These are opportunities that would otherwise be lost because of the barriers to these markets. This program focuses on offering a comprehensive set of electric and gas efficiency options that are specific to the needs of each unique facility. The program also addresses the limited window of opportunity available to install premium grade replacements when equipment fails or is near the end of its useful life. The Program Administrators also partner with advocates, building scientists, and regulators to ensure that the best practices in building design and equipment specifications are introduced and used, resulting in the beneficial evolution of building requirements.

***Initiatives with Enhancements/Additions*:**

Initiative 1: **Expanding Upstream Initiatives**

The upstream model leverages existing distributor networks and infrastructure to influence thousands of customers and contractors, cost-effectively accelerating the introduction and sale of more efficient equipment by removing or reducing the initial cost hurdle for customers. In addition, this proactive approach provides incentives to encourage customers to access more efficient equipment at the point of sale and complements the traditional downstream approach in which Program Administrators work directly with customers and installers.

Using this model, the electric Program Administrators have partnered with electrical distributors and lighting manufacturers to offer discounted LED and reduced wattage linear fluorescent lamps to Massachusetts non-residential facilities. The goal of this initiative is to transform the market from less efficient standard lighting technology to more efficient technologies such as reduced wattage linear fluorescent and LEDs. The Program Administrators plan to expand this successful model with other technologies within the replacement-on-failure market such as HVAC equipment. Gas technologies that are likely to benefit from this approach are also being investigated.

Initiative 2: **Property Management/Real Estate Segmentation**

Property Management/Real Estate Sector: The Program Administrators are developing a comprehensive "go-to-market" strategy for the commercial office market sector, with the goal of achieving higher savings in this sector. This effort includes working with leading real estate consulting firms to understand building stock, key industry actors, and market characteristics, in order to test various value propositions in the tenant fit-out market. The initiative will also address specific barriers in this segment such as owner/tenant split incentives, complex lease structures and the short timeline of tenant fit-outs. The results of these efforts will be used to refine the initiative and may provide the ability to scale up for other customers in this segment.

C&I RETROFIT

Description:

This program focuses on comprehensive gas and electric energy efficiency opportunities associated with mechanical, electrical and thermal systems in existing commercial, industrial, governmental and institutional buildings. The program provides technical assistance and incentives to encourage retrofitting of systems and equipment that continues to function, but are inefficient, and can be replaced with a higher efficiency product. The program includes both prescriptive and custom measures.

The program provides technical assistance (to identify and quantify opportunities) and financial incentives typically based on a percentage of project costs (both material and labor) to make equipment removal and replacement attractive to building and business owners in terms of

conventional business payback requirements. Given the current low cost of gas, this may require an increase to incentives currently offered for gas energy efficiency measures.

For the 2013-15 Plan, the Program Administrators are proposing to include the Small Business Retrofit, commonly referred to as the Direct Install ("DI") Program, within the overall C&I Retrofit Program. This retrofit program is targeted toward smaller qualified C&I customers. Customers with peak electrical demands of 300 kW or less can participate in this program. DI is delivered on a turnkey basis (*i.e.*, pre-packaged) through qualified vendors under contract to each Program Administrator. DI offers incentives, generally at 70 percent of total cost for recommended retrofit measures including lighting, refrigeration, pipe and duct insulation, boiler reset controls, programmable thermostats and pre-rinse spray valves. As a component of the financial incentives, most participants qualify for zero percent loans for the customer portion of project costs.

Initiatives with Enhancements/Additions:

Initiative 1: **CHP**

The Program Administrators, building on the experience learned in the first Three-Year Plan, have a better understanding of where and when Combined Heat and Power ("CHP") may be an appropriate offering for customers who have facilities with intensive year round thermal use. CHP presents unique challenges, as reductions of metered electric loads are offset by increased use of fossil fuels to power the CHP system. Overall energy efficiency is improved through increased utilization of the on-site electric generator's recoverable heat in addition to generating electricity. Program Administrators require that recommended site efficiency measures be implemented to reduce site load first, then where applicable a custom analysis and screening of potential CHP opportunities is performed to assess positive net benefits with an expected net reduction in greenhouse gases.

Initiative 2: **Street Lighting**

The Program Administrators will continue to work with stakeholders to identify barriers that may impede implementation of more efficient LED (and, if applicable, Induction), street lighting, including product technology, product offerings, financial incentives, regulatory and any other identified barriers. The initiative will explore options for both customer and utility-owned street lighting.

Initiative 3: **Expanded Service Offerings**

Building on the experience gained through the first Three-Year Plan, the Program Administrators desire to bring offerings to customers that are timely, easy, and cost-effective. Although the Program Administrators currently provide dedicated customer account management for their largest customers, the intent of expanded service offerings is to broaden service for all customers by exploring new delivery pathways including:

- Self-service through a portal to provide customers a more interactive experience where a customer, on their own, may learn about energy efficiency opportunities

without the need for a site visit. This may lead to greater program participation, while managing costs.

- Personal assistance via conduits such as web-based (chat) or telephone support services that would screen potential customers/facilities to best match the customer with services that address their needs. This effort may refer back to the self-service portal or lead to more interaction in advance of scheduling additional services.
- On-site assessment, for a fee (which may be waived at each PA's discretion), to evaluate the physical plant/facilities for potential savings opportunities. The fee structure will be designed to ensure it is not a barrier to participation, but does engage the customer to encourage implementation. This on-site assessment may lead to a DI visit or the provision of other services available through the C&I Retrofit Program.

Initiative 4: **Main Streets Implementation**

For the smaller customers, challenges exist for both the customer and the Program Administrators given the small incremental savings opportunities. For the customer, there is often insufficient economic motivation to take part in available energy efficiency services. For the Program Administrators, the implementation costs are relatively large compared to the potential savings. Although the intent is to serve a broad base of customers through the self-service portal, there are opportunities to scale efforts through the tested Main Streets model. Geographical areas with high densities of small customers are targeted. During a predetermined time period, customers in the defined area are offered a limited suite of services at no charge including lamp and ballast retrofit, spray valves, exit sign retrofits and other applicable energy efficiency measures. Larger opportunities are identified and referred to the traditional DI program for follow-up. Customers not able to participate during the promotion are also referred back to the traditional program offerings.

CROSS CUTTING

Initiative 1: **Market Segmentation**

Two-tiered customer segmentation is utilized to inform "go-to-market" strategies. Customers are first segmented by energy usage with the largest customers supported by dedicated account executives.[10] Smaller customers are supported via a network of direct install vendors. Customers are also segmented by industry classification. Marketing campaigns, collateral and recommended energy efficiency solutions are then able to be tailored to the specific needs of customers within certain industries.

[10] One of the increasingly preferred tools available to account executives working with larger C&I customers is the Memorandum of Understanding ("MOU"). An MOU offers a way to document a commitment by the business customer and the PA to work together to achieve mutually stated goals of energy efficiency benefits through specific actions that are tailored to the customer's facilities over a multi-year planning horizon. As such, an MOU can set the stage for achieving deeper and more comprehensive energy efficiency savings, and is more likely to succeed than a "one measure, one year" approach to energy efficiency implementation. Typically, this vehicle might include: participation by upper management leadership, the establishment of energy efficiency saving targets; and strategies to engage and measure the efforts to achieve aggressive energy efficiency savings throughout the target facilities.

d. Codes and Standards

The Program Administrators plan to implement an integrated gas and electric Codes and Standards effort beginning 2013. The Program Administrators are still involved in the planning process and have not yet determined the optimal approach with respect to what form the effort will take (*i.e.*, initiative within a program or pilot). The codes and standards effort reflects a long-term strategic plan by Program Administrators who will work in coordination with the Commonwealth and other stakeholders in advancing the codes and standards in Massachusetts so that Program Administrators may attribute benefits for these efforts. Specifically, the Program Administrators will pursue the following projects:

- **Compliance Enhancement Support**: (for base 2012 International Energy Conservation Code® ("IECC") and stretch code): The PAs are considering working with local builders, building enforcement officials and other design and construction community to increase the number of buildings complying with the local applicable code (whether IECC code or stretch code). This may include targeted trainings, outreach and technical support in the form of code ambassadors and circuit riders, compliance documentation tool development and review support.
- **Stretch Code Design Support**: The Program Administrators are considering support of DOER's development of a stretch code that exceeds statewide minimum requirements. Program Administrators are planning to work with interested local governments and other stakeholders to identify characteristics of stretch codes that meet the needs of a majority of jurisdictions. Program Administrators have identified development of a package of stretch codes for new construction and potentially for existing buildings as a key focus. This potentially includes research and development, life cycle cost analysis and industry stakeholder outreach.
- **Appliance Standards Advocacy**: Program Administrators propose to provide leadership for a small number of targeted national/state standards that are either of particular interest to Massachusetts or where active involvement of the Program Administrators is most likely to impact a national outcome.
- **Base energy code advocacy**: The main objective of this effort is to accelerate the development and adoption of new base energy code requirements at the same time as the target measures and their advanced levels of efficiency start to become established as current industry good practice.

G. Pilots & Hard-to-Measure Efforts

The Program Administrators are continuing to review pilot and hard-to-reach initiatives from 2010-2012 in order to determine if any such pilots will be continued as pilots, have findings that are incorporated into programs, or be discontinued. The Program Administrators are still completing pilots and performing this analysis and have not yet received the full results of the 2010-2012 pilots or determined if they would be cost-effective if continued as part of a program.

H. Public Education and Marketing Activities

The Program Administrators' plan to focus on creating a culture of sustainability within the Commonwealth using public education and marketing as key tools in this effort. The focus will be to create powerful, engaging, and motivating education and marketing strategies that will increase awareness of the benefits of energy efficiency and drive increased participation in the available energy efficiency programs and services. Proposed public education and marketing strategies will take into account the unique motivational differences between residential and non-residential customers.

The strategies and messages developed for statewide energy efficiency education, outreach and marketing will augment the efforts already in use and will attempt to complement and leverage program-specific marketing and individual PA efforts across the Commonwealth.

1. Community Engagement

Over the course of the 2010–2012 Three-Year Plan, the Program Administrators worked on a variety of community-based outreach and marketing initiatives throughout the Commonwealth. These efforts were primarily driven by local community advocates and leaders from various communities, in collaboration with Program Administrators who provided project management and technical support. While the overall results and successes of these outreach activities varied, it became evident that community engagement is an important component to enhancing the Program Administrators abilities to achieve greater program participation and energy savings. Additionally, community engagement may help the Program Administrators reach hard-to-reach and hard-to-serve customers, as well as additional multi-family customers. The Program Administrators express their appreciation of the efforts of their dedicated colleagues in community engagement initiatives and of their commitment to working together to find the best ways to serve harder to serve constituencies.

The Program Administrators also recognized over the last three years there is no "one size fits all" outreach model, but rather there is a need to employ a variety of creative engagement mechanisms. Some examples of these include:

- development of customized engagement plans with consideration of actual demographic and sector mixes unique to that particular community/municipality
- inclusion of performance based savings goals
- more holistic approaches that include city or town governing officials being the voice and driver for municipal buildings, local business, and residential participation
- engaging community-based organizations committed to aiding in the delivery of energy efficiency services in what might be considered traditionally harder to serve and/or ethnically diverse neighborhoods
- continued focus on addressing pre-weatherization barriers that have been identified by community-based organizations
- multi-lingual outreach strategies

While there are still many details and challenges that lie ahead in rolling out specific engagement plans, much outstanding work has been done and the Program Administrators are committed to the evolution of community-based engagement activities as an integrated component of program delivery and overall marketing and outreach strategies for the next three years.

I. Evaluation and Monitoring

For the 2013-2015 Plans, the Program Administrators and the Council's Consultants have identified several enhancements to the current EM&V framework. These enhancements are intended to improve the framework and make evaluation efforts more streamlined and transparent with the goal of improving the precision and usefulness of the studies.

The Program Administrators and the Council's Consultants submit that these enhancements to the evaluation framework will help streamline the EM&V process and increase administrative efficiencies, while also creating added flexibility to better address stakeholder research priorities and resource constraints in a timely manner. The specific enhancements proposed include:

- **Evaluation Management Committee**: The Program Administrators and the Council's Consultants have created an Evaluation Management Committee ("EMC") similar to the C&I and Residential Management Committees. The EMC serves as a steering committee for statewide evaluation issues, providing guidance and direction to each of the evaluation research areas. The EMC will also help plan, prioritize and delineate the research studies to be undertaken over the three-year plan period.
- **Research Areas**: The Program Administrators propose that the six research areas as currently defined be collapsed into three primary research areas: (1) Residential; (2) Commercial & Industrial; and (3) Special and Cross Cutting. The research areas will continue to be organized primarily by target markets, which will help to maximize the statewide effectiveness of EM&V while at the same time presenting minimal overlap among research areas.
- **Contracting**: The Program Administrators propose that the contracts in any research area may be awarded to one or more evaluation contractor, depending on the needs of the Program Administrators and the expertise and qualifications of the evaluation contractors available. This structure will maintain both a continuity of evaluation contractor presence in each research area, where appropriate, while still fostering creativity and competition among evaluation contractors.

By agreement with the Council's Consultants, the Program Administrators will allocate four percent of total program budgets for evaluation and market research in each year of the three-year plan.

Finally, the Program Administrators will explore a wide range of topics over the next planning phase to address the EM&V needs of all stakeholders as well as any policy and planning initiatives of the Commonwealth that will require EM&V support. To that end, the

Program Administrators have committed to evaluating the following specific projects over the course of the Three-Year Plan:

- **Codes and Standards**: It is the intent of the Program Administrators to support the proposed Residential and Commercial & Industrial Codes & Standards initiatives with appropriate, timely evaluation. The Program Administrators and the Council's Consultants are currently developing a proposal for a Savings Attribution Methodology. Codes & Standards evaluation plans will be developed after this is complete.
- **Behavioral Program & Initiatives**: The Program Administrators will continue to support behavioral programs, assessing the program effects on both electric and gas customers.
- **Quantification of Market Effects**: Subject to the Department's direction in D.P.U. 11-120, the Program Administrators propose to undertake studies to quantify market effects, naturally occurring energy efficiency[11] as well as identifying baseline and program-induced market changes.

J. Technical Reference Manual

The Massachusetts Technical Reference Manual for Estimating Savings from Energy Efficiency Measures ("TRM") documents how the energy efficiency Program Administrators consistently, reliably, and transparently calculate savings from the installation of prescriptive energy efficiency measures. The TRM provides methods, formulas and default assumptions for estimating energy, peak demand and other resource impacts from efficiency measures.

Building on the important new practices developed in the 2010-2012 plans, the Program Administrators develop a statewide Plan TRM, which contains planning assumptions for each program year. The Plan TRM is submitted along with each Program Administrator's three-year plan. The Plan TRM will be compiled this summer, with a draft 2013 Plan TRM available in the August/September timeframe. This document will incorporate updates from all of the most recent evaluation study results, as well as updates to baseline standards and new measures. The development and use of the TRM reflects an important success of the Program Administrators' ongoing 2010-2012 effort.

K. Performance Incentives

On January 28, 2010, the Department issued the Electric and Gas Orders. In doing so, the Orders approved most aspects of the performance incentive mechanism proposed by the Program Administrators in their 2010-2012 Plans.[12] However, for certain aspects of the proposal regarding the allocation method of the statewide pool and performance metrics, the Department ordered the Program Administrators to work further with the Council and re-file these components with the Department for its review and approval. The Program Administrators

[11] Naturally occurring energy efficiency refers to customers who took action, but would have taken the action without an energy efficiency program. In-program naturally occurring energy efficiency corresponds to free ridership.

[12] See Electric Order, at 93-125, 165, and 168-169; Gas Order at 79-115, 168-169, and 172-173.

worked closely with the Council in 2011 in order to update the allocation method in compliance with the Orders, as well as to propose updated performance metrics. As a result of this effort, a comprehensive settlement was achieved on this and other matters, filed on April 15, 2011, which is currently pending before the Department. *See* D.P.U. 10-141 – 10-150.

The Program Administrators propose to maintain the performance incentive models applicable to their initial three-year plans as a basis for the 2013-2015 performance incentive model and allocations. The proposed model maintains the Savings Mechanism and Value Mechanism with uniform payout rates for all electric Program Administrators (excluding Cape Light Compact),[13] and for all gas PAs, in each of these components. The performance metrics component will be retained, with an emphasis on well defined, objective metrics that are challenging, but also achievable.

The proposed statewide performance incentive pool is proportional to the statewide performance incentive pool applicable to 2010-2012 efforts. Allocations to each PA (excluding Cape Light Compact) will reflect the dollar benefits and dollar net benefits in each PA's Plan with higher incentives available for the PAs with goals expected to deliver higher benefits and net benefits. The threshold level of performance will remain at 75 percent in each component of the incentive mechanism. However, caps on the incentive may be eliminated to encourage continued aggressive deployment of all cost-effective energy efficiency. The issue of performance incentive caps remains under discussion. The following tables summarize statewide incentive pools for which the Program Administrators would be eligible based upon the statewide target levels for 2013-2015. The final allocations of the pools will be based upon PA-specific proposals.

1. Electric Performance Incentive Pool

	2013 Target	**2014 Target**	**2015 Target**	**Total 2013-2015**
Performance Incentive	29,500,000	29,500,000	29,500,000	88,500,000
Threshold to Begin Earning Incentives	75%	75%	75%	75%
Program Costs	$515,417,203	$513,184,326	$522,075,169	$1,550,649,051

2. Gas Performance Incentive Pool

	2013 Target	**2014 Target**	**2015 Target**	**Total 2013-2015**
Performance Incentive	$5,600,000	$5,600,000	$5,600,000	$16,800,000
Threshold to Begin Earning Incentives	75%	75%	75%	75%
Program Costs ($ million)	$167,000,000	$180,000,000	$184,000,000	$531,000,000

[13] As a municipal aggregator and public entity, the Cape Light Compact does not participate in performance incentives. Any discussion or request for performance incentive approval contained herein is not applicable to the Cape Light Compact.

L. Cost Recovery

1. Overview

The Program Administrators emphasize that cost recovery, including the recovery of a performance incentive, and, for those PAs without a Department-approved decoupling mechanism, LBR, is a critical element of this Plan. In order for the Program Administrators to pursue the aggressive goals set forth in this Plan, it is essential 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.

Recovery of all costs associated with the energy efficiency efforts reflected in the Plan, as well as recovery of LBR consistent with Orders of the Department, are integral elements of this Plan. Accordingly, the gas and electric Program Administrators each propose use of existing energy efficiency cost recovery mechanisms relating to their energy efficiency efforts.[14]

In addition to the funding sources available for electric energy efficiency programming, discussed herein in Section II.C, the Department is directed to ensure that electric and natural gas resource needs are first met through the use of all cost-effective energy efficiency and demand resources, and to that end, the Department shall approve a fully reconciling funding mechanism for electric companies, gas companies and municipal aggregators included in their Plans, which may include, but which shall not be limited to, the charge authorized by the Department. G.L. c. 25, § 19; G.L. c. 25, §§ 21(b)(2)(vii) and 21(d)(2); D.P.U. 08-50-B Guidelines §§ 3.2.1 and 3.2.2.

Moreover, after reviewing a Program Administrator's proposed 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.A.3. G.L. c. 25, § 21(d)(2). 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. G.L. c. 25, §21(b)(3). 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 statutorily-authorized energy efficiency charge (equal to 0.250¢ per kilowatt hour for electric Program Administrators) and through other sources.

[14] LBR is not collected as applicable to Cape Light Compact as a result of the Cape Light Compact's energy efficiency efforts either by the Cape Light Compact, since it is a municipal aggregator, or by NSTAR Electric, as the distribution company pursuant to the directive in D.P.U. 08-117.

a. Mechanisms Specific to Electric Program Administrators

In this context, the electric distribution companies have each filed with the Department proposed tariffs or modifications to their respective energy efficiency charge tariffs that include an EERF factor to recover and reconcile their respective energy efficiency costs in a particular program year with the revenue it receives through: (1) the statutorily-authorized energy efficiency charge; (2) participation in the FCM; (3) proceeds from participation in cap-and-trade programs such as the RGGI; (4) for electric PAs without a Department-approved decoupling mechanism, LBR; and (5) proceeds available from other private or public funds that may be available for energy efficiency or demand resources, as appropriate. This is consistent with the Legislature's mandates established in G.L. c. 25, §§ 19 and 21. In addition to costs associated with program implementation and performance incentives, and consistent with Department directives, each electric Program Administrator's respective energy efficiency tariffs will also include, for those Program Administrators without an approved decoupling mechanism, recovery of incremental LBR for energy efficiency measures installed that produce incremental savings that exceed the savings levels from 2007 energy efficiency activities. The factor is calculated as the sum of a Program Administrator's energy efficiency costs, net of that Program Administrator's energy efficiency revenues (from sources outlined above), divided by the forecasted kilowatt-hour sales for the previous calendar year.

The electric Program Administrators will submit new EERFs annually for calendar years 2013, 2014, and 2015 during the course of the implementation of this three-year statewide Plan.

b. Mechanisms Specific to Gas Program Administrators

In Revenue Decoupling, D.P.U. 07-50-A, at 83-84 (2008), the Department determined that allowance of LBR recovery for gas companies through the term of the initial three-year energy efficiency plans is consistent with the Department's expectation that, with limited exceptions, distribution companies will be operating under decoupling plans by year-end 2012. However, those distribution companies that are subject to Performance-Based Ratemaking or rate plans that extend past 2012, and that do not voluntarily terminate such plans before their expiration, will be allowed to recover LBR through the remainder of their existing rate plans. D.P.U. 07-50-A at 83-84. In this context, and consistent with the standard that governs the calculations for and recovery of LBR, those gas Program Administrators' respective energy efficiency tariffs will also include recovery of incremental LBR for energy efficiency measures installed that produce incremental savings that exceed the savings levels from 2007 energy efficiency activities. For gas companies, LBR is defined as the non-gas 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).

The costs associated with LBR, for gas Program Administrators for whom an approved revenue decoupling mechanism is not in effect, will continue to be reconciled through the energy efficiency surcharge ("EES") calculation included in each company's local distribution adjustment clause ("LDAC"). The EES 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 2013 in their respective PA-specific Plan filings with the Department in October 2012, and will submit new LBR calculations annually for calendar years 2014 and 2015 during the course of the implementation of this three-year statewide Plan.

2. Calculation of EERF[15]

The electric Program Administrators calculate their EERF estimates in the following manner; as directed in the Department's orders on the Program Administrators' 2009 energy efficiency programs (*see, e.g.*, Cape Light Compact, D.P.U. 08-113; Fitchburg Gas & Electric Light Company, D.P.U. 08-116; National Grid, D.P.U. 08-129; NSTAR Electric Company, D.P.U. 08-117; Western Massachusetts Electric Company, D.P.U. 08-118).

- Funds collected through the SBC, FCM, and RGGI are allocated to each customer sector in proportion to the sector's kWh consumption. However, consistent with G.L. c. 25 § 19(c), at least 10 percent of the amount expended for electric energy efficiency programs shall be spent on low-income energy efficiency efforts;

- The EERF charged to low-income customers is calculated by dividing (1) the amount of EERF revenue required to fund the low income programs, by (2) total company-wide (*i.e.*, the sum of all customer sectors) kWh sales;

- The EERF charged to residential customers is calculated as the sum of (1) the amount of EERF revenue required to fund residential programs divided by total residential kWh sales and (2) the low-income EERF, as described above; and

- The EERF charged to C&I customers is calculated as the sum of (1) the amount of EERF revenue required to fund C&I programs divided by total C&I kWh sales and (2) the low-income EERF, as described above.

M. Mid-Term Revisions

The Program Administrators continue to view the three-year planning and review process as an opportunity to anticipate and analyze a wide range of possibilities in developing the Plan. The Program Administrators, however, have also recognized that planning flexibility during the three-year term (the "Term") is critical. It is during the Term that Program Administrators monitor and evaluate the effectiveness of various programs and make determinations that certain enhancements, reallocations, or modifications may be appropriate to best achieve the Plan's energy efficiency goals. Having planning flexibility allows ongoing revisions and enhancements to the Plan in order to reflect in-the-field conditions, actual achievements, technological advances and state-of-the-art techniques without unduly inhibiting Program Administrators with

[15] The Program Administrators note that this Plan is not establishing the details of the EERF or LBR recovery. Details of the EERF formula and amount have been determined in separate Department proceeding(s).

the need to seek advance regulatory review and approval (with accompanying administration costs and implementation delays).

While the Program Administrators welcome 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. Indeed, the Department expects that Program Administrators will make minor modifications as a matter of course but that significant modifications will require Department review and approval. D.P.U. 08-50-A at 61. More specifically, D.P.U. 08-50-A expressly authorizes the Program Administrators to make modifications, reallocations and enhancements to their individual plans during the term of those plans (including, without limitation, budgetary reallocations and additions or subtractions of program measures). However, any such modification, reallocation or enhancement shall 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; D.P.U. 08-50-B Guidelines § 3.8.2.[16]

Subsequent to D.P.U. 08-50-A, the Department provided further guidance regarding the need for Department approval of proposed mid-term program modifications. Specifically, in D.P.U. 10-106, the Department addressed the implementation of the modification thresholds contained in the D.P.U. 08-50-B Guidelines, noting that "the Department implemented Guidelines § 3.8.2 with the intent that Program Administrators are required to seek Department approval for a program budget modification that is 20 percent greater than the program's **three-year** budget." D.P.U. 10-106, at 6-9, emphasis added.

As the Department expressly recognizes, it was the intent of the Legislature to establish a three-year cycle for budgeting, planning, and regulatory review of energy efficiency programs. *Id.* As such, the Program Administrators propose to apply the D.P.U. 08-50-B Guidelines, as clarified by the Department in D.P.U. 10-106, *supra*, to program modifications that lead to savings adjustments during the three-year term of the Plan. This will allow Program Administrators continued flexibility to make adjustments to programs that are necessary to promote innovation and efficiency without being unduly burdened by the administrative process. Indeed, retaining the flexibility to make changes and reallocations within the 20 percent bandwidth over the three-year term of the Plan is critical. Having flexibility with budgets

[16] While D.P.U. 08-50-B Guideline § 3.8.1 contemplates the requests for plan modifications to accompany a Program Administrators' annual report filing, the Program Administrators, during the 2010-2012 Term, have filed modification requests through a separate subsequent filing.

without having the same flexibility for program modifications over the three-years of the Plan is counterproductive. Requiring annual review for program modifications will come at a substantial administrative cost and could have the unfortunate effect of inhibiting valuable innovation. The Program Administrators propose that the interpretation of the D.P.U. 08-50-B Guidelines, as expressed by the Department in D.P.U. 10-106, should be broadly construed to apply to both budget and program modifications that adjust savings goals. Such an application will ensure regulatory oversight but permit the Program Administrators to remain agile and responsive in implementing state-of-the-art energy efficiency programs for the benefit of customers during the three-year term of the Plan.[17]

As suggested by the Department in D.P.U. 10-106, the Program Administrators would encourage a stakeholder process to consider specific updates to the D.P.U. 08-50-B Guidelines to address the mid-term modification process. It is the goal of the Program Administrators to balance the need for flexibility with respect to program implementation, budgeting and savings over the three-year term of the Plan with the need for regulatory review of modifications. Some considerations during a stakeholder process could include the consideration of certain dollar limits to mitigate concerns regarding possible over/under spending; the application of modification thresholds at the sector level instead of the program level; the impact of actual program data results on pending modification requests and; the adjustment of the 20 percent bandwidth for programs with smaller budgets.

[17] The Program Administrators note that, in adopting the appropriate flexibility provided by the Department in D.P.U. 10-106, they are not proposing that such flexibility apply to any of the mandatory low-income program funding levels established in G.L. c. 25, § 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.

III. APPENDICES- FOR APRIL 30, 2012 SUBMISSION

A. Traditional Bill Impacts for each Program Administrator

A residential (R-1) customer using 600 kilowatt-hours ("kWh") of electricity per month would experience a monthly bill decrease of approximately $0.08, or 0.1 percent on a total bill resulting from the 2013 budget when compared to the budget filed in the Company's 2012 Midterm Modification.

A low-income residential (R-2) customer using 600 kWh of electricity per month would experience no change in a monthly bill resulting from the 2013 budget when compared to the budget filed in the Company's 2012 Midterm Modification.

A small commercial and industrial (G-1) customer using 1,300 kilowatt-hours ("kWh") of electricity per month would experience a monthly bill increase of approximately $0.85, or 0.4 percent on a total bill resulting from the 2013 budget when compared to the budget filed in the Company's 2012 Midterm Modification.

600 kWh

Massachusetts Electric (R-1)	**Existing Rates**	**Existing Charge**	**Proposed Rates**	**Proposed Charge**	**Increase (Decrease)**	**% Change**
Customer Charge	$ 4.00	$ 4.00	$ 4.00	$ 4.00		
Base Distribution Energy Charge 1st 600	$ 0.02797		$ 0.02797			
Base Distribution Energy Charge Excess 600	$ 0.03459		$ 0.03459			
Basic Service Adjustment Factor	$ (0.00098)		$ (0.00098)			
Residential Assistance Adjustment Factor ("RAAF")	$ 0.00210		$ 0.00210			
Storm Recovery Adjustment Factor	$ 0.00035		$ 0.00035			
Pension PBOP Adjustment Factor	$ 0.00246		$ 0.00246			
Revenue Decoupling	$ 0.00044		$ 0.00044			
Attorney General Consulting Expenses Factor	$ -		$ -			
Solar Cost Adjustment Factor	$ 0.00023		$ 0.00023			
Default Service Reclass			$ -			
Net Distribution Charge for Billing 1st 600	$ 0.03257	$ 19.54	$ 0.03257	$ 19.54		
Net Distribution Charge for Billing Excess 600	$ 0.03919	$ -	$ 0.03919	$ -		
Transition	$ 0.00069	$ 0.41	$ 0.00069	$ 0.41		
Base Energy Efficiency Charge	$ 0.00250		$ 0.00250			
Energy Efficiency Reconciliation Factor (1)	$ 0.00572	$ 4.93	$ 0.00572	$ 4.93		
Incremental EERF			$ (0.00013)	$ (0.08)	$ (0.08)	
Renewable Energy	$ 0.00050	$ 0.30	$ 0.00050	$ 0.30		
Transmission	$ 0.01738	$ 10.43	$ 0.01738	$ 10.43		
Basic Service	$ 0.08265	$ 49.59	$ 0.08265	$ 49.59		
Total		$ 89.20		$ 89.12	$ (0.08)	-0.1%

Massachusetts Electric (R-2)	**Existing Rates**	**Existing Charge**	**Proposed Rates**	**Proposed Charge**	**Increase (Decrease)**	**% Change**
Customer Charge	$ 4.00	$ 4.00	$ 4.00	$ 4.00		
Base Distribution Energy Charge 1st 600	$ 0.02797		$ 0.02797			
Base Distribution Energy Charge Excess 600	$ 0.03459		$ 0.03459			
Basic Service Adjustment Factor	$ (0.00098)		$ (0.00098)			
Residential Assistance Adjustment Factor ("RAAF")	$ 0.00210		$ 0.00210			
Storm Recovery Adjustment Factor	$ 0.00035		$ 0.00035			
Pension PBOP Adjustment Factor	$ 0.00246		$ 0.00246			
Revenue Decoupling	$ 0.00044		$ 0.00044			
Attorney General Consulting Expenses Factor	$ -		$ -			
Solar Cost Adjustment Factor	$ 0.00023		$ 0.00023			
Standard Offer Adjustment Factor	$ -		$ -			
Net Distribution Charge for Billing 1st 600	$ 0.03257	$ 19.54	$ 0.03257	$ 19.54		
Net Distribution Charge for Billing Excess 600	$ 0.03919	$ -	$ 0.03919	$ -		
Transition	$ 0.00069	$ 0.41	$ 0.00069	$ 0.41		
Base Energy Efficiency Charge	$ 0.00250		$ 0.00250			
Energy Efficiency Reconciliation Factor (1)	$ 0.00048	$ 1.79	$ 0.00048	$ 1.79		
Incremental EERF			$ -	$ -	$ -	
Renewable Energy	$ 0.00050	$ 0.30	$ 0.00050	$ 0.30		
Transmission	$ 0.01738	$ 10.43	$ 0.01738	$ 10.43		
Basic Service	$ 0.08265	$ 49.59	$ 0.08265	$ 49.59		
Total		$ 86.06		$ 86.06		
Low Income Discount		$ 21.52		$ 21.52	$ -	
Total		$ 64.54		$ 64.54	$ -	0.0%

1,300 kWh

Massachusetts Electric (G-1)	**Existing Rates**	**Existing Charge**	**Proposed Rates**	**Proposed Charge**	**Increase (Decrease)**	**% Change**
Customer Charge	$ 10.00	$ 10.00	$ 10.00	$ 10.00		
Base Distribution Energy Charge 1st 600	$ 0.03085		$ 0.03085			
Base Distribution Energy Charge Excess 600	$ 0.04857		$ 0.04857			
Basic Service Adjustment Factor	$ (0.00098)		$ (0.00098)			
Residential Assistance Adjustment Factor ("RAAF")	$ 0.00210		$ 0.00210			
Storm Recovery Adjustment Factor	$ 0.00035		$ 0.00035			
Pension PBOP Adjustment Factor	$ 0.00246		$ 0.00246			
Revenue Decoupling	$ 0.00044		$ 0.00044			
Attorney General Consulting Expenses Factor	$ -		$ -			
Solar Cost Adjustment Factor	$ 0.00023		$ 0.00023			
Default Service Reclass			$ -			
Net Distribution Charge for Billing 1st 2,000	$ 0.03545	$ 46.09	$ 0.03545	$ 46.09		
Net Distribution Charge for Billing Excess 2,000	$ 0.05317	$ -	$ 0.05317	$ -		
Transition	$ 0.00052	$ 0.68	$ 0.00052	$ 0.68		
Base Energy Efficiency Charge	$ 0.00250		$ 0.00250			
Energy Efficiency Reconciliation Factor	$ 0.00410	$ 8.58	$ 0.00410	$ 8.58		
Incremental EERF			$ 0.00065	$ 0.85	$ 0.85	
Renewable Energy	$ 0.00050	$ 0.65	$ 0.00050	$ 0.65		
Transmission	$ 0.01629	$ 21.18	$ 0.01629	$ 21.18		
Basic Service	$ 0.08045	$ 104.59	$ 0.08045	$ 104.59		
Total		$ 191.77		$ 192.62	$ 0.85	0.4%

BOSTON EDISON COMPANY
TYPICAL BILL ANALYSIS
RESIDENTIAL RATE R-1

LINE	CUM % BILLS	CUM % KWH	MONTHLY KWH	PRESENT RATE TOTAL	PRESENT RATE SUPPLIER	PRESENT RATE DELIVERY	PROPOSED RATE TOTAL	PROPOSED RATE SUPPLIER	PROPOSED RATE DELIVERY	DIFFERENCE AMOUNT	DIFFERENCE %
1			146	$29.42	$10.67	$18.75	$29.67	$10.67	$19.00	$0.25	0.8%
2			200	$37.91	$14.61	$23.30	$38.25	$14.61	$23.64	0.34	0.9%
3			259	$47.20	$18.92	$28.28	$47.64	$18.92	$28.72	0.44	0.9%
4			322	$57.12	$23.53	$33.59	$57.67	$23.53	$34.14	0.55	1.0%
5			393	$68.29	$28.71	$39.58	$68.97	$28.71	$40.26	0.68	1.0%
6			478	$81.67	$34.92	$46.75	$82.49	$34.92	$47.57	0.82	1.0%
7			586	$98.67	$42.81	$55.86	$99.68	$42.81	$56.87	1.01	1.0%
8			732	$121.65	$53.48	$68.17	$122.91	$53.48	$69.43	1.26	1.0%
9			962	$157.85	$70.28	$87.57	$159.51	$70.28	$89.23	1.66	1.1%
10	AVG.USE		559	$94.42	$40.84	$53.58	$95.38	$40.84	$54.54	0.96	1.0%

PRESENT RATE

RESIDENTIAL RATE R-1 MDTE NO. 961

DELIVERY SERVICES:

CUSTOMER		$6.43	PER BILL
DISTRIBUTION	ALL KWH @	4.559	CENTS/KWH
TRANSITION	" "	1.084	" "
TRANSMISSION	" "	1.513	" "
DEMAND-SIDE MGT	" "	0.250	" "
RENEWABLE ENERGY	" "	0.050	" "
TRANSITION RATE ADJ		0.000	" "
DS ADJ + PENSION ADJ. + RAAF	" "	0.979	" "

SUPPLIER SERVICES:

DEAULT SERVI CE - FIXED	ALL KWH @	7.202	CENTS/KWH
DEAULT SERVI CE - ADDER		0.104	

PROPOSED RATE

RESIDENTIAL RATE R-1

DELIVERY SERVICES:

CUSTOMER		$6.43	PER BILL
DISTRIBUTION	ALL KWH @	4.559	CENTS/KWH
TRANSITION	" "	1.084	" "
TRANSMISSION	" "	1.513	" "
DEMAND-SIDE MGT	" "	0.250	" "
RENEWABLE ENERGY	" "	0.050	" "
TRANSITION RATE ADJ	" "	0.000	" "
DS ADJ + PENSION ADJ. + RAAF	" "	1.151	" "

SUPPLIER SERVICES:

DEAULT SERVI CE - FIXED	ALL KWH @	7.202	CENTS/KWH
DEAULT SERVI CE - ADDER		0.104	

BOSTON EDISON COMPANY
TYPICAL BILL ANALYSIS
RESIDENTIAL ASSISTANCE RATE R-2 (W/O SPACE HEATING) (R1)

LINE	CUM % BILLS	CUM % KWH	MONTHLY KWH	PRESENT RATE TOTAL	PRESENT RATE SUPPLIER	PRESENT RATE DELIVERY	PROPOSED RATE TOTAL	PROPOSED RATE SUPPLIER	PROPOSED RATE DELIVERY	DIFFERENCE AMOUNT	DIFFERENCE %
1			143	$20.40	$7.63	$12.77	$20.41	$7.63	$12.78	$0.01	0.0%
2			188	$25.34	$10.03	$15.31	$25.36	$10.03	$15.33	0.02	0.1%
3			234	$30.39	$12.48	$17.91	$30.41	$12.48	$17.93	0.02	0.1%
4			282	$35.67	$15.04	$20.63	$35.68	$15.04	$20.64	0.01	0.0%
5			333	$41.27	$17.76	$23.51	$41.29	$17.76	$23.53	0.02	0.0%
6			392	$47.75	$20.91	$26.84	$47.78	$20.91	$26.87	0.03	0.1%
7			463	$55.54	$24.69	$30.85	$55.57	$24.69	$30.88	0.03	0.1%
8			560	$66.20	$29.87	$36.33	$66.24	$29.87	$36.37	0.04	0.1%
9			717	$83.44	$38.24	$45.20	$83.49	$38.24	$45.25	0.05	0.1%
10	AVG.USE		449	54.01	$23.95	$30.06	54.04	$23.95	$30.09	0.03	0.1%

PRESENT RATE

RESIDENTIAL ASSISTANCE RATE R-2 MDTE NO. 962 (W/O SPACE HEATING)

DELIVERY SERVICES:

CUSTOMER		$6.43	PER BILL
DISTRIBUTION	ALL KWH @	4.559	CENTS/KWH
TRANSITION	" "	1.084	" "
TRANSMISSION	" "	1.513	" "
DEMAND-SIDE MGT	" "	0.250	" "
RENEWABLE ENERGY	" "	0.050	" "
TRANSITION RATE ADJ		0.000	" "
DS ADJ + PENSION ADJ. + RAAF	" "	0.283	" "

SUPPLIER SERVICES:

DEAULT SERVI CE - FIXED	ALL KWH @	7.202	CENTS/KWH
DEAULT SERVI CE - ADDER		0.104	

LOW INCOME DISCOUNT 27.0%

PROPOSED RATE

RESIDENTIAL ASSISTANCE RATE R-2 (W/O SPACE HEATING)

DELIVERY SERVICES:

CUSTOMER		$6.43	PER BILL
DISTRIBUTION	ALL KWH @	4.559	CENTS/KWH
TRANSITION	" "	1.084	" "
TRANSMISSION	" "	1.513	" "
DEMAND-SIDE MGT	" "	0.250	" "
RENEWABLE ENERGY	" "	0.050	" "
TRANSITION RATE ADJ	" "	0.000	" "
DS ADJ + PENSION ADJ. + RAAF	" "	0.292	" "

SUPPLIER SERVICES:

DEAULT SERVI CE - FIXED	ALL KWH @	7.202	CENTS/KWH
DEAULT SERVI CE - ADDER		0.104	

LOW INCOME DISCOUNT 27.0%

BOSTON EDISON COMPANY
TYPICAL BILL ANALYSIS
GENERAL RATE G-1 (DEMAND)

HRS USE= 150 / CUM % / BILLS	WINTER KW	KWH	PRESENT RATE TOTAL	PRESENT RATE SUPPLIER	PRESENT RATE DELIVERY	PROPOSED RATE TOTAL	PROPOSED RATE SUPPLIER	PROPOSED RATE DELIVERY	DIFFERENCE AMOUNT	DIFFERENCE %
	1	150	$34.95	$11.38	$23.57	$34.77	$11.38	$23.39	($0.18)	-0.5%
	2	300	$57.82	$22.76	$35.06	$57.45	$22.76	$34.69	(0.37)	-0.6%
	3	450	$80.68	$34.14	$46.54	$80.13	$34.14	$45.99	(0.55)	-0.7%
	3	450	$80.68	$34.14	$46.54	$80.13	$34.14	$45.99	(0.55)	-0.7%
	4	600	$103.54	$45.52	$58.02	$102.81	$45.52	$57.29	(0.73)	-0.7%
	5	750	$126.40	$56.90	$69.50	$125.50	$56.90	$68.60	(0.90)	-0.7%
	6	900	$149.26	$68.27	$80.99	$148.17	$68.27	$79.90	(1.09)	-0.7%
	6	900	$149.26	$68.27	$80.99	$148.17	$68.27	$79.90	(1.09)	-0.7%
	8	1,200	$194.98	$91.03	$103.95	$193.53	$91.03	$102.50	(1.45)	-0.7%
AVG.USE	5	750	$126.40	$56.90	$69.50	$125.50	$56.90	$68.60	(0.90)	-0.7%

PRESENT RATE

GENERAL RATE G-1 MDTE NO. 965 (WITH DEMAND)

DELIVERY SERVICES:

CUSTOMER		$12.09	PER BILL
	FIRST 10 kw	OVER 10 kw	
DISTRIBUTION (summer)	$0.00	$0.86	PER KW
DISTRIBUTION (winter)	$0.00	$0.28	
TRANSMISSION (summer)	$0.00	$32.05	" "
TRANSMISSION (winter)	$0.00	$10.45	" "

	1st 2000 kwh	next 150 hrs	additional kwh	
DISTRIBUTION (summer)	6.770	4.116	2.567	CENTS/KWH
DISTRIBUTION (winter)	4.219	3.671	2.443	" "
TRANSITION (summer)	1.084	1.084	1.084	" "
TRANSITION (winter)	1.084	1.084	1.084	" "
TRANSMISSION (summer)	1.090	1.090	0.000	" "
TRANSMISSION (winter)	1.087	1.087	0.000	" "
DEMAND-SIDE MGT	0.250	0.250	0.250	" "
RENEWABLE ENERGY	0.050	0.050	0.050	" "
TRANSIT RATE ADJ (summer)	-0.137	-0.137	-0.137	" "
TRANSIT RATE ADJ (winter)	-0.137	-0.137	-0.137	" "
DS ADJ + PENSION ADJ. + RAAF	1.102	1.102	1.102	" "

SUPPLIER SERVICES:

DEAULT SERVI CE - FIXED	7.482	7.482	7.482	CENTS/KWH
DEAULT SERVI CE - ADDER	0.104	0.104	0.104	

PROPOSED RATE

GENERAL RATE G-1 (WITH DEMAND)

DELIVERY SERVICES:

CUSTOMER		$12.09	PER BILL
	FIRST 10 kw	OVER 10 kw	
DISTRIBUTION (summer)	$0.00	$0.86	PER KW
DISTRIBUTION (winter)	$0.00	$0.28	
TRANSMISSION (summer)	$0.00	$32.05	" "
TRANSMISSION (winter)	$0.00	$10.45	" "

	1st 2000 kwh	next 150 hrs	additional kwh	
DISTRIBUTION (summer)	6.770	4.116	2.567	CENTS/KWH
DISTRIBUTION (winter)	4.219	3.671	2.443	" "
TRANSITION (summer)	1.084	1.084	1.084	" "
TRANSITION (winter)	1.084	1.084	1.084	" "
TRANSMISSION (summer)	1.090	1.090	0.000	" "
TRANSMISSION (winter)	1.087	1.087	0.000	" "
DEMAND-SIDE MGT	0.250	0.250	0.250	" "
RENEWABLE ENERGY	0.050	0.050	0.050	" "
TRANSIT RATE ADJ (summer)	-0.137	-0.137	-0.137	
TRANSIT RATE ADJ (winter)	-0.137	-0.137	-0.137	" "
DS ADJ + PENSION ADJ. + RAAF	0.981	0.981	0.981	" "

SUPPLIER SERVICES:

DEAULT SERVI CE - FIXED	7.482	7.482	7.482	CENTS/KWH
DEAULT SERVI CE - ADDER	0.104	0.104	0.104	" "

BOSTON EDISON COMPANY
TYPICAL BILL ANALYSIS
GENERAL RATE G-1 (DEMAND)

HRS USE= 150 CUM % BILLS	SUMMER KW	KWH	PRESENT RATE TOTAL	PRESENT RATE SUPPLIER	PRESENT RATE DELIVERY	PROPOSED RATE TOTAL	PROPOSED RATE SUPPLIER	PROPOSED RATE DELIVERY	DIFFERENCE AMOUNT	DIFFERENCE %
	1	150	$38.78	$11.38	$27.40	$38.60	$11.38	$27.22	($0.18)	-0.5%
	2	300	$65.48	$22.76	$42.72	$65.11	$22.76	$42.35	(0.37)	-0.6%
	3	450	$92.17	$34.14	$58.03	$91.63	$34.14	$57.49	(0.54)	-0.6%
	4	600	$118.86	$45.52	$73.34	$118.14	$45.52	$72.62	(0.72)	-0.6%
	4	600	$118.86	$45.52	$73.34	$118.14	$45.52	$72.62	(0.72)	-0.6%
	5	750	$145.56	$56.90	$88.66	$144.65	$56.90	$87.75	(0.91)	-0.6%
	6	900	$172.24	$68.27	$103.97	$171.15	$68.27	$102.88	(1.09)	-0.6%
	7	1,050	$198.93	$79.65	$119.28	$197.66	$79.65	$118.01	(1.27)	-0.6%
	8	1,200	$225.63	$91.03	$134.60	$224.18	$91.03	$133.15	(1.45)	-0.6%
AVG.USE	5	750	$145.56	$56.90	$88.66	$144.65	$56.90	$87.75	(0.91)	-0.6%

PRESENT RATE

GENERAL RATE G-1 MDTE NO. 965 (WITH DEMAND)

DELIVERY SERVICES:

CUSTOMER		$12.09	PER BILL
	FIRST 10 kw	OVER 10 kw	
DISTRIBUTION (summer)	$0.00	$0.86	PER KW
DISTRIBUTION (winter)	$0.00	$0.28	
TRANSMISSION (summer)	$0.00	$32.05	" "
TRANSMISSION (winter)	$0.00	$10.45	" "

	1st 2000 kwh	next 150 hrs	additional kwh	
DISTRIBUTION (summer)	6.770	4.116	2.567	CENTS/KWH
DISTRIBUTION (winter)	4.219	3.671	2.443	" "
TRANSITION (summer)	1.084	1.084	1.084	" "
TRANSITION (winter)	1.084	1.084	1.084	" "
TRANSMISSION (summer)	1.090	1.090	0.000	" "
TRANSMISSION (winter)	1.087	1.087	0.000	" "
DEMAND-SIDE MGT	0.250	0.250	0.250	" "
RENEWABLE ENERGY	0.050	0.050	0.050	" "
TRANSIT RATE ADJ (summer)	-0.137	-0.137	-0.137	" "
TRANSIT RATE ADJ (winter)	-0.137	-0.137	-0.137	" "
DS ADJ + PENSION ADJ. + RAAF	1.102	1.102	1.102	" "

SUPPLIER SERVICES:

DEAULT SERVI CE - FIXED	7.482	7.482	7.482	CENTS/KWH
DEAULT SERVI CE - ADDER	0.104	0.104	0.104	

PROPOSED RATE

GENERAL RATE G-1 (WITH DEMAND)

DELIVERY SERVICES:

CUSTOMER		$12.09	PER BILL
	FIRST 10 kw	OVER 10 kw	
DISTRIBUTION (summer)	$0.00	$0.86	PER KW
DISTRIBUTION (winter)	$0.00	$0.28	
TRANSMISSION (summer)		$32.05	" "
TRANSMISSION (winter)		$10.45	" "

	1st 2000 kwh	next 150 hrs	additional kwh	
DISTRIBUTION (summer)	6.770	4.116	2.567	CENTS/KWH
DISTRIBUTION (winter)	4.219	3.671	2.443	" "
TRANSITION (summer)	1.084	1.084	1.084	" "
TRANSITION (winter)	1.084	1.084	1.084	" "
TRANSMISSION (summer)	1.090	1.090	0.000	" "
TRANSMISSION (winter)	1.087	1.087	0.000	" "
DEMAND-SIDE MGT	0.250	0.250	0.250	" "
RENEWABLE ENERGY	0.050	0.050	0.050	" "
TRANSIT RATE ADJ (summer)	-0.137	-0.137	-0.137	
TRANSIT RATE ADJ (winter)	-0.137	-0.137	-0.137	" "
DS ADJ + PENSION ADJ. + RAAF	0.981	0.981	0.981	" "

SUPPLIER SERVICES:

DEAULT SERVI CE - FIXED	7.482	7.482	7.482	CENTS/KWH
DEAULT SERVI CE - ADDER	0.104	0.104	0.104	" "

BOSTON EDISON COMPANY
TYPICAL BILL ANALYSIS
GENERAL RATE G-1 (DEMAND)

HRS USE= 300 / CUM % / BILLS	WINTER KW	KWH	PRESENT RATE TOTAL	PRESENT RATE SUPPLIER	PRESENT RATE DELIVERY	PROPOSED RATE TOTAL	PROPOSED RATE SUPPLIER	PROPOSED RATE DELIVERY	DIFFERENCE AMOUNT	DIFFERENCE %
	1	300	$57.82	$22.76	$35.06	$57.45	$22.76	$34.69	($0.37)	-0.6%
	2	600	$103.54	$45.52	$58.02	$102.81	$45.52	$57.29	(0.73)	-0.7%
	3	900	$149.26	$68.27	$80.99	$148.17	$68.27	$79.90	(1.09)	-0.7%
	3	900	$149.26	$68.27	$80.99	$148.17	$68.27	$79.90	(1.09)	-0.7%
	4	1,200	$194.98	$91.03	$103.95	$193.53	$91.03	$102.50	(1.45)	-0.7%
	5	1,500	$240.71	$113.79	$126.92	$238.89	$113.79	$125.10	(1.82)	-0.8%
	6	1,800	$286.43	$136.55	$149.88	$284.25	$136.55	$147.70	(2.18)	-0.8%
	6	1,800	$286.43	$136.55	$149.88	$284.25	$136.55	$147.70	(2.18)	-0.8%
	8	2,400	$375.68	$182.06	$193.62	$372.77	$182.06	$190.71	(2.91)	-0.8%
AVG.USE	5	1,500	$240.71	$113.79	$126.92	$238.89	$113.79	$125.10	(1.82)	-0.8%

PRESENT RATE

GENERAL RATE G-1 MDTE NO. 965 (WITH DEMAND)

DELIVERY SERVICES:

CUSTOMER		$12.09	PER BILL
	FIRST 10 kw	OVER 10 kw	
DISTRIBUTION (summer)	$0.00	$0.86	PER KW
DISTRIBUTION (winter)	$0.00	$0.28	
TRANSMISSION (summer)	$0.00	$32.05	" "
TRANSMISSION (winter)	$0.00	$10.45	" "
	1st 2000 kwh	next 150 hrs	additional kwh
DISTRIBUTION (summer)	6.770	4.116	2.567 CENTS/KWH
DISTRIBUTION (winter)	4.219	3.671	2.443 " "
TRANSITION (summer)	1.084	1.084	1.084 " "
TRANSITION (winter)	1.084	1.084	1.084 " "
TRANSMISSION (summer)	1.090	1.090	0.000 " "
TRANSMISSION (winter)	1.087	1.087	0.000 " "
DEMAND-SIDE MGT	0.250	0.250	0.250 " "
RENEWABLE ENERGY	0.050	0.050	0.050 " "
TRANSIT RATE ADJ (summer)	-0.137	-0.137	-0.137 " "
TRANSIT RATE ADJ (winter)	-0.137	-0.137	-0.137 " "
DS ADJ + PENSION ADJ. + RAAF	1.102	1.102	1.102 " "

SUPPLIER SERVICES:

DEAULT SERVI CE - FIXED	7.482	7.482	7.482 CENTS/KWH
DEAULT SERVI CE - ADDER	0.104	0.104	0.104

PROPOSED RATE

GENERAL RATE G-1 (WITH DEMAND)

DELIVERY SERVICES:

CUSTOMER		$12.09	PER BILL
	FIRST 10 kw	OVER 10 kw	
DISTRIBUTION (summer)	$0.00	$0.86	PER KW
DISTRIBUTION (winter)	$0.00	$0.28	
TRANSMISSION (summer)	$0.00	$32.05	" "
TRANSMISSION (winter)	$0.00	$10.45	" "
	1st 2000 kwh	next 150 hrs	additional kwh
DISTRIBUTION (summer)	6.770	4.116	2.567 CENTS/KWH
DISTRIBUTION (winter)	4.219	3.671	2.443 " "
TRANSITION (summer)	1.084	1.084	1.084 " "
TRANSITION (winter)	1.084	1.084	1.084 " "
TRANSMISSION (summer)	1.090	1.090	0.000 " "
TRANSMISSION (winter)	1.087	1.087	0.000 " "
DEMAND-SIDE MGT	0.250	0.250	0.250 " "
RENEWABLE ENERGY	0.050	0.050	0.050 " "
TRANSIT RATE ADJ (summer)	-0.137	-0.137	-0.137
TRANSIT RATE ADJ (winter)	-0.137	-0.137	-0.137 " "
DS ADJ + PENSION ADJ. + RAAF	0.981	0.981	0.981 " "

SUPPLIER SERVICES:

DEAULT SERVI CE - FIXED	7.482	7.482	7.482 CENTS/KWH
DEAULT SERVI CE - ADDER	0.104	0.104	0.104 " "

BOSTON EDISON COMPANY
TYPICAL BILL ANALYSIS
GENERAL RATE G-1 (DEMAND)

HRS USE= 300			PRESENT RATE			PROPOSED RATE			DIFFERENCE	
CUM % BILLS	SUMMER KW	KWH	TOTAL	SUPPLIER	DELIVERY	TOTAL	SUPPLIER	DELIVERY	AMOUNT	%
	1	300	$65.48	$22.76	$42.72	$65.11	$22.76	$42.35	($0.37)	-0.6%
	2	600	$118.86	$45.52	$73.34	$118.14	$45.52	$72.62	(0.72)	-0.6%
	3	900	$172.24	$68.27	$103.97	$171.15	$68.27	$102.88	(1.09)	-0.6%
	4	1,200	$225.63	$91.03	$134.60	$224.18	$91.03	$133.15	(1.45)	-0.6%
	4	1,200	$225.63	$91.03	$134.60	$224.18	$91.03	$133.15	(1.45)	-0.6%
	5	1,500	$279.02	$113.79	$165.23	$277.20	$113.79	$163.41	(1.82)	-0.7%
	6	1,800	$332.40	$136.55	$195.85	$330.22	$136.55	$193.67	(2.18)	-0.7%
	7	2,100	$383.14	$159.31	$223.83	$380.59	$159.31	$221.28	(2.55)	-0.7%
	8	2,400	$428.55	$182.06	$246.49	$425.65	$182.06	$243.59	(2.90)	-0.7%
AVG.USE	5	1,500	$279.02	$113.79	$165.23	$277.20	$113.79	$163.41	(1.82)	-0.7%

PRESENT RATE

GENERAL RATE G-1 MDTE NO. 965 (WITH DEMAND)

DELIVERY SERVICES:

CUSTOMER		$12.09	PER BILL	
	FIRST 10 kw	OVER 10 kw		
DISTRIBUTION (summer)	$0.00	$0.86	PER KW	
DISTRIBUTION (winter)	$0.00	$0.28		
TRANSMISSION (summer)	$0.00	$32.05	" "	
TRANSMISSION (winter)	$0.00	$10.45	" "	
	1st 2000 kwh	next 150 hrs	additional kwh	
DISTRIBUTION (summer)	6.770	4.116	2.567	CENTS/KWH
DISTRIBUTION (winter)	4.219	3.671	2.443	" "
TRANSITION (summer)	1.084	1.084	1.084	" "
TRANSITION (winter)	1.084	1.084	1.084	" "
TRANSMISSION (summer)	1.090	1.090	0.000	" "
TRANSMISSION (winter)	1.087	1.087	0.000	" "
DEMAND-SIDE MGT	0.250	0.250	0.250	" "
RENEWABLE ENERGY	0.050	0.050	0.050	" "
TRANSIT RATE ADJ (summer)	-0.137	-0.137	-0.137	" "
TRANSIT RATE ADJ (winter)	-0.137	-0.137	-0.137	" "
DS ADJ + PENSION ADJ. + RAAF	1.102	1.102	1.102	" "

SUPPLIER SERVICES:

DEAULT SERVI CE - FIXED	7.482	7.482	7.482	CENTS/KWH
DEAULT SERVI CE - ADDER	0.104	0.104	0.104	

PROPOSED RATE

GENERAL RATE G-1 (WITH DEMAND)

DELIVERY SERVICES:

CUSTOMER		$12.09	PER BILL	
	FIRST 10 kw	OVER 10 kw		
DISTRIBUTION (summer)	$0.00	$0.86	PER KW	
DISTRIBUTION (winter)	$0.00	$0.28		
TRANSMISSION (summer)	$0.00	$32.05	" "	
TRANSMISSION (winter)	$0.00	$10.45	" "	
	1st 2000 kwh	next 150 hrs	additional kwh	
DISTRIBUTION (summer)	6.770	4.116	2.567	CENTS/KWH
DISTRIBUTION (winter)	4.219	3.671	2.443	" "
TRANSITION (summer)	1.084	1.084	1.084	" "
TRANSITION (winter)	1.084	1.084	1.084	" "
TRANSMISSION (summer)	1.090	1.090	0.000	" "
TRANSMISSION (winter)	1.087	1.087	0.000	" "
DEMAND-SIDE MGT	0.250	0.250	0.250	" "
RENEWABLE ENERGY	0.050	0.050	0.050	" "
TRANSIT RATE ADJ (summer)	-0.137	-0.137	-0.137	
TRANSIT RATE ADJ (winter)	-0.137	-0.137	-0.137	" "
DS ADJ + PENSION ADJ. + RAAF	0.981	0.981	0.981	" "

SUPPLIER SERVICES:

DEAULT SERVI CE - FIXED	7.482	7.482	7.482	CENTS/KWH
DEAULT SERVI CE - ADDER	0.104	0.104	0.104	" "

CAMBRIDGE ELECTRIC LIGHT COMPANY
TYPICAL BILL ANALYSIS
RESIDENTIAL RATE R-1

LINE	CUM % BILLS	CUM % KWH	MONTHLY KWH	PRESENT RATE TOTAL	PRESENT RATE SUPPLIER	PRESENT RATE DELIVERY	PROPOSED RATE TOTAL	PROPOSED RATE SUPPLIER	PROPOSED RATE DELIVERY	DIFFERENCE AMOUNT	DIFFERENCE %
1	10	3	106	$21.85	$7.74	$14.11	$22.04	$7.74	$14.30	$0.19	0.9%
2	20	5	144	27.23	10.52	16.71	27.48	10.52	16.96	0.25	0.9%
3	30	8	185	33.03	13.52	19.51	33.35	13.52	19.83	0.32	1.0%
4	40	12	227	38.96	16.58	22.38	39.35	16.58	22.77	0.39	1.0%
5	50	16	272	45.33	19.87	25.46	45.80	19.87	25.93	0.47	1.0%
6	60	21	325	52.82	23.74	29.08	53.38	23.74	29.64	0.56	1.1%
7	70	27	392	62.30	28.64	33.66	62.97	28.64	34.33	0.67	1.1%
8	80	35	488	75.87	35.65	40.22	76.71	35.65	41.06	0.84	1.1%
9	90	45	646	98.22	47.20	51.02	99.33	47.20	52.13	1.11	1.1%
10	AVG.USE		393	$62.44	$28.71	$33.73	$63.11	$28.71	$34.40	0.67	1.1%

PRESENT RATE

RESIDENTIAL RATE R-1 MDTE NO. 220

DELIVERY SERVICES:

CUSTOMER		$6.87	PER BILL
DISTRIBUTION	ALL KWH @	3.796	CENTS/KWH
TRANSITION	" "	-0.014	" "
TRANSMISSION	" "	1.858	" "
TRANSITION RATE ADJ	" "	0.000	" "
PAF/RAAF/EERF	" "	1.034	" "
DEFAULT SERV ADJ	" "	-0.140	" "
DEMAND-SIDE MGT	" "	0.250	" "
RENEWABLE ENERGY	" "	0.050	" "

SUPPLIER SERVICES:

DEFAULT SERVICE - FIXED	ALL KWH @	7.202	CENTS/KWH
DEFAULT SERVICE - ADDER		0.104	

PROPOSED RATE

RESIDENTIAL RATE R-1

DELIVERY SERVICES:

CUSTOMER		$6.87	PER BILL
DISTRIBUTION	ALL KWH @	3.796	CENTS/KWH
TRANSITION	" "	(0.014)	" "
TRANSMISSION	" "	1.858	" "
TRANSITION RATE ADJ	" "	0.000	" "
PAF/RAAF/EERF	" "	1.206	" "
DEFAULT SERV ADJ	" "	(0.140)	" "
DEMAND-SIDE MGT	" "	0.250	" "
RENEWABLE ENERGY	" "	0.050	" "

SUPPLIER SERVICES:

DEFAULT SERVICE - FIXED	ALL KWH @	7.202	CENTS/KWH
DEFAULT SERVICE - ADDER		0.104	

CAMBRIDGE ELECTRIC LIGHT COMPANY
TYPICAL BILL ANALYSIS
RESIDENTIAL ASSISTANCE RATE R-2 (R1)

LINE	CUM % BILLS	CUM % KWH	MONTHLY KWH	PRESENT RATE TOTAL	PRESENT RATE SUPPLIER	PRESENT RATE DELIVERY	PROPOSED RATE TOTAL	PROPOSED RATE SUPPLIER	PROPOSED RATE DELIVERY	DIFFERENCE AMOUNT	DIFFERENCE %
1	10	5	116	$16.87	$6.36	$10.51	$16.87	$6.36	$10.51	$0.00	0.0%
2	20	8	156	20.91	$8.56	$12.35	$20.92	$8.56	$12.36	0.01	0.0%
3	30	12	194	24.74	$10.64	$14.10	$24.76	$10.64	$14.12	0.02	0.1%
4	40	16	225	27.88	$12.35	$15.53	$27.90	$12.35	$15.55	0.02	0.1%
5	50	22	266	32.01	$14.59	$17.42	$32.03	$14.59	$17.44	0.02	0.1%
6	60	31	309	36.35	$16.95	$19.40	$36.37	$16.95	$19.42	0.02	0.1%
7	70	35	362	41.71	$19.86	$21.85	$41.73	$19.86	$21.87	0.02	0.0%
8	80	44	431	48.68	$23.65	$25.03	$48.71	$23.65	$25.06	0.03	0.1%
9	90	55	541	59.78	$29.68	$30.10	$59.81	$29.68	$30.13	0.03	0.1%
10	AVG.USE		333	38.78	$18.27	$20.51	$38.80	$18.27	$20.53	0.02	0.1%

PRESENT RATE

RESIDENTIAL ASSISTANCE RATE R-2 MDTE NO. 221

DELIVERY SERVICES:

CUSTOMER		$6.87	PER BILL
DISTRIBUTION	ALL KWH @	3.796	CENTS/KWH
TRANSITION	" "	-0.014	" "
TRANSMISSION	" "	1.858	" "
TRANSITION RATE ADJ	" "	0.000	" "
PAF/RAAF/EERF	" "	0.338	" "
DEFAULT SERV ADJ	" "	-0.140	" "
DEMAND-SIDE MGT	" "	0.250	" "
RENEWABLE ENERGY	" "	0.050	" "

SUPPLIER SERVICES:

DEFAULT SERVICE - FIXED	ALL KWH @	7.202	CENTS/KWH
DEFAULT SERVICE - ADDER		0.104	

LOW INCOME DISCOUNT: 24.9%

PROPOSED RATE

RESIDENTIAL ASSISTANCE RATE R-2

DELIVERY SERVICES:

CUSTOMER		$6.87	PER BILL
DISTRIBUTION	ALL KWH @	3.796	CENTS/KWH
TRANSITION	" "	-0.014	" "
TRANSMISSION	" "	1.858	" "
TRANSITION RATE ADJ	" "	0.000	" "
PAF/RAAF/EERF	" "	0.347	" "
DEFAULT SERV ADJ	" "	(0.140)	" "
DEMAND-SIDE MGT	" "	0.250	" "
RENEWABLE ENERGY	" "	0.050	" "

SUPPLIER SERVICES:

DEFAULT SERVICE - FIXED	ALL KWH @	7.202	CENTS/KWH
DEFAULT SERVICE - ADDER		0.104	" "

LOW INCOME DISCOUNT: 24.9%

CAMBRIDGE ELECTRIC LIGHT COMPANY
TYPICAL BILL ANALYSIS
GENERAL RATE G-1 (DEMAND)

LINE	CUM % BILLS	AVERAGE LF = 0.420 MONTHLY KW	MONTHLY KWH	PRESENT RATE TOTAL	PRESENT RATE SUPPLIER	PRESENT RATE DELIVERY	PROPOSED RATE TOTAL	PROPOSED RATE SUPPLIER	PROPOSED RATE DELIVERY	DIFFERENCE AMOUNT	DIFFERENCE %
1	10	5	1,546	$207.57	$117.28	$90.29	$205.70	$117.28	$88.42	($1.87)	-0.9%
2	20	7	2,308	302.11	175.08	127.03	299.31	175.08	124.23	(2.80)	-0.9%
3	30	10	3,125	411.14	237.06	174.08	407.36	237.06	170.30	(3.78)	-0.9%
4	40	12	3,872	510.67	293.73	216.94	505.99	293.73	212.26	(4.68)	-0.9%
5	50	16	4,875	660.38	369.82	290.56	654.48	369.82	284.66	(5.90)	-0.9%
6	60	20	6,237	846.16	473.14	373.02	838.62	473.14	365.48	(7.54)	-0.9%
7	70	26	8,024	1099.11	608.70	490.41	1089.40	608.70	480.70	(9.71)	-0.9%
8	80	37	11,418	1574.70	866.17	708.53	1560.88	866.17	694.71	(13.82)	-0.9%
9	90	56	17,349	2403.07	1,316.10	1,086.97	2382.07	1,316.10	1,065.97	(21.00)	-0.9%
10	AVG.USE	28	8,746	$1,196.13	$663.47	$532.66	$1,185.54	$663.47	522.07	(10.59)	-0.9%

PRESENT RATE

GENERAL RATE G-1 MDTE NO. 231

DELIVERY SERVICES:

CUSTOMER		$7.32	PER BILL
	FIRST 10	OVER 10	
DISTRIBUTION (DEMAND)	$3.76	$7.01	PER KW
TRANSITION	($0.06)	($0.06)	" "
TRANSMISSION	$5.19	$5.19	" "
TRANSITION RATE ADJ	$ 0.08	$ 0.08	
DISTRIBUTION (ENERGY)	ALL KWH @	1.149	CENTS/KWH
TRANSMISSION		0.000	
TRANSITION	" "	0.000	" "
TRANSITION RATE ADJ	" "	0.000	" "
PAF/RAAF/EERF	" "	1.157	" "
DEFAULT SERV ADJ	" "	(0.140)	" "
DEMAND-SIDE MGT	" "	0.250	" "
RENEWABLE ENERGY	" "	0.050	" "

SUPPLIER SERVICES:

DEFAULT SERVICE - FIXED	ALL KWH @	7.482	CENTS/KWH
DEFAULT SERVICE - ADDER		0.104	

PROPOSED RATE

GENERAL RATE G-1

DELIVERY SERVICES:

CUSTOMER		$7.32	PER BILL
	FIRST 10	OVER 10	
DISTRIBUTION (DEMAND)	$3.76	$7.01	PER KW
TRANSITION	($0.06)	($0.06)	
TRANSMISSION	$5.19	$5.19	
TRANSITION RATE ADJ	$0.08	$0.08	
DISTRIBUTION (ENERGY)	ALL KWH @	1.149	CENTS/KWH
TRANSMISSION		0.000	
TRANSITION	" "	0.000	" "
TRANSITION RATE ADJ	" "	0.000	" "
PAF/RAAF/EERF	" "	1.036	" "
DEFAULT SERV ADJ	" "	(0.140)	" "
DEMAND-SIDE MGT	" "	0.250	" "
RENEWABLE ENERGY	" "	0.050	" "
			" "

SUPPLIER SERVICES:

DEFAULT SERVICE - FIXED	ALL KWH @	7.482	CENTS/KWH
DEFAULT SERVICE - ADDER		0.104	" "

CAMBRIDGE ELECTRIC LIGHT COMPANY
TYPICAL BILL ANALYSIS
GENERAL RATE G-1 (DEMAND)

LINE	CUM % BILLS	HIGH LF = 0.520 MONTHLY KW	MONTHLY KWH	PRESENT RATE TOTAL	PRESENT RATE SUPPLIER	PRESENT RATE DELIVERY	PROPOSED RATE TOTAL	PROPOSED RATE SUPPLIER	PROPOSED RATE DELIVERY	DIFFERENCE AMOUNT	DIFFERENCE %
1	10	4	1,546	$198.60	$117.28	$81.32	$196.73	$117.28	$79.45	($1.87)	-0.9%
2	20	6	2,308	293.14	175.08	118.06	290.34	175.08	115.26	(2.80)	-1.0%
3	30	8	3,125	393.20	237.06	156.14	389.42	237.06	152.36	(3.78)	-1.0%
4	40	10	3,872	486.23	293.73	192.50	481.55	293.73	187.82	(4.68)	-1.0%
5	50	13	4,875	623.72	369.82	253.90	617.82	369.82	248.00	(5.90)	-0.9%
6	60	16	6,237	797.28	473.14	324.14	789.74	473.14	316.60	(7.54)	-0.9%
7	70	21	8,024	1038.01	608.70	429.31	1028.30	608.70	419.60	(9.71)	-0.9%
8	80	30	11,418	1489.16	866.17	622.99	1475.34	866.17	609.17	(13.82)	-0.9%
9	90	45	17,349	2268.65	1,316.10	952.55	2247.65	1,316.10	931.55	(21.00)	-0.9%
10	AVG.USE	23	8,746	$1,135.03	$663.47	$471.56	$1,124.44	$663.47	460.97	(10.59)	-0.9%

PRESENT RATE

GENERAL RATE G-1 MDTE NO. 231

DELIVERY SERVICES:

CUSTOMER		$7.32	PER BILL
	FIRST 10	OVER 10	
DISTRIBUTION (DEMAND)	$3.76	$7.01	PER KW
TRANSITION	($0.06)	($0.06)	" "
TRANSMISSION	$5.19	$5.19	" "
TRANSITION RATE ADJ			
DISTRIBUTION (ENERGY)	ALL KWH @	1.149	CENTS/KWH
TRANSMISSION		0.000	
TRANSITION	" "	0.000	" "
TRANSITION RATE ADJ		0.000	
PAF/RAAF/EERF	" "	1.157	" "
DEFAULT SERV ADJ	" "	(0.140)	" "
DEMAND-SIDE MGT	" "	0.250	" "
RENEWABLE ENERGY	" "	0.050	" "

SUPPLIER SERVICES:

DEFAULT SERVICE - FIXED	ALL KWH @	7.482	CENTS/KWH
DEFAULT SERVICE - ADDER		0.104	

PROPOSED RATE

GENERAL RATE G-1

DELIVERY SERVICES:

CUSTOMER		$7.32	PER BILL
	FIRST 10	OVER 10	
DISTRIBUTION (DEMAND)	$3.76	$7.01	PER KW
TRANSITION	($0.06)	($0.06)	
TRANSMISSION	$5.19	$5.19	
TRANSITION RATE ADJ	$0.08	$0.08	
DISTRIBUTION (ENERGY)	ALL KWH @	1.149	CENTS/KWH
TRANSMISSION		0.000	
TRANSITION	" "	0.000	" "
TRANSITION RATE ADJ	" "	0.000	" "
PAF/RAAF/EERF	" "	1.036	" "
DEFAULT SERV ADJ	" "	(0.140)	" "
DEMAND-SIDE MGT	" "	0.250	" "
RENEWABLE ENERGY	" "	0.050	" "
			" "

SUPPLIER SERVICES:

DEFAULT SERVICE - FIXED	ALL KWH @	7.482	CENTS/KWH
DEFAULT SERVICE - ADDER		0.104	" "

CAMBRIDGE ELECTRIC LIGHT COMPANY
TYPICAL BILL ANALYSIS
GENERAL RATE G-1 (DEMAND)

LINE	LF = 0.320 LOW CUM % BILLS	MONTHLY KW	MONTHLY KWH	PRESENT RATE TOTAL	PRESENT RATE SUPPLIER	PRESENT RATE DELIVERY	PROPOSED RATE TOTAL	PROPOSED RATE SUPPLIER	PROPOSED RATE DELIVERY	DIFFERENCE AMOUNT	DIFFERENCE %
1	10	6	1,546	$216.54	$117.28	$99.26	$214.67	$117.28	$97.39	($1.87)	-0.9%
2	20	10	2,308	329.02	175.08	153.94	326.22	175.08	151.14	(2.80)	-0.9%
3	30	13	3,125	447.80	237.06	210.74	444.02	237.06	206.96	(3.78)	-0.8%
4	40	16	3,872	559.55	293.73	265.82	554.87	293.73	261.14	(4.68)	-0.8%
5	50	20	4,875	709.26	369.82	339.44	703.36	369.82	333.54	(5.90)	-0.8%
6	60	26	6,237	919.48	473.14	446.34	911.94	473.14	438.80	(7.54)	-0.8%
7	70	34	8,024	1196.87	608.70	588.17	1187.16	608.70	578.46	(9.71)	-0.8%
8	80	48	11,418	1709.12	866.17	842.95	1695.30	866.17	829.13	(13.82)	-0.8%
9	90	73	17,349	2610.81	1,316.10	1294.71	2589.81	1,316.10	1,273.71	(21.00)	-0.8%
10	AVG.USE	37	8,746	$1,306.11	$663.47	$642.64	$1,295.52	$663.47	632.05	(10.59)	-0.8%

PRESENT RATE

GENERAL RATE G-1 MDTE NO. 231

DELIVERY SERVICES:

CUSTOMER		$7.32	PER BILL
	FIRST 10	OVER 10	
DISTRIBUTION (DEMAND)	$3.76	$7.01	PER KW
TRANSITION	($0.06)	($0.06)	" "
TRANSMISSION	$5.19	$5.19	" "
TRANSITION RATE ADJ			
DISTRIBUTION (ENERGY)	ALL KWH @	1.149	CENTS/KWH
TRANSMISSION		0.000	
TRANSITION	" "	0.000	" "
TRANSITION RATE ADJ		0.000	
PAF/RAAF/EERF	" "	1.157	" "
DEFAULT SERV ADJ	" "	(0.140)	" "
DEMAND-SIDE MGT	" "	0.250	" "
RENEWABLE ENERGY	" "	0.050	" "

SUPPLIER SERVICES:

DEFAULT SERVICE - FIXED	ALL KWH @	7.482	CENTS/KWH
DEFAULT SERVICE - ADDER		0.104	

PROPOSED RATE

GENERAL RATE G-1

DELIVERY SERVICES:

CUSTOMER		$7.32	PER BILL
	FIRST 10	OVER 10	
DISTRIBUTION (DEMAND)	$3.76	$7.01	PER KW
TRANSITION	($0.06)	($0.06)	
TRANSMISSION	$5.19	$5.19	
TRANSITION RATE ADJ	$0.08	$0.08	
DISTRIBUTION (ENERGY)	ALL KWH @	1.149	CENTS/KWH
TRANSMISSION		0.000	
TRANSITION	" "	0.000	" "
TRANSITION RATE ADJ	" "	0.000	" "
PAF/RAAF/EERF	" "	1.036	" "
DEFAULT SERV ADJ	" "	(0.140)	" "
DEMAND-SIDE MGT	" "	0.250	" "
RENEWABLE ENERGY	" "	0.050	" "
			" "

SUPPLIER SERVICES:

DEFAULT SERVICE - FIXED	ALL KWH @	7.482	CENTS/KWH
DEFAULT SERVICE - ADDER		0.104	" "

COMMONWEALTH ELECTRIC COMPANY
TYPICAL BILL ANALYSIS
RESIDENTIAL RATE R-1

LINE	CUM % BILLS	CUM % KWH	MONTHLY KWH	PRESENT RATE TOTAL	PRESENT RATE SUPPLIER	PRESENT RATE DELIVERY	PROPOSED RATE TOTAL	PROPOSED RATE SUPPLIER	PROPOSED RATE DELIVERY	DIFFERENCE AMOUNT	DIFFERENCE %
1	10	2	160	$31.22	$11.69	$19.53	$31.50	$11.69	$19.81	$0.28	0.9%
2	20	5	230	$43.25	$16.80	$26.45	$43.65	$16.80	$26.85	0.40	0.9%
3	30	10	306	$56.32	$22.36	$33.96	$56.84	$22.36	$34.48	0.52	0.9%
4	40	17	382	$69.37	$27.91	$41.46	$70.03	$27.91	$42.12	0.66	1.0%
5	50	24	464	$83.46	$33.90	$49.56	$84.26	$33.90	$50.36	0.80	1.0%
6	60	33	555	$99.10	$40.55	$58.55	$100.06	$40.55	$59.51	0.96	1.0%
7	70	44	660	$117.14	$48.22	$68.92	$118.28	$48.22	$70.06	1.14	1.0%
8	80	57	793	$140.00	$57.94	$82.06	$141.37	$57.94	$83.43	1.37	1.0%
9	90	73	997	$175.05	$72.84	$102.21	$176.77	$72.84	$103.93	1.72	1.0%
10	AVG.USE		584	$104.09	$42.67	$61.42	$105.09	$42.67	$62.42	1.00	1.0%

PRESENT RATE

RESIDENTIAL RATE R-1 MDTE NO. 320 - (ANNUAL)

DELIVERY SERVICES:

CUSTOMER		$3.73	PER BILL
DISTRIBUTION	ALL KWH @	4.922	CENTS/KWH
TRANSITION	" "	1.935	" "
TRANSMISSION	" "	1.601	" "
TRANS RATE ADJ	" "	0.000	" "
PENS. ADJ FACT./RAAF/EERF	" "	1.260	" "
DEFAULT SERV ADJ	" "	-0.140	" "
DEMAND-SIDE MGT	" "	0.250	" "
RENEWABLE ENERGY	" "	0.050	" "

SUPPLIER SERVICES:

DEFAULT SERVICE - FIXED	ALL KWH @	7.202	CENTS/KWH
DEFAULT SERVICE - ADDER		0.104	

PROPOSED RATE

RESIDENTIAL RATE R-1 (ANNUAL)

DELIVERY SERVICES:

CUSTOMER		$3.73	PER BILL
DISTRIBUTION	ALL KWH @	4.922	CENTS/KWH
TRANSITION	" "	1.935	" "
TRANSMISSION	" "	1.601	" "
TRANS RATE ADJ	" "	0.000	" "
PENS. ADJ FACT./RAAF/EERF	" "	1.432	" "
DEFAULT SERV ADJ	" "	-0.140	" "
DEMAND-SIDE MGT	" "	0.250	" "
RENEWABLE ENERGY	" "	0.050	" "

SUPPLIER SERVICES:

DEFAULT SERVICE - FIXED	ALL KWH @	7.202	CENTS/KWH
DEFAULT SERVICE - ADDER		0.104	

COMMONWEALTH ELECTRIC COMPANY
TYPICAL BILL ANALYSIS
RESIDENTIAL ASSISTANCE RATE R-2 (R1)

LINE	CUM % BILLS	CUM % KWH	MONTHLY KWH	PRESENT RATE TOTAL	PRESENT RATE SUPPLIER	PRESENT RATE DELIVERY	PROPOSED RATE TOTAL	PROPOSED RATE SUPPLIER	PROPOSED RATE DELIVERY	DIFFERENCE AMOUNT	DIFFERENCE %
1	10	2	146	$21.55	$8.27	$13.28	$21.56	$8.27	$13.29	$0.01	0.0%
2	20	6	194	$27.68	$10.98	$16.70	$27.69	$10.98	$16.71	0.01	0.0%
3	30	11	243	$33.94	$13.76	$20.18	$33.96	$13.76	$20.20	0.02	0.1%
4	40	17	293	$40.33	$16.59	$23.74	$40.35	$16.59	$23.76	0.02	0.0%
5	50	23	350	$47.62	$19.82	$27.80	$47.64	$19.82	$27.82	0.02	0.0%
6	60	32	416	$56.04	$23.55	$32.49	$56.07	$23.55	$32.52	0.03	0.1%
7	70	42	497	$66.40	$28.14	$38.26	$66.43	$28.14	$38.29	0.03	0.0%
8	80	54	608	$80.59	$34.43	$46.16	$80.63	$34.43	$46.20	0.04	0.0%
9	90	69	785	$103.20	$44.45	$58.75	$103.26	$44.45	$58.81	0.06	0.1%
10	AVG.USE		483	$64.61	$27.35	$37.26	$64.64	$27.35	$37.29	0.03	0.0%

PRESENT RATE

RESIDENTIAL ASSISTANCE RATE R-2 MDTE NO. 321 - (ANNUAL)

DELIVERY SERVICES:

CUSTOMER		$3.73	PER BILL
DISTRIBUTION	ALL KWH @	4.922	CENTS/KWH
TRANSITION	" "	1.935	" "
TRANSMISSION	" "	1.601	" "
TRANS RATE ADJ	" "	0.000	" "
PENS. ADJ FACT./RAAF/EERF	" "	0.564	" "
DEFAULT SERV ADJ	" "	-0.140	" "
DEMAND-SIDE MGT	" "	0.250	" "
RENEWABLE ENERGY	" "	0.050	" "

SUPPLIER SERVICES:

DEFAULT SERVICE - FIXED	ALL KWH @	7.202	CENTS/KWH
DEFAULT SERVICE - ADDER		0.104	

LOW INCOME DISCOUNT: 22.5%

PROPOSED RATE

RESIDENTIAL ASSISTANCE RATE R-2 (ANNUAL)

DELIVERY SERVICES:

CUSTOMER		$3.73	PER BILL
DISTRIBUTION	ALL KWH @	4.922	CENTS/KWH
TRANSITION	" "	1.935	" "
TRANSMISSION	" "	1.601	" "
TRANS RATE ADJ	" "	0.000	" "
PENS. ADJ FACT./RAAF/EERF	" "	0.573	" "
DEFAULT SERV ADJ	" "	-0.140	" "
DEMAND-SIDE MGT	" "	0.250	" "
RENEWABLE ENERGY	" "	0.050	" "

SUPPLIER SERVICES:

DEFAULT SERVICE - FIXED	ALL KWH @	7.202	CENTS/KWH
DEFAULT SERVICE - ADDER		0.104	

LOW INCOME DISCOUNT: 22.5%

COMMONWEALTH ELECTRIC COMPANY
TYPICAL BILL ANALYSIS
GENERAL RATE G-1

LINE	AVERAGE LF = 0.408 CUM % BILLS	MONTHLY KW	MONTHLY KWH	PRESENT RATE TOTAL	PRESENT RATE SUPPLIER	PRESENT RATE DELIVERY	PROPOSED RATE TOTAL	PROPOSED RATE SUPPLIER	PROPOSED RATE DELIVERY	DIFFERENCE AMOUNT	DIFFERENCE %
1	10	0	13	$7.72	$0.99	$6.73	$7.70	$0.99	$6.71	($0.02)	-0.3%
2	20	0	82	$19.22	$6.19	$13.03	$19.12	$6.19	$12.93	(0.10)	-0.5%
3	30	1	186	$36.68	$14.08	$22.60	$36.46	$14.08	$22.38	(0.22)	-0.6%
4	40	1	335	$61.81	$25.44	$36.37	$61.41	$25.44	$35.97	(0.40)	-0.6%
5	50	2	525	$93.65	$39.83	$53.82	$93.01	$39.83	$53.18	(0.64)	-0.7%
6	60	3	826	$144.13	$62.65	$81.48	$143.13	$62.65	$80.48	(1.00)	-0.7%
7	70	4	1,275	$219.45	$96.70	$122.75	$217.91	$96.70	$121.21	(1.54)	-0.7%
8	80	8	2,351	$398.64	$178.38	$220.26	$395.79	$178.38	$217.41	(2.85)	-0.7%
9	90	17	4,950	$792.71	$375.52	$417.19	$786.72	$375.52	$411.20	(5.99)	-0.8%
10	AVG.USE	8	2,396	$404.82	$181.76	$223.06	$401.92	$181.76	$220.16	(2.90)	-0.7%

PRESENT RATE

GENERAL RATE G-1 MDTE NO. 330

DELIVERY SERVICES:

CUSTOMER		$5.53	PER BILL
	FIRST 10	OVER 10	
DISTRIBUTION (DEMAND)	$0.00	$4.86	PER KW
TRANSMISSION	$0.00	$0.00	PER KW
	< 2300 KWH	>2300 KWH	
DISTRIBUTION (ENERGY)	4.089	1.162	CENTS/KWH
TRANSITION	1.935	1.935	" "
TRANSMISSION	1.628	1.628	" "
TRANS RATE ADJ	0.001	0.001	" "
PENS. ADJ FACT./RAAF/EERF	1.383	1.383	" "
DEFAULT SERV ADJ	-0.140	-0.140	" "
DEMAND-SIDE MGT	0.250	0.250	" "
RENEWABLE ENERGY	0.050	0.050	" "

SUPPLIER SERVICES:

DEFAULT SERVICE - FIXED	7.482	7.482	CENTS/KWH
DEFAULT SERVICE - ADDER	0.104	0.104	

PROPOSED RATE

GENERAL RATE G-1

DELIVERY SERVICES:

CUSTOMER		$5.53	PER BILL
	FIRST 10	OVER 10	
DISTRIBUTION (DEMAND)	$0.00	$4.86	PER KW
TRANSMISSION	$0.00	$0.00	PER KW
	< 2300 KWH	>2300 KWH	
DISTRIBUTION (ENERGY)	4.089	1.162	CENTS/KWH
TRANSITION	1.935	1.935	" "
TRANSMISSION	1.628	1.628	" "
TRANS RATE ADJ	0.001	0.001	" "
PENS. ADJ FACT./RAAF/EERF	1.262	1.262	" "
DEFAULT SERV ADJ	-0.140	-0.140	" "
DEMAND-SIDE MGT	0.250	0.250	" "
RENEWABLE ENERGY	0.050	0.050	" "

SUPPLIER SERVICES:

DEFAULT SERVICE - FIXED	7.482	7.482	CENTS/KWH
DEFAULT SERVICE - ADDER	0.104	0.104	

COMMONWEALTH ELECTRIC COMPANY
TYPICAL BILL ANALYSIS
GENERAL RATE G-1

LINE	CUM % BILLS	HIGH LF = 0.508 MONTHLY KW	MONTHLY KWH	PRESENT RATE TOTAL	PRESENT RATE SUPPLIER	PRESENT RATE DELIVERY	PROPOSED RATE TOTAL	PROPOSED RATE SUPPLIER	PROPOSED RATE DELIVERY	DIFFERENCE AMOUNT	DIFFERENCE %
1	10	0	13	$7.72	$0.99	$6.73	$7.70	$0.99	$6.71	($0.02)	-0.3%
2	20	0	82	$19.22	$6.19	$13.03	$19.12	$6.19	$12.93	(0.10)	-0.5%
3	30	1	186	$36.68	$14.08	$22.60	$36.46	$14.08	$22.38	(0.22)	-0.6%
4	40	1	335	$61.81	$25.44	$36.37	$61.41	$25.44	$35.97	(0.40)	-0.6%
5	50	1	525	$93.65	$39.83	$53.82	$93.01	$39.83	$53.18	(0.64)	-0.7%
6	60	2	826	$144.13	$62.65	$81.48	$143.13	$62.65	$80.48	(1.00)	-0.7%
7	70	3	1,275	$219.45	$96.70	$122.75	$217.91	$96.70	$121.21	(1.54)	-0.7%
8	80	6	2,351	$398.64	$178.38	$220.26	$395.79	$178.38	$217.41	(2.85)	-0.7%
9	90	13	4,950	$773.27	$375.52	$397.75	$767.28	$375.52	$391.76	(5.99)	-0.8%
10	AVG.USE	6	2,396	$404.82	$181.76	$223.06	$401.92	$181.76	$220.16	(2.90)	-0.7%

PRESENT RATE

GENERAL RATE G-1 MDTE NO. 330

DELIVERY SERVICES:

CUSTOMER		$5.53	PER BILL
	FIRST 10	OVER 10	
DISTRIBUTION (DEMAND)	$0.00	$4.86	PER KW
TRANSMISSION	$0.00	$0.00	PER KW
	< 2300 KWH	>2300 KWH	
DISTRIBUTION (ENERGY)	4.089	1.162	CENTS/KWH
TRANSITION	1.935	1.935	" "
TRANSMISSION	1.628	1.628	" "
TRANS RATE ADJ	0.001	0.001	" "
PENS. ADJ FACT./RAAF/EERF	1.383	1.383	" "
DEFAULT SERV ADJ	-0.140	-0.140	" "
DEMAND-SIDE MGT	0.250	0.250	" "
RENEWABLE ENERGY	0.050	0.050	" "

SUPPLIER SERVICES:

DEFAULT SERVICE - FIXED	7.482	7.482	CENTS/KWH
DEFAULT SERVICE - ADDER	0.104	0.104	

PROPOSED RATE

GENERAL RATE G-1

DELIVERY SERVICES:

CUSTOMER		$5.53	PER BILL
	FIRST 10	OVER 10	
DISTRIBUTION (DEMAND)	$0.00	$4.86	PER KW
TRANSMISSION	$0.00	$0.00	PER KW
	< 2300 KWH	>2300 KWH	
DISTRIBUTION (ENERGY)	4.089	1.162	CENTS/KWH
TRANSITION	1.935	1.935	" "
TRANSMISSION	1.628	1.628	" "
TRANS RATE ADJ	0.001	0.001	" "
PENS. ADJ FACT./RAAF/EERF	1.262	1.262	" "
DEFAULT SERV ADJ	-0.140	-0.140	" "
DEMAND-SIDE MGT	0.250	0.250	" "
RENEWABLE ENERGY	0.050	0.050	" "

SUPPLIER SERVICES:

DEFAULT SERVICE - FIXED	7.482	7.482	CENTS/KWH
DEFAULT SERVICE - ADDER	0.104	0.104	

COMMONWEALTH ELECTRIC COMPANY
TYPICAL BILL ANALYSIS
GENERAL RATE G-1

LINE	LF = 0.308 CUM % BILLS	LOW MONTHLY KW	MONTHLY KWH	PRESENT RATE TOTAL	PRESENT RATE SUPPLIER	PRESENT RATE DELIVERY	PROPOSED RATE TOTAL	PROPOSED RATE SUPPLIER	PROPOSED RATE DELIVERY	DIFFERENCE AMOUNT	DIFFERENCE %
1	10	0	13	$7.72	$0.99	$6.73	$7.70	$0.99	$6.71	($0.02)	-0.3%
2	20	0	82	$19.22	$6.19	$13.03	$19.12	$6.19	$12.93	(0.10)	-0.5%
3	30	1	186	$36.68	$14.08	$22.60	$36.46	$14.08	$22.38	(0.22)	-0.6%
4	40	1	335	$61.81	$25.44	$36.37	$61.41	$25.44	$35.97	(0.40)	-0.6%
5	50	2	525	$93.65	$39.83	$53.82	$93.01	$39.83	$53.18	(0.64)	-0.7%
6	60	4	826	$144.13	$62.65	$81.48	$143.13	$62.65	$80.48	(1.00)	-0.7%
7	70	6	1,275	$219.45	$96.70	$122.75	$217.91	$96.70	$121.21	(1.54)	-0.7%
8	80	10	2,351	$398.64	$178.38	$220.26	$395.79	$178.38	$217.41	(2.85)	-0.7%
9	90	22	4,950	$817.01	$375.52	$441.49	$811.02	$375.52	$435.50	(5.99)	-0.7%
10	AVG.USE	11	2,396	$409.68	$181.76	$227.92	$406.78	$181.76	$225.02	(2.90)	-0.7%

PRESENT RATE

GENERAL RATE G-1 MDTE NO. 330

DELIVERY SERVICES:

CUSTOMER		$5.53	PER BILL
	FIRST 10	OVER 10	
DISTRIBUTION (DEMAND)	$0.00	$4.86	PER KW
TRANSMISSION	$0.00	$0.00	
	< 2300 KWH	>2300 KWH	
DISTRIBUTION (ENERGY)	4.089	1.162	CENTS/KWH
TRANSITION	1.935	1.935	" "
TRANSMISSION	1.628	1.628	" "
TRANS RATE ADJ	0.001	0.001	" "
PENS. ADJ FACT./RAAF/EERF	1.383	1.383	" "
DEFAULT SERV ADJ	-0.140	-0.140	" "
DEMAND-SIDE MGT	0.250	0.250	" "
RENEWABLE ENERGY	0.050	0.050	" "

SUPPLIER SERVICES:

DEFAULT SERVICE - FIXED	7.482	7.482	CENTS/KWH
DEFAULT SERVICE - ADDER	0.104	0.104	

PROPOSED RATE

GENERAL RATE G-1

DELIVERY SERVICES:

CUSTOMER		$5.53	PER BILL
	FIRST 10	OVER 10	
DISTRIBUTION (DEMAND)	$0.00	$4.86	PER KW
TRANSMISSION	$0.00	$0.00	
	< 2300 KWH	>2300 KWH	
DISTRIBUTION (ENERGY)	4.089	1.162	CENTS/KWH
TRANSITION	1.935	1.935	" "
TRANSMISSION	1.628	1.628	" "
TRANS RATE ADJ	0.001	0.001	" "
PENS. ADJ FACT./RAAF/EERF	1.262	1.262	" "
DEFAULT SERV ADJ	-0.140	-0.140	" "
DEMAND-SIDE MGT	0.250	0.250	" "
RENEWABLE ENERGY	0.050	0.050	" "

SUPPLIER SERVICES:

DEFAULT SERVICE - FIXED	7.482	7.482	CENTS/KWH
DEFAULT SERVICE - ADDER	0.104	0.104	

WMECO 2013 Incremental Bill Impacts

A residential R-1 customer using 700 kilowatt-hours per month could experience a monthly bill increase of 1.72% in 2013.

A low-income R-2 customer using 700 kilowatt-hours per month could experience a monthly bill increase of 0.32% in 2013.

A small commercial & industrial customer using 2,500 kilowatt-hours per month could experience a monthly bill increase of 1.91% in 2013.

Sector	Variance w/LI Variance Re-Allocated to all 3 sectors	2013 kWh Sales in Filing	EEPCA - Change from 2012 MTM Budget	EEPCA Change X 700 kWh/Month Customer	Current Customer Bill using 700kWh	% Change in Total Bill	EEPCA Change X 2,500 kWh/Month Customer	Current Customer Bill using 2,500 kWh	% Change in Total Bill
Residential	$2,650,076	990,856,175	$0.00267	$1.87	$109.10	1.72%	N/A	N/A	N/A
Low Income	$180,177	533,537,941	$0.00034	$0.24	$74.19	0.32%	N/A	N/A	N/A
Small C&I	$6,151,817	2,102,420,071	$0.00293	N/A	N/A	N/A	$7.32	$ 382.39	1.91%
Total	**$8,982,069**	3,626,814,187							

Cape Light Compact - April 30th Traditional Bill Impacts
Exhibit CLC 1 - Summary of Total Costs

Line No.	Description	(1) 2012 MTM	2013 Plan	(3) 2013 Plan vs. 2012 MTM $ Change	(4) 2013 Plan vs. 2012 MTM % Change
1	Total PA Cost	$ 18,313,920	$ 30,311,381	$ 11,997,461	65.51%
2	Performance Incentives (2)	$ -	$ -	$ -	0.00%
3	Total PA Budget	$ 18,313,920	$ 30,311,381	$ 11,997,461	65.51%

Notes:
1) 2012 MTM data from D.P.U. 11-116
2) As the Compact does not have performance incentives, no change to performance incentives is observed.
3) 2013 Plan - 2012 MTM
4) $ Change / 2012 MTM

Cape Light Compact - April 30th Traditional Bill Impacts
Exhibit CLC 2a - 2013 Residential R-1 Bill Impacts

Line No.	Description	Jan. 1, 2012		2013 Plan		(5) $ Change	(6) % Change
1	Residential EERF ($/kWh)	$ 0.00710	(1)	$ 0.01022	(4)		
2	Avg. Residential Monthly Consumption (kWh) (2)	550		550			
3	Residential Monthly EERF ($) (3)	$ 3.91		$ 5.62		$ 1.71	43.91%

Notes:
1) From 2011 EERF Compliance Filing (D.P.U. 11-40)
2) Based on 2011 actual sales and customer data.
3) Monthly EERF = EERF * Avg. Monthly Consumption
4) Assumes SBC revenues based on 2011 actual sales. Assumes the same FCM and RGGI revenues as received in 2011. No other funding or carryover assumed.
5) 2013 Plan Monthly EERF ($) - Jan. 1, 2012 Monthly EERF ($)
6) $ Change / Jan. 1, 2012 Monthly EERF ($)

Cape Light Compact - April 30th Traditional Bill Impacts
Exhibit CLC 2b - 2013 Low Income R-2 Bill Impacts

Line No.	Description	Jan. 1, 2012		2013 Plan		(5) $ Change	(6) % Change
1	Low Income EERF ($/kWh)	$ 0.00034	(1)	$ 0.00141	(4)		
2	Avg. Low Income Monthly Consumption (kWh) (2)	550		550			
3	Low Income Monthly EERF ($) (3)	$ 0.19		$ 0.78		$ 0.59	315.07%

Notes:
1) From 2011 EERF Compliance Filing (D.P.U. 11-40)
2) Based on 2011 actual sales and customer data.
3) Monthly EERF = EERF * Avg. Monthly Consumption
4) Assumes SBC revenues based on 2011 actual sales. Assumes the same FCM and RGGI revenues as received in 2011. No other funding or carryover assumed.
5) 2013 Plan Monthly EERF ($) - Jan. 1, 2012 Monthly EERF ($)
6) $ Change / Jan. 1, 2012 Monthly EERF ($)

Cape Light Compact - April 30th Traditional Bill Impacts
Exhibit CLC 2c - 2013 C&I Small G-1 Bill Impacts

Line No.	Description	Jan. 1, 2012		2013 Plan		(5) $ Change	(6) % Change
1	C&I EERF ($/kWh)	$ 0.00675	(1)	$ 0.01477	(4)		
2	Avg. C&I Monthly Consumption (kWh) (2)	2,000		2,000			
3	C&I Monthly EERF ($) (3)	$ 13.50		$ 29.53		$ 16.03	118.76%

Notes:
1) From 2011 EERF Compliance Filing (D.P.U. 11-40)
2) Based on 2011 actual sales and customer data.
3) Monthly EERF = EERF * Avg. Monthly Consumption
4) Assumes SBC revenues based on 2011 actual sales. Assumes the same FCM and RGGI revenues as received in 2011. No other funding or carryover assumed.
5) 2013 Plan Monthly EERF ($) - Jan. 1, 2012 Monthly EERF ($)
6) $ Change / Jan. 1, 2012 Monthly EERF ($)

Fitchburg Gas and Electric Light Company d/b/a Unitil
Default Service Customer Typical Bill Impacts
Impact on RD-1 Rate Customers

Average Monthly kWh	Present Rates Total Revenue	Proposed Rates Total Revenue	Total Difference	% Total Difference
125	$29.16	$29.00	($0.15)	-0.5%
250	$53.02	$52.71	($0.31)	-0.6%
500	$100.76	$100.14	($0.62)	-0.6%
600	$119.85	$119.11	($0.74)	-0.6%
750	$149.05	$148.12	($0.93)	-0.6%
1000	$197.72	$196.48	($1.24)	-0.6%
1250	$246.38	$244.84	($1.55)	-0.6%
1500	$295.05	$293.20	($1.86)	-0.6%
2000	$392.39	$389.91	($2.47)	-0.6%

Approved Rates - January 1, 2012:

	RD-1
Delivery Charges:	
Customer Charge	$5.29
	kWh
Internal Transmission	$0.00225
External Transmission	$0.00839
Transmission Subtotal	$0.01064
Distribution - First 600 kWh	$0.05420
Distribution - Excess kWh	$0.05794
Energy Efficiency Reconciliation Factor	$0.00929
Residential Assistance Adjustment Factor	$0.00342
Pension/PBOP Adjustment Factor	$0.00232
Net Metering Recovery Surcharge	$0.00002
Revenue Decoupling Adjustment Factor	($0.00066)
AG Consultant Expense Factor	$0.00077
Distribution Subtotal First Block	$0.06936
Distribution Subtotal Second Block	$0.07310
Energy Efficiency Charge	$0.00250
Renewable Resources Charge	$0.00050
Default Service Adjustment	($0.00202)
Transition Charge	$0.02420
Transition Charge Surcharge	$0.00400
Supplier Charges:	
Generation Charge*	$0.08175
Total First Block	$0.19093
Total Second Block	$0.19467

Approved Rates - January 1, 2012 w/ estimated 2013 EERF:

	RD-1
Delivery Charges:	
Customer Charge	$5.29
	kWh
Internal Transmission	$0.00225
External Transmission	$0.00839
Transmission Subtotal	$0.01064
Distribution - First 600 kWh	$0.05420
Distribution - Excess kWh	$0.05794
Energy Efficiency Reconciliation Factor	$0.00805
Residential Assistance Adjustment Factor	$0.00342
Pension/PBOP Adjustment Factor	$0.00232
Net Metering Recovery Surcharge	$0.00002
Revenue Decoupling Adjustment Factor	($0.00066)
AG Consultant Expense Factor	$0.00077
Distribution Subtotal First Block	$0.06812
Distribution Subtotal Second Block	$0.07186
Energy Efficiency Charge	$0.00250
Renewable Resources Charge	$0.00050
Default Service Adjustment	($0.00202)
Transition Charge	$0.02420
Transition Charge Surcharge	$0.00400
Supplier Charges:	
Generation Charge*	$0.08175
Total First Block	$0.18969
Total Second Block	$0.19343

Fitchburg Gas and Electric Light Company d/b/a Unitil
Default Service Customer Typical Bill Impacts
Impact on RD-2 Rate Customers

Average Monthly kWh	Present Rates Total Revenue	Proposed Rates Total Revenue	Total Difference	% Total Difference
125	$21.87	$21.75	($0.11)	-0.5%
250	$39.77	$39.54	($0.23)	-0.6%
500	$75.57	$75.11	($0.46)	-0.6%
600	$89.89	$89.33	($0.55)	-0.6%
750	$111.79	$111.09	($0.69)	-0.6%
1,000	$148.29	$147.36	($0.92)	-0.6%
1,250	$184.79	$183.63	($1.16)	-0.6%
1,500	$221.29	$219.90	($1.39)	-0.6%
2,000	$294.29	$292.44	($1.85)	-0.6%

Approved Rates - January 1, 2012:

	RD-2
Delivery Charges:	
Customer Charge	$5.29
	kWh
Internal Transmission	$0.00225
External Transmission	$0.00839
Transmission Subtotal	$0.01064
Distribution - First 600 kWh	$0.05420
Distribution - Excess kWh	$0.05794
Energy Efficiency Reconciliation Factor	$0.00081
Residential Assistance Adjustment Factor	$0.00342
Pension/PBOP Adjustment Factor	$0.00232
Net Metering Recovery Surcharge	$0.00002
Revenue Decoupling Adjustment Factor	($0.00066)
AG Consultant Expense Factor	$0.00077
Distribution Subtotal First Block	$0.06088
Distribution Subtotal Second Block	$0.06462
Energy Efficiency Charge	$0.00250
Renewable Resources Charge	$0.00050
Default Service Adjustment	($0.00202)
Transition Charge	$0.02420
Transition Charge Surcharge	$0.00400
Supplier Charges:	
Generation Charge*	$0.08175
25% Low Income Discount	
Fixed Charges	($1.32)
Volumetric Charges - First 600 kWh	($0.03925)
Volumetric Charges - Excess 600 kWh	($0.04019)
Total First Block	$0.14320
Total Second Block	$0.14600

Approved Rates - January 1, 2012 w/ estimated 2013 EERF:

	RD-2
Delivery Charges:	
Customer Charge	$5.29
	kWh
Internal Transmission	$0.00225
External Transmission	$0.00839
Transmission Subtotal	$0.01064
Distribution - First 600 kWh	$0.05420
Distribution - Excess kWh	$0.05794
Energy Efficiency Reconciliation Factor	$0.00018
Residential Assistance Adjustment Factor	$0.00342
Pension/PBOP Adjustment Factor	$0.00232
Net Metering Recovery Surcharge	$0.00002
Revenue Decoupling Adjustment Factor	($0.00066)
AG Consultant Expense Factor	$0.00077
Distribution Subtotal First Block	$0.06025
Distribution Subtotal Second Block	$0.06399
Energy Efficiency Charge	$0.00250
Renewable Resources Charge	$0.00050
Default Service Adjustment	($0.00202)
Transition Charge	$0.02420
Transition Charge Surcharge	$0.00400
Supplier Charges:	
Generation Charge*	$0.08175
25% Low Income Discount	
Fixed Charges	($1.32)
Volumetric Charges - First 600 kWh	($0.03954)
Volumetric Charges - Excess 600 kWh	($0.04048)
Total First Block	$0.14227
Total Second Block	$0.14507

Fitchburg Gas and Electric Light Company d/b/a Unitil
Default Service Customer Typical Bill Impacts
Impact on GD-1 Rate Customers

Average Monthly kWh	Present Rates Total Revenue	Proposed Rates Total Revenue	Total Difference	% Total Difference
50	$17.98	$17.93	($0.05)	-0.3%
100	$27.74	$27.63	($0.11)	-0.4%
200	$47.25	$47.04	($0.21)	-0.5%
300	$67.44	$67.12	($0.32)	-0.5%
400	$87.63	$87.21	($0.43)	-0.5%
500	$107.83	$107.30	($0.53)	-0.5%
750	$158.31	$157.51	($0.80)	-0.5%
1000	$208.79	$207.73	($1.06)	-0.5%

Approved Rates - January 1, 2012:

	GD-1
Delivery Charges:	
Customer Charge	$8.23
	kWh
Internal Transmission	$0.00222
External Transmission	$0.00839
Transmission Subtotal	$0.01061
Distribution - First 200 kWh	$0.05916
Distribution - Excess kWh	$0.06600
Energy Efficiency Reconciliation Factor	$0.00852
Residential Assistance Adjustment Factor	$0.00342
Pension/PBOP Adjustment Factor	$0.00232
Net Metering Recovery Surcharge	$0.00002
Revenue Decoupling Adjustment Factor	($0.00066)
AG Consultant Expense Factor	$0.00077
Distribution Subtotal First Block	$0.07355
Distribution Subtotal Second Block	$0.08039
Energy Efficiency Charge	$0.00250
Renewable Resources Charge	$0.00050
Default Service Adjustment	($0.00202)
Transition Charge	$0.02420
Transition Charge Surcharge	$0.00400
Supplier Charges:	
Generation Charge*	$0.08175
Total First Block	$0.19509
Total Second Block	$0.20193

Approved Rates - January 1, 2012 w/ estimated 2013 EERF:

	GD-1
Delivery Charges:	
Customer Charge	$8.23
	kWh
Internal Transmission	$0.00222
External Transmission	$0.00839
Transmission Subtotal	$0.01061
Distribution - First 200 kWh	$0.05916
Distribution - Excess kWh	$0.06600
Energy Efficiency Reconciliation Factor	$0.00746
Residential Assistance Adjustment Factor	$0.00342
Pension/PBOP Adjustment Factor	$0.00232
Net Metering Recovery Surcharge	$0.00002
Revenue Decoupling Adjustment Factor	($0.00066)
AG Consultant Expense Factor	$0.00077
Distribution Subtotal First Block	$0.07249
Distribution Subtotal Second Block	$0.07933
Energy Efficiency Charge	$0.00250
Renewable Resources Charge	$0.00050
Default Service Adjustment	($0.00202)
Transition Charge	$0.02420
Transition Charge Surcharge	$0.00400
Supplier Charges:	
Generation Charge*	$0.08175
Total First Block	$0.19403
Total Second Block	$0.20087

Boston Gas Company

- The impact on the gas bill for a typical Boston Gas residential heating (R-3) customer using 122 therms per month would be an increase of approximately $0.52, or 0.3 percent in 2013 when compared to the 2012 MTM EE budget.

- The impact on the gas bill for a typical Boston Gas residential Low-Income heating (R-4) customer using 113 therms per month would be an increase of approximately $0.36, or 0.2 percent in 2013 when compared to the 2012 MTM EE budget.

- The impact on the gas bill for a typical Boston Gas Low Load small C/I (G-41B) customer using 186 therms per month would be an increase of approximately $6.02, or 2.3 percent in 2013 when compared to the 2012 MTM EE budget.

- The impact on the gas bill for a typical Boston Gas High Load small C/I (G-51B) customer using 177 therms per month would be an increase of approximately $5.71, or 2.5 percent in 2013 when compared to the 2012 MTM EE budget.

- The impact on the gas bill for a typical Boston Gas –formerly Essex Gas Low Load small C/I (G-41E) customer using 334 therms per month would be an increase of approximately $10.82, or 2.8 percent in 2013 when compared to the 2012 MTM EE budget.

- The impact on the gas bill for a typical Boston Gas – formerly Essex Gas High Load small C/I (G-51E) customer using 516 therms per month would be an increase of approximately $16.67, or 2.9 percent in 2013 when compared to the 2012 MTM EE budget.

Colonial Gas Company

- The impact on the gas bill for a typical Colonial Gas residential heating (R-3) customer using 111 therms per month would be an increase of approximately $0.48, or 0.3 percent in 2013 when compared to the 2012 MTM EE budget.

- The impact on the gas bill for a typical residential Low-Income heating (R-4) customer using 116 therms per month would be an increase of approximately $0.37, or 0.3 percent in 2013 when compared to the 2012 MTM EE budget.

- The impact on the gas bill for a typical Colonial Gas Low Load small C/I (G-41) customer using 283 therms per month would be an increase of approximately $9.13, or 2.8 percent in 2013 when compared to the 2012 MTM EE budget.

- The impact on the gas bill for a typical Colonial Gas High Load small C/I (G-51) customer using 365 therms per month would be an increase of approximately $11.78, or 3.0 percent in 2013 when compared to the 2012 MTM EE budget.

Boston Gas Company

Monthly Bill Impact for an Average Residential Heating (R3) Customer

Feb - April 12 (Peak CGA & LDAF effective 2/1/12)			Avg. Winter				
With 2012 MTM EE Budget			Month	Peak Month			
Average Monthly Use per Customer - Therms	50	100	122	172	250	300	400
Cust. Charge	$10.00	$10.00	$10.00	$10.00	$10.00	$10.00	$10.00
Headblock	$0.3938	$0.3938	$0.3938	$0.3938	$0.3938	$0.3938	$0.3938
Tailblock	$0.4785	$0.4785	$0.4785	$0.4785	$0.4785	$0.4785	$0.4785
CGA	$0.6821	$0.6821	$0.6821	$0.6821	$0.6821	$0.6821	$0.6821
LDAF	$0.1506	$0.1506	$0.1506	$0.1506	$0.1506	$0.1506	$0.1506
Average Use	50	100	122	172	250	300	400
Block Break	40	40	40	40	40	40	40
Head Block	40	40	40	40	40	40	40
Tail Block	10	60	82	132	210	260	360
GAF $	$34.11	$68.21	$83.26	$117.15	$170.53	$204.63	$272.84
LDAF $	$7.53	$15.06	$18.38	$25.87	$37.65	$45.18	$60.24
Head Block $	$15.75	$15.75	$15.75	$15.75	$15.75	$15.75	$15.75
Tail Block $	$4.79	$28.71	$39.27	$63.04	$100.49	$124.41	$172.26
Customer Charge	$10.00	$10.00	$10.00	$10.00	$10.00	$10.00	$10.00
Total Bill	**$72**	**$138**	**$167**	**$232**	**$334**	**$400**	**$531**
With 2013 EE Budget							
Cust. Charge	$10.00	$10.00	$10.00	$10.00	$10.00	$10.00	$10.00
Headblock	$0.3938	$0.3938	$0.3938	$0.3938	$0.3938	$0.3938	$0.3938
Tailblock	$0.4785	$0.4785	$0.4785	$0.4785	$0.4785	$0.4785	$0.4785
CGA	$0.6821	$0.6821	$0.6821	$0.6821	$0.6821	$0.6821	$0.6821
LDAF	$0.1549	$0.1549	$0.1549	$0.1549	$0.1549	$0.1549	$0.1549
Average Use	50	100	122	172	250	300	400
Block Break	40	40	40	40	40	40	40
Head Block	40	40	40	40	40	40	40
Tail Block	10	60	82	132	210	260	360
GAF $	$34.11	$68.21	$83.26	$117.15	$170.53	$204.63	$272.84
LDAF $	$7.75	$15.49	$18.91	$26.60	$38.73	$46.47	$61.96
Head Block $	$15.75	$15.75	$15.75	$15.75	$15.75	$15.75	$15.75
Tail Block $	$4.79	$28.71	$39.27	$63.04	$100.49	$124.41	$172.26
Customer Charge	$10.00	$10.00	$10.00	$10.00	$10.00	$10.00	$10.00
Total Bill	**$72**	**$138**	**$167**	**$233**	**$335**	**$401**	**$533**
Variance	**$0.22**	**$0.43**	**$0.52**	**$0.74**	**$1.07**	**$1.29**	**$1.72**
Percent Variance	**0.3%**	**0.3%**	**0.3%**	**0.3%**	**0.3%**	**0.3%**	**0.3%**

Boston Gas Company

Monthly Bill Impact for an Average Residential Heating (R4) Customer (Assistance)

Feb - April 12 (Peak CGA & LDAF effective 2/1/12)			Avg. Winter				
With 2012 MTM EE Budget			Month	Peak Month			
Average Monthly Use per Customer - Therms	50	100	113	141	200	250	300
Cust. Charge	$10.00	$10.00	$10.00	$10.00	$10.00	$10.00	$10.00
Headblock	$0.3938	$0.3938	$0.3938	$0.3938	$0.3938	$0.3938	$0.3938
Tailblock	$0.4785	$0.4785	$0.4785	$0.4785	$0.4785	$0.4785	$0.4785
CGA	$0.6821	$0.6821	$0.6821	$0.6821	$0.6821	$0.6821	$0.6821
LDAF	$0.1506	$0.1506	$0.1506	$0.1506	$0.1506	$0.1506	$0.1506
Average Use	50	100	113	141	200	250	300
Block Break	40	40	40	40	40	40	40
Head Block	40	40	40	40	40	40	40
Tail Block	10	60	73	101	160	210	260
GAF $	$34.11	$68.21	$76.93	$95.97	$136.42	$170.53	$204.63
LDAF $	$7.53	$15.06	$16.99	$21.19	$30.12	$37.65	$45.18
Head Block $	$15.75	$15.75	$15.75	$15.75	$15.75	$15.75	$15.75
Tail Block $	$4.79	$28.71	$34.83	$48.19	$76.56	$100.49	$124.41
Customer Charge	$10.00	$10.00	$10.00	$10.00	$10.00	$10.00	$10.00
Total Bill	**$72**	**$138**	**$155**	**$191**	**$269**	**$334**	**$400**
25% Discount	$18	$34	$39	$48	$67	$84	$100
Total Discounted Bill	**$54**	**$103**	**$116**	**$143**	**$202**	**$251**	**$300**

With 2013 EE Budget

Cust. Charge	$10.00	$10.00	$10.00	$10.00	$10.00	$10.00	$10.00
Headblock	$0.3938	$0.3938	$0.3938	$0.3938	$0.3938	$0.3938	$0.3938
Tailblock	$0.4785	$0.4785	$0.4785	$0.4785	$0.4785	$0.4785	$0.4785
CGA	$0.6821	$0.6821	$0.6821	$0.6821	$0.6821	$0.6821	$0.6821
LDAF	$0.1549	$0.1549	$0.1549	$0.1549	$0.1549	$0.1549	$0.1549
Average Use	50	100	113	141	200	250	300
Block Break	40	40	40	40	40	40	40
Head Block	40	40	40	40	40	40	40
Tail Block	10	60	73	101	160	210	260
GAF $	$34.11	$68.21	$76.93	$95.97	$136.42	$170.53	$204.63
LDAF $	$7.75	$15.49	$17.47	$21.80	$30.98	$38.73	$46.47
Head Block $	$15.75	$15.75	$15.75	$15.75	$15.75	$15.75	$15.75
Tail Block $	$4.79	$28.71	$34.83	$48.19	$76.56	$100.49	$124.41
Customer Charge	$10.00	$10.00	$10.00	$10.00	$10.00	$10.00	$10.00
Total Bill	**$72**	**$138**	**$155**	**$192**	**$270**	**$335**	**$401**
25% Discount	$18	$35	$39	$48	$67	$84	$100
Total Discounted Bill	**$54**	**$104**	**$116**	**$144**	**$202**	**$252**	**$301**
Variance	**$0.16**	**$0.32**	**$0.36**	**$0.45**	**$0.64**	**$0.81**	**$0.97**
Percent Variance	**0.2%**	**0.2%**	**0.2%**	**0.2%**	**0.2%**	**0.2%**	**0.2%**

Boston Gas Company

Monthly Bill Impact for an Average Commercial G41B Customer

February - April 12 (Peak CGA & LDAF effective 2/1/12)			Avg. Winter				
With 2012 MTM EE Budget			Month	Peak Month			
Average Monthly Use per Customer - Therms	50	100	186	277	300	400	500
Cust. Charge	$21.00	$21.00	$21.00	$21.00	$21.00	$21.00	$21.00
Headblock	$0.3901	$0.3901	$0.3901	$0.3901	$0.3901	$0.3901	$0.3901
Tailblock	$0.4845	$0.4845	$0.4845	$0.4845	$0.4845	$0.4845	$0.4845
CGA	$0.6821	$0.6821	$0.6821	$0.6821	$0.6821	$0.6821	$0.6821
LDAF	$0.1268	$0.1268	$0.1268	$0.1268	$0.1268	$0.1268	$0.1268
Average Use	50	100	186	277	300	400	500
Block Break	60	60	60	60	60	60	60
Head Block	50	60	60	60	60	60	60
Tail Block	0	40	126	217	240	340	440
GAF $	$34.11	$68.21	$126.78	$188.85	$204.63	$272.84	$341.05
LDAF $	$6.34	$12.68	$23.57	$35.11	$38.04	$50.72	$63.40
Head Block $	$19.51	$23.41	$23.41	$23.41	$23.41	$23.41	$23.41
Tail Block $	$0.00	$19.38	$60.98	$105.07	$116.28	$164.73	$213.18
Customer Charge	$21.00	$21.00	$21.00	$21.00	$21.00	$21.00	$21.00
Total Bill	**$81**	**$145**	**$256**	**$373**	**$403**	**$533**	**$662**
With 2013 EE Budget							
Cust. Charge	$21.00	$21.00	$21.00	$21.00	$21.00	$21.00	$21.00
Headblock	$0.3901	$0.3901	$0.3901	$0.3901	$0.3901	$0.3901	$0.3901
Tailblock	$0.4845	$0.4845	$0.4845	$0.4845	$0.4845	$0.4845	$0.4845
CGA	$0.6821	$0.6821	$0.6821	$0.6821	$0.6821	$0.6821	$0.6821
LDAF	$0.1592	$0.1592	$0.1592	$0.1592	$0.1592	$0.1592	$0.1592
Average Use	50	100	186	277	300	400	500
Block Break	60	60	60	60	60	60	60
Head Block	50	60	60	60	60	60	60
Tail Block	0	40	126	217	240	340	440
GAF $	$34.11	$68.21	$126.78	$188.85	$204.63	$272.84	$341.05
LDAF $	$7.96	$15.92	$29.59	$44.08	$47.76	$63.68	$79.60
Head Block $	$19.51	$23.41	$23.41	$23.41	$23.41	$23.41	$23.41
Tail Block $	$0.00	$19.38	$60.98	$105.07	$116.28	$164.73	$213.18
Customer Charge	$21.00	$21.00	$21.00	$21.00	$21.00	$21.00	$21.00
Total Bill	**$83**	**$148**	**$262**	**$382**	**$413**	**$546**	**$678**
Variance	**$1.62**	**$3.24**	**$6.02**	**$8.97**	**$9.72**	**$12.96**	**$16.20**
Percent Variance	**2.0%**	**2.2%**	**2.3%**	**2.3%**	**2.4%**	**2.4%**	**2.4%**

Boston Gas Company

Monthly Bill Impact for an Average Commercial G51B Customer

February - April 12 (Peak CGA & LDAF effective 2/1/12)			Avg. Winter				
With 2012 MTM EE Budget			Month	Peak Month			
Average Monthly Use per Customer - Therms	50	100	177	203	250	300	400
Cust. Charge	$21.00	$21.00	$21.00	$21.00	$21.00	$21.00	$21.00
Headblock	$0.2833	$0.2833	$0.2833	$0.2833	$0.2833	$0.2833	$0.2833
Tailblock	$0.3571	$0.3571	$0.3571	$0.3571	$0.3571	$0.3571	$0.3571
CGA	$0.6821	$0.6821	$0.6821	$0.6821	$0.6821	$0.6821	$0.6821
LDAF	$0.1234	$0.1234	$0.1234	$0.1234	$0.1234	$0.1234	$0.1234
Average Use	50	100	177	203	250	300	400
Block Break	60	60	60	60	60	60	60
Head Block	50	60	60	60	60	60	60
Tail Block	0	40	117	143	190	240	340
GAF $	$34.11	$68.21	$120.66	$138.75	$170.53	$204.63	$272.84
LDAF $	$6.17	$12.34	$21.83	$25.10	$30.85	$37.02	$49.36
Head Block $	$14.17	$17.00	$17.00	$17.00	$17.00	$17.00	$17.00
Tail Block $	$0.00	$14.28	$41.74	$51.21	$67.85	$85.70	$121.41
Customer Charge	$21.00	$21.00	$21.00	$21.00	$21.00	$21.00	$21.00
Total Bill	**$75**	**$133**	**$222**	**$253**	**$307**	**$365**	**$482**

With 2013 EE Budget

Cust. Charge	$21.00	$21.00	$21.00	$21.00	$21.00	$21.00	$21.00
Headblock	$0.2833	$0.2833	$0.2833	$0.2833	$0.2833	$0.2833	$0.2833
Tailblock	$0.3571	$0.3571	$0.3571	$0.3571	$0.3571	$0.3571	$0.3571
CGA	$0.6821	$0.6821	$0.6821	$0.6821	$0.6821	$0.6821	$0.6821
LDAF	$0.1557	$0.1557	$0.1557	$0.1557	$0.1557	$0.1557	$0.1557
Average Use	50	100	177	203	250	300	400
Block Break	60	60	60	60	60	60	60
Head Block	50	60	60	60	60	60	60
Tail Block	0	40	117	143	190	240	340
GAF $	$34.11	$68.21	$120.66	$138.75	$170.53	$204.63	$272.84
LDAF $	$7.79	$15.57	$27.54	$31.67	$38.93	$46.71	$62.28
Head Block $	$14.17	$17.00	$17.00	$17.00	$17.00	$17.00	$17.00
Tail Block $	$0.00	$14.28	$41.74	$51.21	$67.85	$85.70	$121.41
Customer Charge	$21.00	$21.00	$21.00	$21.00	$21.00	$21.00	$21.00
Total Bill	**$77**	**$136**	**$228**	**$260**	**$315**	**$375**	**$495**
Variance	**$1.62**	**$3.23**	**$5.71**	**$6.57**	**$8.08**	**$9.69**	**$12.92**
Percent Variance	**2.1%**	**2.4%**	**2.5%**	**2.5%**	**2.6%**	**2.6%**	**2.6%**

Boston Gas Company

Monthly Bill Impact for an Average Commercial G41E Customer

February - April 12 (Peak CGA & LDAF effective 2/1/12)			Avg. Winter				
With 2012 MTM EE Budget			Month	Peak Month			
Average Monthly Use per Customer - Therms	50	100	334	471	500	600	700
Cust. Charge	$21.00	$21.00	$21.00	$21.00	$21.00	$21.00	$21.00
Headblock	$0.2288	$0.2288	$0.2288	$0.2288	$0.2288	$0.2288	$0.2288
Tailblock	$0.2856	$0.2856	$0.2856	$0.2856	$0.2856	$0.2856	$0.2856
CGA	$0.6821	$0.6821	$0.6821	$0.6821	$0.6821	$0.6821	$0.6821
LDAF	$0.1268	$0.1268	$0.1268	$0.1268	$0.1268	$0.1268	$0.1268
Average Use	50	100	334	471	500	600	700
Block Break	120	120	120	120	120	120	120
Head Block	50	100	120	120	120	120	120
Tail Block	0	0	214	351	380	480	580
GAF $	$34.11	$68.21	$227.81	$320.98	$341.05	$409.26	$477.47
LDAF $	$6.34	$12.68	$42.35	$59.67	$63.40	$76.08	$88.76
Head Block $	$11.44	$22.88	$27.46	$27.46	$27.46	$27.46	$27.46
Tail Block $	$0.00	$0.00	$61.12	$100.13	$108.53	$137.09	$165.65
Customer Charge	$21.00	$21.00	$21.00	$21.00	$21.00	$21.00	$21.00
Total Bill	**$73**	**$125**	**$380**	**$529**	**$561**	**$671**	**$780**
With 2013 EE Budget							
Cust. Charge	$21.00	$21.00	$21.00	$21.00	$21.00	$21.00	$21.00
Headblock	$0.2288	$0.2288	$0.2288	$0.2288	$0.2288	$0.2288	$0.2288
Tailblock	$0.2856	$0.2856	$0.2856	$0.2856	$0.2856	$0.2856	$0.2856
CGA	$0.6821	$0.6821	$0.6821	$0.6821	$0.6821	$0.6821	$0.6821
LDAF	$0.1592	$0.1592	$0.1592	$0.1592	$0.1592	$0.1592	$0.1592
Average Use	50	100	334	471	500	600	700
Block Break	120	120	120	120	120	120	120
Head Block	50	100	120	120	120	120	120
Tail Block	0	0	214	351	380	480	580
GAF $	$34.11	$68.21	$227.81	$320.98	$341.05	$409.26	$477.47
LDAF $	$7.96	$15.92	$53.17	$74.92	$79.60	$95.52	$111.44
Head Block $	$11.44	$22.88	$27.46	$27.46	$27.46	$27.46	$27.46
Tail Block $	$0.00	$0.00	$61.12	$100.13	$108.53	$137.09	$165.65
Customer Charge	$21.00	$21.00	$21.00	$21.00	$21.00	$21.00	$21.00
Total Bill	**$75**	**$128**	**$391**	**$544**	**$578**	**$690**	**$803**
Variance	**$1.62**	**$3.24**	**$10.82**	**$15.25**	**$16.20**	**$19.44**	**$22.68**
Percent Variance	**2.2%**	**2.5%**	**2.8%**	**2.8%**	**2.8%**	**2.8%**	**2.8%**

Boston Gas Company

Monthly Bill Impact for an Average Commercial G51E Customer

February - April 12 (Peak CGA & LDAF effective 2/1/12)			Avg. Winter				
With 2012 MTM EE Budget			Month	Peak Month			
Average Monthly Use per Customer - Therms	100	250	516	672	1,000	2,000	5,000
Cust. Charge	$21.00	$21.00	$21.00	$21.00	$21.00	$21.00	$21.00
Headblock	$0.2182	$0.2182	$0.2182	$0.2182	$0.2182	$0.2182	$0.2182
Tailblock	$0.2755	$0.2755	$0.2755	$0.2755	$0.2755	$0.2755	$0.2755
CGA	$0.6821	$0.6821	$0.6821	$0.6821	$0.6821	$0.6821	$0.6821
LDAF	$0.1234	$0.1234	$0.1234	$0.1234	$0.1234	$0.1234	$0.1234
Average Use	100	250	516	672	1,000	2,000	5,000
Block Break	200	200	200	200	200	200	200
Head Block	100	200	200	200	200	200	200
Tail Block	0	50	316	472	800	1,800	4,800
GAF $	$68.21	$170.53	$352.12	$458.05	$682.10	$1,364.20	$3,410.50
LDAF $	$12.34	$30.85	$63.70	$82.87	$123.40	$246.80	$617.00
Head Block $	$21.82	$43.64	$43.64	$43.64	$43.64	$43.64	$43.64
Tail Block $	$0.00	$13.78	$87.12	$129.91	$220.40	$495.90	$1,322.40
Customer Charge	$21.00	$21.00	$21.00	$21.00	$21.00	$21.00	$21.00
Total Bill	**$123**	**$280**	**$568**	**$735**	**$1,091**	**$2,172**	**$5,415**
With 2013 EE Budget							
Cust. Charge	$21.00	$21.00	$21.00	$21.00	$21.00	$21.00	$21.00
Headblock	$0.2182	$0.2182	$0.2182	$0.2182	$0.2182	$0.2182	$0.2182
Tailblock	$0.2755	$0.2755	$0.2755	$0.2755	$0.2755	$0.2755	$0.2755
CGA	$0.6821	$0.6821	$0.6821	$0.6821	$0.6821	$0.6821	$0.6821
LDAF	$0.1557	$0.1557	$0.1557	$0.1557	$0.1557	$0.1557	$0.1557
Average Use	100	250	516	672	1,000	2,000	5,000
Block Break	200	200	200	200	200	200	200
Head Block	100	200	200	200	200	200	200
Tail Block	0	50	316	472	800	1,800	4,800
GAF $	$68.21	$170.53	$352.12	$458.05	$682.10	$1,364.20	$3,410.50
LDAF $	$15.57	$38.93	$80.38	$104.56	$155.70	$311.40	$778.50
Head Block $	$21.82	$43.64	$43.64	$43.64	$43.64	$43.64	$43.64
Tail Block $	$0.00	$13.78	$87.12	$129.91	$220.40	$495.90	$1,322.40
Customer Charge	$21.00	$21.00	$21.00	$21.00	$21.00	$21.00	$21.00
Total Bill	**$127**	**$288**	**$584**	**$757**	**$1,123**	**$2,236**	**$5,576**
Variance	**3.23**	**8.08**	**16.67**	**21.69**	**32.30**	**64.60**	**161.50**
Percent Variance	**2.6%**	**2.8%**	**2.9%**	**2.9%**	**2.9%**	**2.9%**	**2.9%**

Colonial Gas Company

Monthly Bill Impact for an Average Residential Heating (R3) Customer

Feb - April 12 (Peak CGA & LDAF effective 2/1/12)			Avg. Winter				
With 2012 MTM EE Budget			Month	Peak Month			
Average Monthly Use per Customer- CCF	50	119	111	155	250	300	400
Cust. Charge	$8.00	$8.00	$8.00	$8.00	$8.00	$8.00	$8.00
Headblock	$0.3334	$0.3334	$0.3334	$0.3334	$0.3334	$0.3334	$0.3334
Tailblock	$0.3995	$0.3995	$0.3995	$0.3995	$0.3995	$0.3995	$0.3995
CGA	$0.6770	$0.6770	$0.6770	$0.6770	$0.6770	$0.6770	$0.6770
LDAF	$0.1252	$0.1252	$0.1252	$0.1252	$0.1252	$0.1252	$0.1252
Average Use	50	119	111	155	250	300	400
Block Break	40	40	40	40	40	40	40
Head Block	40	40	40	40	40	40	40
Tail Block	10	79	71	115	210	260	360
GAF $	$33.85	$80.56	$75.15	$104.94	$169.25	$203.10	$270.80
LDAF $	$6.26	$14.90	$13.90	$19.41	$31.30	$37.56	$50.08
Head Block $	$13.34	$13.34	$13.34	$13.34	$13.34	$13.34	$13.34
Tail Block $	$4.00	$31.56	$28.36	$45.94	$83.90	$103.87	$143.82
Customer Charge	$8.00	$8.00	$8.00	$8.00	$8.00	$8.00	$8.00
Total Bill	**$65**	**$148**	**$139**	**$192**	**$306**	**$366**	**$486**
With 2013 EE Budget							
Cust. Charge	$8.00	$8.00	$8.00	$8.00	$8.00	$8.00	$8.00
Headblock	$0.3334	$0.3334	$0.3334	$0.3334	$0.3334	$0.3334	$0.3334
Tailblock	$0.3995	$0.3995	$0.3995	$0.3995	$0.3995	$0.3995	$0.3995
CGA	$0.6770	$0.6770	$0.6770	$0.6770	$0.6770	$0.6770	$0.6770
LDAF	$0.1295	$0.1295	$0.1295	$0.1295	$0.1295	$0.1295	$0.1295
Average Use	50	119	111	155	250	300	400
Block Break	40	40	40	40	40	40	40
Head Block	40	40	40	40	40	40	40
Tail Block	10	79	71	115	210	260	360
GAF $	$33.85	$80.56	$75.15	$104.94	$169.25	$203.10	$270.80
LDAF $	$6.48	$15.41	$14.37	$20.07	$32.38	$38.85	$51.80
Head Block $	$13.34	$13.34	$13.34	$13.34	$13.34	$13.34	$13.34
Tail Block $	$4.00	$31.56	$28.36	$45.94	$83.90	$103.87	$143.82
Customer Charge	$8.00	$8.00	$8.00	$8.00	$8.00	$8.00	$8.00
Total Bill	**$66**	**$149**	**$139**	**$192**	**$307**	**$367**	**$488**
Variance	**$0.22**	**$0.51**	**$0.48**	**$0.67**	**$1.07**	**$1.29**	**$1.72**
Percent Variance	**0.3%**	**0.3%**	**0.3%**	**0.3%**	**0.4%**	**0.4%**	**0.4%**

Colonial Gas Company

Monthly Bill Impact for an Average Residential Heating (R4) Customer (Assistance)

Feb - April 12 (Peak CGA & LDAF effective 2/1/12)			Avg. Winter				
With 2012 MTM EE Budget			Month	Peak Month			
Average Monthly Use per Customer- CCF	50	100	116	145	250	300	400
Cust. Charge	$8.00	$8.00	$8.00	$8.00	$8.00	$8.00	$8.00
Headblock	$0.3334	$0.3334	$0.3334	$0.3334	$0.3334	$0.3334	$0.3334
Tailblock	$0.3995	$0.3995	$0.3995	$0.3995	$0.3995	$0.3995	$0.3995
CGA	$0.6770	$0.6770	$0.6770	$0.6770	$0.6770	$0.6770	$0.6770
LDAF	$0.1252	$0.1252	$0.1252	$0.1252	$0.1252	$0.1252	$0.1252
Average Use	50	100	116	145	250	300	400
Block Break	40	40	40	40	40	40	40
Head Block	40	40	40	40	40	40	40
Tail Block	10	60	76	105	210	260	360
GAF $	$33.85	$67.70	$78.53	$98.17	$169.25	$203.10	$270.80
LDAF $	$6.26	$12.52	$14.52	$18.15	$31.30	$37.56	$50.08
Head Block $	$13.34	$13.34	$13.34	$13.34	$13.34	$13.34	$13.34
Tail Block $	$4.00	$23.97	$30.36	$41.95	$83.90	$103.87	$143.82
Customer Charge	$8.00	$8.00	$8.00	$8.00	$8.00	$8.00	$8.00
Total Bill	**$65**	**$126**	**$145**	**$180**	**$306**	**$366**	**$486**
25% Discount	$16	$31	$36	$45	$76	$91	$122
Total Discounted Bill	**$49**	**$94**	**$109**	**$135**	**$229**	**$274**	**$365**
With 2013 EE Budget							
Cust. Charge	$8.00	$8.00	$8.00	$8.00	$8.00	$8.00	$8.00
Headblock	$0.3334	$0.3334	$0.3334	$0.3334	$0.3334	$0.3334	$0.3334
Tailblock	$0.3995	$0.3995	$0.3995	$0.3995	$0.3995	$0.3995	$0.3995
CGA	$0.6770	$0.6770	$0.6770	$0.6770	$0.6770	$0.6770	$0.6770
LDAF	$0.1295	$0.1295	$0.1295	$0.1295	$0.1295	$0.1295	$0.1295
Average Use	50	100	116	145	250	300	400
Block Break	40	40	40	40	40	40	40
Head Block	40	40	40	40	40	40	40
Tail Block	10	60	76	105	210	260	360
GAF $	$33.85	$67.70	$78.53	$98.17	$169.25	$203.10	$270.80
LDAF $	$6.48	$12.95	$15.02	$18.78	$32.38	$38.85	$51.80
Head Block $	$13.34	$13.34	$13.34	$13.34	$13.34	$13.34	$13.34
Tail Block $	$4.00	$23.97	$30.36	$41.95	$83.90	$103.87	$143.82
Customer Charge	$8.00	$8.00	$8.00	$8.00	$8.00	$8.00	$8.00
Total Bill	**$66**	**$126**	**$145**	**$180**	**$307**	**$367**	**$488**
25% Discount	$16	$31	$36	$45	$77	$92	$122
Total Discounted Bill	**$49**	**$94**	**$109**	**$135**	**$230**	**$275**	**$366**
Variance	**$0.16**	**$0.32**	**$0.37**	**$0.47**	**$0.81**	**$0.97**	**$1.29**
Percent Variance	**0.2%**	**0.3%**	**0.3%**	**0.3%**	**0.3%**	**0.3%**	**0.3%**

Colonial Gas Company

Monthly Bill Impact for an Average Commercial G41 Customer

Feb - April 12 (Peak CGA & LDAF effective 2/1/12)			Avg. Winter				
With 2012 MTM EE Budget			Month	Peak Month			
Average Monthly Use per Customer- therm	50	100	283	416	700	800	1,000
Cust. Charge	$11.00	$11.00	$11.00	$11.00	$11.00	$11.00	$11.00
Headblock	$0.2823	$0.2823	$0.2823	$0.2823	$0.2823	$0.2823	$0.2823
Tailblock	$0.3473	$0.3473	$0.3473	$0.3473	$0.3473	$0.3473	$0.3473
CGA	$0.6770	$0.6770	$0.6770	$0.6770	$0.6770	$0.6770	$0.6770
LDAF	$0.1022	$0.1022	$0.1022	$0.1022	$0.1022	$0.1022	$0.1022
Average Use	50	100	283	416	700	800	1,000
Block Break	120	120	120	120	120	120	120
Head Block	50	100	120	120	120	120	120
Tail Block	0	0	163	296	580	680	880
GAF $	$33.85	$67.70	$191.30	$281.74	$473.90	$541.60	$677.00
LDAF $	$5.11	$10.22	$28.88	$42.53	$71.54	$81.76	$102.20
Head Block $	$14.12	$28.23	$33.88	$33.88	$33.88	$33.88	$33.88
Tail Block $	$0.00	$0.00	$56.46	$102.86	$201.43	$236.16	$305.62
Customer Charge	$11.00	$11.00	$11.00	$11.00	$11.00	$11.00	$11.00
Total Bill	**$64**	**$117**	**$322**	**$472**	**$792**	**$904**	**$1,130**
With 2013 EE Budget							
Cust. Charge	$11.00	$11.00	$11.00	$11.00	$11.00	$11.00	$11.00
Headblock	$0.2823	$0.2823	$0.2823	$0.2823	$0.2823	$0.2823	$0.2823
Tailblock	$0.3473	$0.3473	$0.3473	$0.3473	$0.3473	$0.3473	$0.3473
CGA	$0.6770	$0.6770	$0.6770	$0.6770	$0.6770	$0.6770	$0.6770
LDAF	$0.1345	$0.1345	$0.1345	$0.1345	$0.1345	$0.1345	$0.1345
Average Use	50	100	283	416	700	800	1,000
Block Break	120	120	120	120	120	120	120
Head Block	50	100	120	120	120	120	120
Tail Block	0	0	163	296	580	680	880
GAF $	$33.85	$67.70	$191.30	$281.74	$473.90	$541.60	$677.00
LDAF $	$6.73	$13.45	$38.01	$55.97	$94.15	$107.60	$134.50
Head Block $	$14.12	$28.23	$33.88	$33.88	$33.88	$33.88	$33.88
Tail Block $	$0.00	$0.00	$56.46	$102.86	$201.43	$236.16	$305.62
Customer Charge	$11.00	$11.00	$11.00	$11.00	$11.00	$11.00	$11.00
Total Bill	**$66**	**$120**	**$331**	**$485**	**$814**	**$930**	**$1,162**
Variance	**$1.61**	**$3.23**	**$9.13**	**$13.44**	**$22.61**	**$25.84**	**$32.30**
Percent Variance	**2.5%**	**2.7%**	**2.8%**	**2.8%**	**2.8%**	**2.8%**	**2.8%**

Colonial Gas Company

Monthly Bill Impact for an Average Commercial G51 Customer

Feb - April 12 (Peak CGA & LDAF effective 2/1/12)			Avg. Winter				
With 2012 MTM EE Budget			Month	Peak Month			
Average Monthly Use per Customer- therm	100	250	365	418	1,000	2,000	5,000
Cust. Charge	$11.00	$11.00	$11.00	$11.00	$11.00	$11.00	$11.00
Headblock	$0.2233	$0.2233	$0.2233	$0.2233	$0.2233	$0.2233	$0.2233
Tailblock	$0.2763	$0.2763	$0.2763	$0.2763	$0.2763	$0.2763	$0.2763
CGA	$0.6770	$0.6770	$0.6770	$0.6770	$0.6770	$0.6770	$0.6770
LDAF	$0.1017	$0.1017	$0.1017	$0.1017	$0.1017	$0.1017	$0.1017
Average Use	100	250	365	418	1,000	2,000	5,000
Block Break	175	175	175	175	175	175	175
Head Block	100	175	175	175	175	175	175
Tail Block	0	75	190	243	825	1,825	4,825
GAF $	$67.70	$169.25	$246.95	$283.19	$677.00	$1,354.00	$3,385.00
LDAF $	$10.17	$25.43	$37.10	$42.54	$101.70	$203.40	$508.50
Head Block $	$22.33	$39.08	$39.08	$39.08	$39.08	$39.08	$39.08
Tail Block $	$0.00	$20.72	$52.43	$67.22	$227.95	$504.25	$1,333.15
Customer Charge	$11.00	$11.00	$11.00	$11.00	$11.00	$11.00	$11.00
Total Bill	**$111**	**$265**	**$387**	**$443**	**$1,057**	**$2,112**	**$5,277**

Total Bill

Cust. Charge	$11.00	$11.00	$11.00	$11.00	$11.00	$11.00	$11.00
Headblock	$0.2233	$0.2233	$0.2233	$0.2233	$0.2233	$0.2233	$0.2233
Tailblock	$0.2763	$0.2763	$0.2763	$0.2763	$0.2763	$0.2763	$0.2763
CGA	$0.6770	$0.6770	$0.6770	$0.6770	$0.6770	$0.6770	$0.6770
LDAF	$0.1340	$0.1340	$0.1340	$0.1340	$0.1340	$0.1340	$0.1340
Average Use	100	250	365	418	1,000	2,000	5,000
Block Break	175	175	175	175	175	175	175
Head Block	100	175	175	175	175	175	175
Tail Block	0	75	190	243	825	1,825	4,825
GAF $	$67.70	$169.25	$246.95	$283.19	$677.00	$1,354.00	$3,385.00
LDAF $	$13.40	$33.50	$48.88	$56.05	$134.00	$268.00	$670.00
Head Block $	$22.33	$39.08	$39.08	$39.08	$39.08	$39.08	$39.08
Tail Block $	$0.00	$20.72	$52.43	$67.22	$227.95	$504.25	$1,333.15
Customer Charge	$11.00	$11.00	$11.00	$11.00	$11.00	$11.00	$11.00
Total Bill	**$114**	**$274**	**$398**	**$457**	**$1,089**	**$2,176**	**$5,438**
Variance	**3.23**	**8.07**	**11.78**	**13.51**	**32.30**	**64.60**	**161.50**
Percent Variance	**2.8%**	**3.0%**	**3.0%**	**3.0%**	**3.0%**	**3.0%**	**3.0%**

NSTAR GAS COMPANY
WINTER BILL COMPARISON
DOMESTIC HEATING RATE R-3

WINTER USAGE & RATES

BILL PERCENTILE	MONTHLY THERMS	-------2012 3 YR Plan -------- TOTAL	CGA (1)	CC/LDAC (3)	DIST.	------- 2012 MTM -------- TOTAL	CGA (2)	CC/LDAC (4)	DIST.	---- CHANGE ---- AMOUNT	% OF TOTAL
10	32	$ 55.07	$ 25.82	$ 5.06	$ 24.19	$ 55.81	$ 25.82	$ 5.80	$ 24.19	$ 0.74	1.3%
20	54	87.02	43.57	8.53	34.92	88.27	43.57	9.78	34.92	1.25	1.4%
30	72	108.84	58.10	11.38	39.36	110.50	58.10	13.04	39.36	1.66	1.5%
40	90	130.63	72.62	14.22	43.79	132.71	72.62	16.30	43.79	2.08	1.6%
50	110	154.87	88.76	17.38	48.73	157.41	88.76	19.92	48.73	2.54	1.6%
60	130	179.10	104.90	20.54	53.66	182.10	104.90	23.54	53.66	3.00	1.7%
70	160	215.44	129.10	25.28	61.06	219.14	129.10	28.98	61.06	3.70	1.7%
80	190	251.78	153.31	30.02	68.45	256.17	153.31	34.41	68.45	4.39	1.7%
90	250	324.48	201.73	39.50	83.25	330.26	201.73	45.28	83.25	5.78	1.8%
Avg Use	131	180.30	105.70	20.70	53.90	183.32	105.70	23.72	53.90	3.02	1.7%

PRESENT RATE
R-3

		WINTER		SUMMER	
CUSTOMER CHARGE:		$ 6.88		$ 6.88	
ENERGY CHARGE:		THERM		THERM	
FIRST		50	$ 0.5410	20	$ 0.5410
OVER		50	$ 0.2466	20	$ 0.2466

PROPOSED RATE
R-3

	WINTER		SUMMER	
CUSTOMER CHARGE:	$ 6.88		$ 6.88	
ENERGY CHARGE:	THERM	RATE	THERM	RATE
FIRST	50	$ 0.5410	20	$ 0.5410
OVER	50	$ 0.2466	20	$ 0.2466

PRESENT RATE ADJUSTMENTS	CENTS/THERM
(1) WINTER CGA	80.690
SUMMER CGA	47.670
(3) LDAC FACTOR	15.800

PROPOSED RATE ADJUSTMENTS	CENTS/THERM
(2) WINTER CGA	80.690
SUMMER CGA	47.670
(4) LDAC FACTOR	18.110

NSTAR GAS COMPANY
WINTER BILL COMPARISON
DOMESTIC HEATING LOW INCOME RATE R-4

WINTER USAGE & RATES

BILL PERCENTILE	MONTHLY THERMS	-------2012 3 YR Plan -------- TOTAL	CGA (1)	CC/LDAC (3)	DIST.	------- 2012 MTM -------- TOTAL	CGA (2)	CC/LDAC (4)	DIST.	---- CHANGE ---- AMOUNT	% OF TOTAL
10	40	$ 49.76	$ 32.28	$ 6.32	$ 11.16	$ 50.68	$ 32.28	$ 7.24	$ 11.16	$ 0.92	1.8%
20	57	68.59	45.99	9.01	13.59	69.90	45.99	10.32	13.59	1.31	1.9%
30	73	85.06	58.90	11.53	14.63	86.75	58.90	13.22	14.63	1.69	2.0%
40	88	100.51	71.01	13.90	15.60	102.55	71.01	15.94	15.60	2.04	2.0%
50	100	112.87	80.69	15.80	16.38	115.18	80.69	18.11	16.38	2.31	2.0%
60	120	133.46	96.83	18.96	17.67	136.23	96.83	21.73	17.67	2.77	2.1%
70	145	159.20	117.00	22.91	19.29	162.55	117.00	26.26	19.29	3.35	2.1%
80	170	184.94	137.17	26.86	20.91	188.87	137.17	30.79	20.91	3.93	2.1%
90	220	236.43	177.52	34.76	24.15	241.51	177.52	39.84	24.15	5.08	2.1%
Avg Use	120	133.46	96.83	18.96	17.67	136.23	96.83	21.73	17.67	2.77	2.1%

PRESENT RATE R-4		WINTER		SUMMER		PROPOSED RATE R-4		WINTER		SUMMER	
CUSTOMER CHARGE:		$ 3.24		$ 3.24		CUSTOMER CHARGE:		$ 3.24		$ 3.24	
ENERGY CHARGE:		THERM		THERM		ENERGY CHARGE:		THERM	RATE	THERM	RATE
	FIRST	50	$ 0.1979	20	$ 0.1979		FIRST	50	$ 0.1979	20	$ 0.1979
	OVER	50	$ 0.0648	20	$ 0.0648		OVER	50	$ 0.0648	20	$ 0.0648

PRESENT RATE ADJUSTMENTS	CENTS/THERM
(1) WINTER CGA	80.690
SUMMER CGA	47.670
(3) LDAC FACTOR	15.800

PROPOSED RATE ADJUSTMENTS	CENTS/THERM
(2) WINTER CGA	80.690
SUMMER CGA	47.670
(4) LDAC FACTOR	18.110

NSTAR GAS COMPANY
WINTER BILL COMPARISON
LOW LOAD FACTOR SMALL GENERAL- RATE G-41

WINTER USAGE & RATES

BILL PERCENTILE	MONTHLY THERMS	-------2012 3 YR Plan -------- TOTAL	CGA (1)	CC/LDAC (3)	DIST.	------- 2012 MTM -------- TOTAL	CGA (2)	CC/LDAC (4)	DIST.	---- CHANGE ---- AMOUNT	% OF TOTAL
10	7	$ 23.52	$ 5.65	$ 0.72	$ 17.15	$ 23.78	$ 5.65	$ 0.98	$ 17.15	$ 0.26	1.1%
20	28	47.91	22.59	2.86	22.46	48.96	22.59	3.91	22.46	1.05	2.2%
30	56	80.45	45.19	5.72	29.54	82.55	45.19	7.82	29.54	2.10	2.6%
40	90	119.96	72.62	9.20	38.14	123.33	72.62	12.57	38.14	3.37	2.8%
50	135	172.25	108.93	13.80	49.52	177.31	108.93	18.86	49.52	5.06	2.9%
60	200	247.78	161.38	20.44	65.96	255.28	161.38	27.94	65.96	7.50	3.0%
70	290	352.36	234.00	29.64	88.72	363.23	234.00	40.51	88.72	10.87	3.1%
80	450	538.29	363.11	45.99	129.19	555.17	363.11	62.87	129.19	16.88	3.1%
90	800	944.98	645.52	81.76	217.70	974.98	645.52	111.76	217.70	30.00	3.2%
Avg Use	296	359.33	238.84	30.25	90.24	370.43	238.84	41.35	90.24	11.10	3.1%

PRESENT RATE G-41		WINTER	SUMMER
CUSTOMER CHARGE:		$ 15.38	$ 15.38
ENERGY CHARGE:	PER THERM	$ 0.2529	$ 0.1712

PROPOSED RATE G-41		WINTER	SUMMER
CUSTOMER CHARGE:		$ 15.38	$ 15.38
ENERGY CHARGE:	PER THERM	$ 0.2529	$ 0.1712

PRESENT RATE ADJUSTMENTS	CENTS/THERM
(1) WINTER CGA	80.690
SUMMER CGA	47.670
(3) LDAC FACTOR	10.220

PROPOSED RATE ADJUSTMENTS	CENTS/THERM
(2) WINTER CGA	80.690
SUMMER CGA	47.670
(4) LDAC FACTOR	13.970

COLUMBIA GAS OF MASSACHUSETTS
Typical Residential Heating Bill (R-3)
Energy Efficiency Non-participant and Participant Bill Impacts re: EE Surcharge and Therm Savings
Effective May 2012

Attach. A
Page 1 of 2

Typical Usage In Therms

Line No.	Residential Heating (R-3)		Jan (1)	Feb (2)	Mar (3)	Apr (4)	May (5)	Jun (6)	Jul (7)	Aug (8)	Sep (9)	Oct (10)	Nov (11)	Dec (12)	Total May - Apr (13)	Total Off-Peak (14)	Total Peak (15)
1	Average Monthly Use	*Input*	185	157	132	75	41	22	20	20	23	50	91	150	966	176	790
2	Participant Average Therm Savings @	**15.0%**	28	24	20	11	6	3	3	3	3	8	14	23	**145**	**26**	**119**
3	Participant Average Monthly Use		157	133	112	64	35	19	17	17	20	43	77	128	821	150	205
4																	
5	**Base Rates Effective 11/01/09 --- Nonparticipant**																
6	Off-Peak																
7	Cust. Chg	$10.94					$10.94	$10.94	$10.94	$10.94	$10.94	$10.94			$66	$66	
8	First 10 therms @	$0.3044					$3.04	$3.04	$3.04	$3.04	$3.04	$3.04			$18	$18	
9	10 therms @	$0.3546					$10.99	$4.26	$3.55	$3.55	$4.61	$14.18			$41	$41	
10																	
11	Peak																
12	Cust. Chg	$10.94	$10.94	$10.94	$10.94	$10.94							$10.94	$10.94	$66		$66
13	First 50 therms @	$0.3044	$15.22	$15.22	$15.22	$15.22							$15.22	$15.22	$91		$91
14	Over 50 therms @	$0.3546	$47.87	$37.94	$29.08	$8.87							$14.54	$35.46	$174		$174
15																	
16	Base Rate Amount -- **Nonparticipant**		$74.03	$64.10	$55.24	$35.03	$24.98	$18.24	$17.53	$17.53	$18.59	$28.17	$40.70	$61.62	$456	$125	$331
17																	
18	**Base Rates Effective 11/01/09 --- Participant Costs**																
19	Off-Peak																
20	Cust. Chg	$10.94					$10.94	$10.94	$10.94	$10.94	$10.94	$10.94			$66	$66	
21	First 10 therms @	$0.3044					$3.04	$3.04	$3.04	$3.04	$3.04	$3.04			$18	$18	
22	10 therms @	$0.3546					$8.81	$3.09	$2.48	$2.48	$3.39	$11.53			$32	$32	
23																	
24	Peak																
25	Cust. Chg	$10.94	$10.94	$10.94	$10.94	$10.94							$10.94	$10.94	$66		$66
26	First 50 therms @	$0.3044	$15.22	$15.22	$15.22	$15.22							$15.22	$15.22	$91		$91
27	Over 50 therms @	$0.3546	$38.03	$29.59	$22.06	$4.88							$9.70	$27.48	$132		$132
28																	
29	Base Rate Amount -- **Participant**		$64.19	$55.75	$48.22	$31.04	$22.80	$17.07	$16.47	$16.47	$17.37	$25.51	$35.86	$53.64	$404	$116	$289
30																	
31																	
32	**Nov. 2011 - May 2012 -- Year 1**																
33	Proposed CGA Rates - May 2012 & Nov 2011		$0.7929	$0.6551	$0.6551	$0.6551	$0.3644	$0.3644	$0.3644	$0.3644	$0.3644	$0.3644	$0.7929	$0.7929			
34	Proposed LDAF - Annual eff. Nov. 1, 2011 *		$0.0878	$0.0878	$0.0878	$0.0878	$0.0880	$0.0880	$0.0880	$0.0880	$0.0880	$0.0880	$0.0878	$0.0878			
35	Including EES * of:		**$0.0391**	**$0.0391**	**$0.0391**	**$0.0391**	**$0.0391**	**$0.0391**	**$0.0391**	**$0.0391**	**$0.0391**	**$0.0391**	**$0.0391**	**$0.0391**			
36	Revenue Decoupling Adj. Factor (RDAF) - Annual *																
37	EE ProgramTherm Savings Impact on RDAF		$0.0017	$0.0017	$0.0017	$0.0017	$0.0017	$0.0017	$0.0017	$0.0017	$0.0017	$0.0017	$0.0017	$0.0017			
38																	
39	**Non-participant**																
40	Total Bill Without EES and without EE Impact on RDAF		$229.40	$174.32	$147.91	$87.68	$41.85	$27.29	$25.76	$25.76	$28.06	$48.75	$117.13	$187.60	$1,142	$197.47	$944
41	Total Bill With EES		$236.97	$180.74	$153.30	$90.75	$43.53	$28.19	$26.58	$26.58	$29.00	$50.79	$120.85	$193.73	$1,181	$204.67	$976
42	Difference		$7.56	$6.42	$5.40	$3.07	$1.68	$0.90	$0.82	$0.82	$0.94	$2.04	$3.72	$6.13	**$39**	$7	$32
43																	
44	% Change in Total Bill - Non-participant		3.30%	3.68%	3.65%	3.50%	4.01%	3.30%	3.17%	3.17%	3.35%	4.19%	3.18%	3.27%	**3.46%**	3.64%	3.42%
45																	
46	**Participant**																
47	Total Bill Without EES, Therm Savings and RDAF Impact		$229.40	$174.32	$147.91	$87.68	$41.85	$27.29	$25.76	$25.76	$28.06	$48.75	$117.13	$187.60	$1,142	$197.47	$944
48	Total Bill With EES & With Therm Savings & RDAF Impact		$202.69	$154.90	$131.57	$78.40	$38.56	$25.53	$24.16	$24.16	$26.22	$44.74	$103.98	$165.94	$1,021	$183.36	$837
49	Difference		($26.72)	($19.43)	($16.33)	($9.28)	($3.29)	($1.76)	($1.60)	($1.60)	($1.84)	($4.01)	($13.14)	($21.66)	**($121)**	($14)	($107)
50																	
51	% Change in Total Bill - Non-participant		-11.65%	-11.14%	-11.04%	-10.58%	-7.85%	-6.46%	-6.22%	-6.22%	-6.57%	-8.22%	-11.22%	-11.55%	**-10.57%**	-7.15%	-11.29%
52						*input*											
53	Net Savings / Cost -- Combined Participant and Nonparticipant: Based on Participant level of:					**25%**									**-0.05%**	**0.95%**	**-0.26%**

* Use Calculated annualized EE-based RDAF instead of actual RDAFs.

Columbia Gas of Massachusetts
Derivation of EE Savings Impact on Rates
and EES Rate Calculation During 3-Year Plan

Attachment A
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1	RDAF re: EE Program Therm Savings:		BENCHMARK		
2	***Volumetric*** Benchmark (2008) Base Revenue		$ 125,581,146	- rev 12-21-11	
3	Test Year 2008 Therms		516,576,411		
4	Average Rev per Therm	(1) / (2)	$ 0.2431		
5					
6	**EE Savings Rate Impact**		YEAR 1 - 2013	YEAR 2 - 2014	YEAR 3 - 2015
7	EE Therm Savings		3,684,198	3,791,301	3,911,146
8	Reduced Year 1 Annual Therms	(3) - (7)	512,892,213	512,785,110	512,665,265
9	Reduced Avg Rev per Therm	(2) / (8)	$ 0.2448	$ 0.2449	$ 0.2450
10					
11	**Rate Impact (LBR-type Rate)**	(9) - (4)	$ 0.0017	$ 0.0018	$ 0.0019
12					
13					
14	**EES Rate:**		YEAR 1 - 2013	YEAR 2 - 2014	YEAR 3 - 2015
15	Res Htg Annual Budget *		$ 9,043,571	$9,704,309	$10,397,382
16	Annual Vols - Therms		231,065,000	232,220,325	233,381,427
17	**EES Rate**	(15) / (16)	$ 0.0391	$0.0418	$0.0446

* From 3-Year Plan

COLUMBIA GAS OF MASSACHUSETTS
Typical Residential Heating Bill (R-4)
Energy Efficiency Non-participant and Participant Bill Impacts re: EE Surcharge and Therm Savings
Effective May 2012

Attach. B
Page 1 of 2

Typical Usage In Therms

Line No.	Residential Heating Low Income (R-4)	Jan (1)	Feb (2)	Mar (3)	Apr (4)	May (5)	Jun (6)	Jul (7)	Aug (8)	Sep (9)	Oct (10)	Nov (11)	Dec (12)	Total May - Apr (13)	Total Off-Peak (14)	Total Peak (15)
1	Average Monthly Use *Input*	179	151	131	74	43	23	21	22	25	54	93	151	967	188	779
2	Participant Average Therm Savings @ **15.0%**	27	23	20	11	6	3	3	3	4	8	14	23	**145**	**28**	**117**
3	Participant Average Monthly Use	152	128	111	63	37	20	18	19	21	46	79	128	822	160	207
4																
5	**Base Rates Effective 11/01/09 --- Nonparticipant**															
6	Off-Peak															
7	Cust. Chg $10.94					$10.94	$10.94	$10.94	$10.94	$10.94	$10.94			$66	$66	
8	First 10 therms @ $0.3044					$3.04	$3.04	$3.04	$3.04	$3.04	$3.04			$18	$18	
9	10 therms @ $0.3546					$11.70	$4.61	$3.90	$4.26	$5.32	$15.60			$45	$45	
10																
11	Peak															
12	Cust. Chg $10.94	$10.94	$10.94	$10.94	$10.94							$10.94	$10.94	$66		$66
13	First 50 therms @ $0.3044	$15.22	$15.22	$15.22	$15.22							$15.22	$15.22	$91		$91
14	Over 50 therms @ $0.3546	$45.74	$35.82	$28.72	$8.51							$15.25	$35.82	$170		$170
15																
16	Base Rate Amount -- **Nonparticipant**	$71.90	$61.98	$54.88	$34.67	$25.69	$18.59	$17.89	$18.24	$19.30	$29.59	$41.41	$61.98	$456	$129	$327
17																
18	**Base Rates Effective 11/01/09 --- Participant Costs**															
19	Off-Peak															
20	Cust. Chg $10.94					$10.94	$10.94	$10.94	$10.94	$10.94	$10.94			$66	$66	
21	First 10 therms @ $0.3044					$3.04	$3.04	$3.04	$3.04	$3.04	$3.04			$18	$18	
22	10 therms @ $0.3546					$9.42	$3.39	$2.78	$3.09	$3.99	$12.73			$35	$35	
23																
24	Peak															
25	Cust. Chg $10.94	$10.94	$10.94	$10.94	$10.94							$10.94	$10.94	$66		$66
26	First 50 therms @ $0.3044	$15.22	$15.22	$15.22	$15.22							$15.22	$15.22	$91		$91
27	Over 50 therms @ $0.3546	$36.22	$27.78	$21.76	$4.57							$10.30	$27.78	$128		$128
28																
29	Base Rate Amount -- **Participant**	$62.38	$53.94	$47.92	$30.73	$23.40	$17.37	$16.77	$17.07	$17.97	$26.71	$36.46	$53.94	$405	$119	$285
30																
31																
32	**Nov. 2011 - May 2012 -- Year 1**															
33	Proposed CGA Rates - May 2012 & Nov 2011	$0.7929	$0.6551	$0.6551	$0.6551	$0.3644	$0.3644	$0.3644	$0.3644	$0.3644	$0.3644	$0.7929	$0.7929			
34	Proposed LDAF - Annual eff. Nov. 1, 2011 *	$0.0878	$0.0878	$0.0878	$0.0878	$0.0880	$0.0880	$0.0880	$0.0880	$0.0880	$0.0880	$0.0878	$0.0878			
35	Including EES * of:	**$0.0391**	**$0.0391**	**$0.0391**	**$0.0391**	**$0.0391**	**$0.0391**	**$0.0391**	**$0.0391**	**$0.0391**	**$0.0391**	**$0.0391**	**$0.0391**			
36	Revenue Decoupling Adj. Factor (RDAF) - Annual *															
37	EE ProgramTherm Savings Impact on RDAF	$0.0017	$0.0017	$0.0017	$0.0017	$0.0017	$0.0017	$0.0017	$0.0017	$0.0017	$0.0017	$0.0017	$0.0017			
38																
39	**Non-participant - Reflects Discount of: 20.9%**															
40	Total Bill Without EES and without EE Impact on RDAF	$175.79	$132.88	$116.16	$68.52	$34.32	$22.20	$20.98	$21.59	$23.41	$40.98	$94.54	$149.34	$901	$163.47	$737
41	Total Bill With EES	$181.58	$137.76	$120.40	$70.91	$35.71	$22.94	$21.66	$22.30	$24.22	$42.73	$97.54	$154.22	$932	$169.55	$762
42	Difference	$5.79	$4.88	$4.24	$2.39	$1.39	$0.74	$0.68	$0.71	$0.81	$1.75	$3.01	$4.88	**$31**	$6	$25
43																
44	% Change in Total Bill - Non-participant	3.29%	3.68%	3.65%	3.49%	4.05%	3.35%	3.24%	3.30%	3.45%	4.26%	3.18%	3.27%	**3.47%**	3.72%	3.42%
45																
46	**Participant - Reflects Discount of: 20.9%**															
47	Total Bill Without EES, Therm Savings and RDAF Impact	$175.79	$132.88	$116.16	$68.52	$34.32	$22.20	$20.98	$21.59	$23.41	$40.98	$94.54	$149.34	$901	$163.47	$737
48	Total Bill With EES & With Therm Savings & RDAF Impact	$155.34	$118.10	$103.34	$61.27	$31.59	$20.74	$19.65	$20.19	$21.82	$37.56	$83.91	$132.09	$806	$151.55	$654
49	Difference	($20.45)	($14.78)	($12.82)	($7.24)	($2.73)	($1.46)	($1.33)	($1.39)	($1.59)	($3.42)	($10.62)	($17.25)	**($95)**	($12)	($83)
50																
51	% Change in Total Bill - Non-participant	-11.63%	-11.12%	-11.04%	-10.57%	-7.95%	-6.57%	-6.35%	-6.46%	-6.77%	-8.36%	-11.24%	-11.55%	**-10.56%**	-7.29%	-11.28%
52					*input*											
53	Net Savings / Cost -- Combined Participant and Nonparticipant: Based on Participant level of:				**25%**									**-0.04%**	**0.97%**	**-0.26%**

* Use Calculated annualized EE-based RDAF instead of actual RDAFs.

Columbia Gas of Massachusetts
Derivation of EE Savings Impact on Rates
and EES Rate Calculation During 3-Year Plan

Attachment B
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1	RDAF re: EE Program Therm Savings:		BENCHMARK		
2	***Volumetric*** Benchmark (2008) Base Revenue		$ 125,581,146	- rev 12-21-11	
3	Test Year 2008 Therms		516,576,411		
4	Average Rev per Therm	(1) / (2)	$ 0.2431		
5					
6	**EE Savings Rate Impact**		YEAR 1 - 2013	YEAR 2 - 2014	YEAR 3 - 2015
7	EE Therm Savings		3,684,198	3,791,301	3,911,146
8	Reduced Year 1 Annual Therms	(3) - (7)	512,892,213	512,785,110	512,665,265
9	Reduced Avg Rev per Therm	(2) / (8)	$ 0.2448	$ 0.2449	$ 0.2450
10					
11	**Rate Impact (LBR-type Rate)**	(9) - (4)	$ 0.0017	$ 0.0018	$ 0.0019
12					
13					
14	**EES Rate:**		YEAR 1 - 2013	YEAR 2 - 2014	YEAR 3 - 2015
15	Res Htg Annual Budget *		$ 9,043,571	$9,704,309	$10,397,382
16	Annual Vols - Therms		231,065,000	232,220,325	233,381,427
17	**EES Rate**	(15) / (16)	$ 0.0391	$0.0418	$0.0446

* From 3-Year Plan

COLUMBIA GAS OF MASSACHUSETTS
Typical Low Annual / High Winter (G-40)
Energy Efficiency Non-participant and Participant Bill Impacts re: EE Surcharge and Therm Savings
Effective May 2012

Attachment C
Page 1 of 2

Typical Usage In Therms

Line No.	C&I Low Annual/High Winter (G-40)				Jan (1)	Feb (2)	Mar (3)	Apr (4)	May (5)	Jun (6)	Jul (7)	Aug (8)	Sep (9)	Oct (10)	Nov (11)	Dec (12)	Total May - Apr (13)	Total Off-Peak (14)	Total Peak (15)
1	Average Monthly Use		*Input*		291	247	189	88	33	11	10	10	15	40	105	204	1,243	119	1,124
2	Participant Average Therm Savings @		**15.0%**		44	37	28	13	5	2	2	2	2	6	16	31	**186**	**18**	**169**
3	Participant Average Monthly Use				247	210	161	75	28	9	9	9	13	34	89	173	1,057	101	263
4																			
5	**Base Rates Effective 11/01/09 --- Nonparticipant**																		
6	Off-Peak																		
7	Cust. Chg			$17.51					$17.51	$17.51	$17.51	$17.51	$17.51	$17.51			$105	$105	
8	First	8	therms @	$0.2963					$2.37	$2.37	$2.37	$2.37	$2.37	$2.37			$14	$14	
9		8	therms @	$0.3477					$8.69	$1.04	$0.70	$0.70	$2.43	$11.13			$25	$25	
10																			
11	Peak																		
12	Cust. Chg			$17.51	$17.51	$17.51	$17.51	$17.51							$17.51	$17.51	$105		$105
13	First	50	therms @	$0.2963	$14.82	$14.82	$14.82	$14.82							$14.82	$14.82	$89		$89
14	Over	50	therms @	$0.3477	$83.80	$68.50	$48.33	$13.21							$19.12	$53.55	$287		$287
15																			
16	Base Rate Amount -- **Nonparticipant**				$116.12	$100.82	$80.66	$45.54	$28.57	$20.92	$20.58	$20.58	$22.31	$31.01	$51.45	$85.87	$624	$144	$480
17																			
18	**Base Rates Effective 11/01/09 --- Participant Costs**																		
19	Off-Peak																		
20	Cust. Chg			$17.51					$17.51	$17.51	$17.51	$17.51	$17.51	$17.51			$105	$105	
21	First	8	therms @	$0.2963					$2.37	$2.37	$2.37	$2.37	$2.37	$2.37			$14	$14	
22		8	therms @	$0.3477					$6.97	$0.47	$0.17	$0.17	$1.65	$9.04			$18	$18	
23																			
24	Peak																		
25	Cust. Chg			$17.51	$17.51	$17.51	$17.51	$17.51							$17.51	$17.51	$105		$105
26	First	50	therms @	$0.2963	$14.82	$14.82	$14.82	$14.82							$14.82	$14.82	$89		$89
27	Over	50	therms @	$0.3477	$68.62	$55.62	$38.47	$8.62							$13.65	$42.91	$228		$228
28																			
29	Base Rate Amount -- **Participant**				$100.94	$87.94	$70.80	$40.95	$26.85	$20.35	$20.05	$20.05	$21.53	$28.92	$45.97	$75.23	$560	$138	$422
30																			
31																			
32	**Nov. 2011 - May 2012 -- Year 1**																		
33	Proposed CGA Rates - May 2012 & Nov 2011				$0.7929	$0.6551	$0.6551	$0.6551	$0.3644	$0.3644	$0.3644	$0.3644	$0.3644	$0.3644	$0.7929	$0.7929			
34	Proposed LDAF - Annual eff. Nov. 1, 2011 *				$0.0865	$0.0865	$0.0865	$0.0865	$0.0867	$0.0867	$0.0867	$0.0867	$0.0867	$0.0867	$0.0865	$0.0865			
35	Including EES * of:				**$0.0378**	**$0.0378**	**$0.0378**	**$0.0378**	**$0.0378**	**$0.0378**	**$0.0378**	**$0.0378**	**$0.0378**	**$0.0378**	**$0.0378**	**$0.0378**			
36	Revenue Decoupling Adj. Factor (RDAF) - Annual *																		
37	EE ProgramTherm Savings Impact on RDAF				$0.0017	$0.0017	$0.0017	$0.0017	$0.0017	$0.0017	$0.0017	$0.0017	$0.0017	$0.0017	$0.0017	$0.0017			
38																			
39	**Non-participant**																		
40	Total Bill Without EES and without EE Impact on RDAF				$360.53	$274.24	$213.35	$107.32	$42.15	$25.45	$24.69	$24.69	$28.49	$47.47	$139.64	$257.21	$1,545	$192.94	$1,352
41	Total Bill With EES				$372.03	$284.00	$220.82	$110.80	$43.46	$25.88	$25.09	$25.09	$29.08	$49.05	$143.79	$265.27	$1,594	$197.64	$1,397
42	Difference				$11.50	$9.76	$7.47	$3.48	$1.30	$0.43	$0.40	$0.40	$0.59	$1.58	$4.15	$8.06	**$49**	$5	$44
43																			
44	% Change in Total Bill - Non-participant				3.19%	3.56%	3.50%	3.24%	3.09%	1.71%	1.60%	1.60%	2.08%	3.33%	2.97%	3.13%	**3.18%**	2.44%	3.28%
45																			
46	**Participant**																		
47	Total Bill Without EES, Therm Savings and RDAF Impact				$360.53	$274.24	$213.35	$107.32	$42.15	$25.45	$24.69	$24.69	$28.49	$47.47	$139.64	$257.21	$1,545	$192.94	$1,352
48	Total Bill With EES & With Therm Savings & RDAF Impact				$318.46	$243.64	$189.94	$96.42	$39.50	$24.57	$23.89	$23.89	$27.28	$44.26	$124.46	$227.72	$1,384	$183.39	$1,201
49	Difference				($42.06)	($30.60)	($23.41)	($10.90)	($2.65)	($0.88)	($0.80)	($0.80)	($1.20)	($3.21)	($15.18)	($29.49)	**($161)**	($10)	($152)
50																			
51	% Change in Total Bill - Non-participant				-11.67%	-11.16%	-10.97%	-10.16%	-6.29%	-3.47%	-3.25%	-3.25%	-4.23%	-6.77%	-10.87%	-11.47%	**-10.43%**	-4.95%	-11.21%
52								*input*											
53	Net Savings / Cost -- Combined Participant and Nonparticipant: Based on Participant level of:							**25%**									**-0.22%**	**0.59%**	**-0.34%**

* Use Calculated annualized EE-based RDAF instead of actual RDAFs.

Columbia Gas of Massachusetts
Derivation of EE Savings Impact on Rates
and EES Rate Calculation During 3-Year Plan

Attachment C
Page 2 of 2

1	RDAF re: EE Program Therm Savings:		BENCHMARK		
2	Benchmark (2008) Base Revenue		$ 125,581,146		
3	Test Year 2008 Therms		516,576,411		
4	Average Rev per Therm	(1) / (2)	$ 0.2431		
5					
6	**EE Savings Rate Impact**		YEAR 1 - 2013	YEAR 2 - 2014	YEAR 3 - 2015
7	EE Therm Savings		3,684,198	3,791,301	3,911,146
8	Reduced Year 1 Annual Therms	(3) - (7)	512,892,213	512,785,110	512,665,265
9	Reduced Avg Rev per Therm	(2) / (8)	$ 0.2448	$ 0.2449	$ 0.2450
10					
11	**Rate Impact (LBR-type Rate)**	(9) - (4)	$ 0.0017	$ 0.0018	$ 0.0019
12					
13					
14	**EES Rate:**		YEAR 1 - 2013	YEAR 2 - 2014	YEAR 3 - 2015
15	C&I Annual Budget *		$ 9,132,056	$9,984,376	$10,873,791
16	Annual Vols - Therms **		241,807,230	240,969,470	241,807,230
17	**EES Rate**	(15) / (16)	$ 0.0378	$0.0414	$0.0450

* From 3-Year Plan

	Annual			Average Monthly		
	Average Usage	EES/Therm	Total EES	Usage	EES/Therm	Total EES
Current Model run with 2012 MTM Budget/Savings[1]						
R-3	966	$ 0.0309	$ 29.82	81	$ 0.0309	$ 2.49
R-4	967	$ 0.0309	$ 29.85	81	$ 0.0309	$ 2.49
G-40	1,243	$ 0.0240	$ 29.85	104	$ 0.0240	$ 2.49
Current Model run with 2013 MTM Budget/Savings						
R-3	966	$0.0391	$ 37.81	81	$ 0.0391	$ 3.15
R-4	967	$0.0391	$ 37.85	81	$ 0.0391	$ 3.15
G-40	1,243	$0.0378	$ 46.94	104	$ 0.0378	$ 3.91
Change (from 2012 MTM)						
R-3		$0.0083	$7.99		$0.0083	$0.67
R-4		$0.0083	$7.99		$0.0083	$0.67
G-40		$0.0137	$17.09		$0.0137	$1.42

Percentage Change

R-3	26.78%
R-4	26.78%
G-40	57.24%

[1] Previous MTM Model has multiple different assumptions including a different average annual use. To get an accurate comparison,these values were calculated by running the current Bill Impact Model with 2012 MTM savings and budget figures. Values will not match 2012 MTM filing.

	Annual					Average Monthly				
	Usage	Total Bill	Total EE	Unit Rate Total	Unit Rate EE	Usage	Total Bill	Total EE	Unit Rate Total	Unit Rate EE
As of 3/2012										
R-3	907	$ 1,302.95	$ 37.28	$1.4367	$0.0411	76	$ 108.58	$ 3.11	$ 1.4367	$ 0.0411
R-4	827	$ 977.21	$ 25.51	$1.1810	$0.0308	69	$ 81.43	$ 2.13	$ 1.1810	$ 0.0308
G-41	1,646	$ 1,392.07	$ 21.07	$0.8456	$0.0128	137	$ 116.01	$ 1.76	$ 0.8456	$ 0.0128
G-51	3,023	$ 1,338.44	$ 38.70	$0.4427	$0.0128	252	$ 111.54	$ 3.22	$ 0.4427	$ 0.0128
With 2012 MTM										
R-3	907	$ 1,308.48	$ 42.81	$1.4428	$0.0472	76	$ 109.04	$ 3.57	$ 1.4428	$ 0.0472
R-4	827	$ 981.36	$ 29.29	$1.1860	$0.0354	69	$ 81.78	$ 2.44	$ 1.1860	$ 0.0354
G-41	1,646	$ 1,390.26	$ 17.78	$0.8445	$0.0108	137	$ 115.86	$ 1.48	$ 0.8445	$ 0.0108
G-51	3,023	$ 1,336.62	$ 32.65	$0.4421	$0.0108	252	$ 111.39	$ 2.72	$ 0.4421	$ 0.0108
Change										
R-3		$ 5.53					$ 0.46			
R-4		$ 4.15					$ 0.35			
G-41		$ (1.81)					$ (0.15)			
G-51		$ (1.81)					$ (0.15)			
Percentage Change										
R-3		0.42%					0.42%			
R-4		0.42%					0.42%			
G-41		-0.13%					-0.13%			
G-51		-0.14%					-0.14%			
with 2013 Budget										
R-3	907	$1,296.15	$ 30.47	$1.4292	$0.0336	76	$ 108.01	$ 2.54	$ 1.4292	$ 0.0336
R-4	827	$ 972.11	$ 20.85	$1.1748	$0.0252	69	$ 81.01	$ 1.74	$ 1.1748	$ 0.0252
G-41	1,646	$ 1,391.44	$ 31.77	$0.8452	$0.0193	137	$ 115.95	$ 2.65	$ 0.8452	$ 0.0193
G-51	3,023	$ 1,344.33	$ 58.35	$0.4447	$0.0193	252	$ 112.03	$ 4.86	$ 0.4447	$ 0.0193
Change (from 2012 MTM)										
R-3		$ (12.33)					$ (1.03)			
R-4		$ (9.25)					$ (0.77)			
G-41		$ 1.18					$ 0.10			
G-51		$ 7.71					$ 0.64			
Percentage Change										
R-3		-0.94%					-0.94%			
R-4		-0.94%					-0.94%			
G-41		0.08%					0.08%			
G-51		0.58%					0.58%			

EE Charge Calculation

EE Charge for each year recalculated based on that years projected budget
No reconcilation or interest expenses assumed for 2013 EE calculation
Volumes for each year reduced by expected savings.

Bill Impacts assume:

Approved GAF's as of 5/11, 7/11, 11/11, and 3/12
Approved LDAF as of 11/11 and 2/12 (ESM charge)
LDAF adjusted by subtracting prior EE and adding in new EE

THE BERKSHIRE GAS COMPANY
RESIDENTIAL HEATING BILL IMPACT
RATE CODE R3

SEASON	BILL PERCENTILE	NO. BILLS	THERM LEVEL	TOTAL REVENUES CURRENT	TOTAL REVENUES PROPOSED	DOLLAR INCREASE	PERCENT INCREASE
PEAK WINTER 2/1/2012	25.00%	33,917	65	$96.60	$96.47	($0.13)	-0.13%
	50.00%	67,834	112	$145.36	$145.14	($0.22)	-0.15%
	75.00%	101,750	178	$213.84	$213.48	($0.36)	-0.17%

CURRENT RATE			PROPOSED RATE		
CUSTOMER CHARGE		$11.74	CUSTOMER CHARGE		$11.74
WINTER			WINTER		
FIRST	60	$0.6169	FIRST	60	$0.6169
OVER	60	$0.3265	OVER	60	$0.3265
CGA and LDA		$0.7110	CGA and LDA		$0.7090

THE BERKSHIRE GAS COMPANY
RES'L LOW INC. HEATING BILL IMPACT
RATE CODE R4

SEASON	BILL PERCENTILE	NO. BILLS	THERM LEVEL	TOTAL REVENUES CURRENT	TOTAL REVENUES PROPOSED	DOLLAR INCREASE	PERCENT INCREASE
PEAK WINTER 2/1/2012	25.00%	5,470	67	$79.75	$79.64	($0.11)	-0.14%
	50.00%	10,940	106	$112.45	$112.28	($0.17)	-0.15%
	75.00%	16,409	160	$157.73	$157.47	($0.26)	-0.16%

CURRENT RATE with 19.18% Discount			PROPOSED RATE with 19.18% Discount		
CUSTOMER CHARGE		$11.74	CUSTOMER CHARGE		$11.74
WINTER			WINTER		
FIRST	60	$0.6169	FIRST	60	$0.6169
OVER	60	$0.3265	OVER	60	$0.3265
CGA and LDA		$0.7110	CGA and LDA		$0.7090

THE BERKSHIRE GAS COMPANY
C&I SMALL LOW LOAD FACTOR BILL IMPACT
RATE CODE G41

SEASON	BILL PERCENTILE	NO. BILLS	THERM LEVEL	TOTAL REVENUES CURRENT	TOTAL REVENUES PROPOSED	DOLLAR INCREASE	PERCENT INCREASE
PEAK WINTER	25.00%	4,899	58	$87.91	$87.51	($0.41)	-0.46%
	50.00%	9,798	160	$201.32	$200.20	($1.12)	-0.56%
	75.00%	14,697	384	$431.66	$428.97	($2.69)	-0.62%

CURRENT RATE			PROPOSED RATE		
CUSTOMER CHARGE		$12.83	CUSTOMER CHARGE		$12.83
WINTER			WINTER		
FIRST	90	$0.6425	FIRST	90	$0.6425
OVER	90	$0.3763	OVER	90	$0.3763
CGA and LDA		$0.6520	CGA and LDA		$0.6450

Fitchburg Gas and Electric Light Company
Residential Heating Customer - R3
Rates Effective 2/1/12 vs Estimated 2013 EEC

Monthly Usage (Therms)	Monthly Bills @ Rates Effective 2/1/12	Monthly Bills Including Estimated 2013 EEC Rates	$ Difference	% Difference
0	$8.94	$8.94	$0.00	0.0%
10	$22.36	$22.31	($0.04)	-0.2%
25	$43.18	$43.07	($0.11)	-0.3%
50	$80.21	$79.99	($0.22)	-0.3%
75	$117.23	$116.90	($0.33)	-0.3%
100	$154.26	$153.82	($0.44)	-0.3%
125	$191.28	$190.73	($0.55)	-0.3%
150	$228.31	$227.64	($0.66)	-0.3%
175	$265.33	$264.56	($0.78)	-0.3%
200	$302.36	$301.47	($0.89)	-0.3%
225	$339.38	$338.39	($1.00)	-0.3%
250	$376.41	$375.30	($1.11)	-0.3%
275	$413.43	$412.21	($1.22)	-0.3%
300	$450.46	$449.13	($1.33)	-0.3%
350	$524.51	$522.96	($1.55)	-0.3%
400	$598.56	$596.79	($1.77)	-0.3%
500	$746.66	$744.44	($2.21)	-0.3%
750	$1,116.91	$1,113.59	($3.32)	-0.3%
1000	$1,487.16	$1,482.73	($4.43)	-0.3%
2000	$2,968.16	$2,959.30	($8.86)	-0.3%

Rates Effective 2/1/12:

Customer Charge ($/customer)	$8.50
Distribution Charge ($/therm)	
First 20 therms	$0.5736
Excess 20 therms	$0.7127
CGA ($/therm) - all therms	$0.6076
LDAC ($/therm) - all therms	$0.1607
ECS ($/customer)	$0.44

Rates Effective 2/1/12 Revised for Estimated 2013 EEC

Customer Charge ($/customer)	$8.50
Distribution Charge ($/therm)	
First 20 therms	$0.5736
Excess 20 therms	$0.7127
CGA ($/therm) - all therms	$0.6076
LDAC ($/therm) - all therms	$0.1563
ECS ($/customer)	$0.44

indicates approximate average monthly use

Fitchburg Gas and Electric Light Company
Residential Gas Low-Income Heating Customer - R4
Rates Effective 2/1/12 vs Estimated 2013 EEC

Monthly Usage (Therms)	Monthly Bills @ Rates Effective 2/1/12	Monthly Bills Including Estimated 2013 EEC Rates	$ Difference	% Difference
0	$6.70	$6.70	$0.00	0.0%
10	$16.76	$16.73	($0.03)	-0.2%
25	$32.38	$32.30	($0.08)	-0.3%
50	$60.15	$59.99	($0.16)	-0.3%
75	$87.92	$87.67	($0.24)	-0.3%
100	$115.68	$115.36	($0.32)	-0.3%
125	$143.45	$143.05	($0.41)	-0.3%
150	$171.22	$170.73	($0.49)	-0.3%
175	$198.99	$198.42	($0.57)	-0.3%
200	$226.75	$226.11	($0.65)	-0.3%
225	$254.52	$253.79	($0.73)	-0.3%
250	$282.29	$281.48	($0.81)	-0.3%
275	$310.06	$309.17	($0.89)	-0.3%
300	$337.82	$336.85	($0.97)	-0.3%
350	$393.36	$392.23	($1.13)	-0.3%
400	$448.89	$447.60	($1.29)	-0.3%
500	$559.96	$558.35	($1.62)	-0.3%
750	$837.64	$835.22	($2.42)	-0.3%
1000	$1,115.31	$1,112.08	($3.23)	-0.3%
2000	$2,226.01	$2,219.55	($6.46)	-0.3%

Rates Effective 2/1/12:

Customer Charge ($/customer)	$8.50
Distribution Charge ($/therm)	
First 20 therms	$0.5736
Excess 20 therms	$0.7127
CGA ($/therm) - all therms	$0.6076
LDAC ($/therm) - all therms	$0.1607
ECS ($/customer)	$0.44
25% LI Discount Fixed Charges	($2.24)
25% LI Discount - First 20 therms	($0.3355)
25% LI Discount - Excess 20 therms	($0.3703)

Rates Effective 2/1/12 Revised for Estimated 2013 EEC

Customer Charge ($/customer)	$8.50
Distribution Charge ($/therm)	
First 20 therms	$0.5736
Excess 20 therms	$0.7127
CGA ($/therm) - all therms	$0.6076
LDAC ($/therm) - all therms	$0.1563
ECS ($/customer)	$0.44
25% LI Discount Fixed Charges	($2.24)
25% LI Discount - First 20 therms	($0.3344)
25% LI Discount - Excess 20 therms	($0.3691)

indicates approximate average monthly use

Fitchburg Gas and Electric Light Company
General Service - Small, High Winter Use - G41
Rates Effective 2/1/12 vs Estimated 2013 EEC

Monthly Usage (Therms)	Monthly Bills @ Rates Effective 2/1/12	Monthly Bills Including Estimated 2013 EEC Rates	$ Difference	% Difference
0	$24.44	$24.44	$0.00	0.0%
10	$36.43	$36.47	$0.04	0.1%
25	$54.42	$54.51	$0.09	0.2%
50	$86.74	$86.91	$0.18	0.2%
75	$122.55	$122.81	$0.26	0.2%
100	$158.36	$158.72	$0.35	0.2%
150	$229.99	$230.52	$0.53	0.2%
200	$301.61	$302.32	$0.71	0.2%
250	$373.24	$374.12	$0.88	0.2%
300	$444.86	$445.92	$1.06	0.2%
350	$516.49	$517.72	$1.24	0.2%
400	$588.11	$589.53	$1.41	0.2%
500	$731.36	$733.13	$1.77	0.2%
750	$1,089.49	$1,092.14	$2.65	0.2%
1000	$1,447.61	$1,451.15	$3.53	0.2%
1500	$2,163.86	$2,169.16	$5.30	0.2%
2000	$2,880.11	$2,887.18	$7.07	0.2%
3000	$4,312.61	$4,323.21	$10.60	0.2%
4000	$5,745.11	$5,759.25	$14.13	0.2%
5000	$7,177.61	$7,195.28	$17.67	0.2%

Rates Effective 2/1/12:	
Customer Charge ($/customer)	$24.00
Distribution Charge ($/therm)	
First 40 therms	$0.4433
Excess 40 therms	$0.6765
CGA ($/therm) - all therms	$0.6076
LDAC ($/therm) - all therms	$0.1484
ECS ($/customer)	$0.44

Rates Effective 2/1/12 Revised for Estimated 2013 EEC	
Customer Charge ($/customer)	$24.00
Distribution Charge ($/therm)	
First 40 therms	$0.4433
Excess 40 therms	$0.6765
CGA ($/therm) - all therms	$0.6076
LDAC ($/therm) - all therms	$0.1519
ECS ($/customer)	$0.44

indicates approximate average monthly use

B. Green Communities Act Excerpt - G.L. c. 25 Section 21 related to April 30 Filing

(b)(1) Every 3 years, on or before April 30, the electric distribution companies and municipal aggregators with certified efficiency plans shall jointly prepare an electric efficiency investment plan and the natural gas distribution companies shall jointly prepare a natural gas efficiency investment plan. Each plan shall provide for the acquisition of all available energy efficiency and demand reduction resources that are cost effective or less expensive than supply and shall be prepared in coordination with the energy efficiency advisory council established by section 22. Each plan shall provide for the acquisition, with the lowest reasonable customer contribution, of all of the cost effective energy efficiency and demand reduction resources that are available from municipalities and other governmental bodies.

(2) A plan shall include: (i) an 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 supply; (ii) the amount of demand resources, including efficiency, conservation, demand response and load management, that are proposed to be acquired under the plan and the basis for this determination; (iii) the estimated energy cost savings that the acquisition of such resources will provide to electricity and natural gas consumers, including, but not limited to, reductions in capacity and energy costs and increases in rate stability and affordability for low-income customers; (iv) a description of programs, which may include, but which shall not be limited to: (A) efficiency and load management programs; (B) demand response programs; (C) programs for research, development and commercialization of products or processes which are more energy-efficient than those generally available; (D) programs for development of markets for such products and processes, including recommendations for new appliance and product efficiency standards; (E) programs providing support for energy use assessment, real time monitoring systems, engineering studies and services related to new construction or major building renovation, including integration of such assessments, systems, studies and services with building energy codes programs and processes, or those regarding the development of high performance or sustainable buildings that exceed code; (F) programs for the design, manufacture, commercialization and purchase of energy-efficient appliances and heating, air conditioning and lighting devices; (G) programs for planning and evaluation; (H) programs providing commercial, industrial and institutional customers with greater flexibility and control over demand side investments funded by the programs at their facilities; and (I) programs for public education regarding energy efficiency and demand management; provided, however, that not more than 1 per cent of the fund shall be expended for items (C) and (D) collectively, without authorization from the advisory council; (v) a proposed mechanism which provides performance incentives to the companies based on their success in meeting or exceeding the goals in the plan; (vi) the budget that is needed to support the programs; (vii) a fully reconciling funding mechanism which may include, but which shall not be limited to, the charge authorized by section 19; (viii) the estimated amount of reduction in peak load that will be reduced from each option and any estimated economic benefits for such projects, including job retention, job growth or economic development; and (ix) data showing the percentage of all monies collected that will be used for direct consumer benefit, such as incentives and technical assistance to carry the plan. With the approval of the council, the plan may also include a mechanism to prioritize projects that have substantial benefits in reducing peak load, reducing the energy consumption or costs of municipalities or other governmental bodies, or that have economic development, job creation or job retention benefits.

C. Next Steps and Dates

Date	Task
July 1, 2012	Full draft of 2013-2015 Plan to Council
July 1, 2012	First draft of 08-50 tables for 2013-2015
July 13, 2012	Cut-off for EM&V studies to be included in 2013-2015 Plan
July 30, 2012	Council approval or comments to PAs regarding April 30th Plan
August 15, 2012	Draft of TRM- 2013 Plan Version to consultants
September 6, 2012	Proposed full draft of 2013-2015 Plan to Council
October 2, 2012	PAs to provide final materials to Council for resolution
October 31, 2012	Each PA to file complete and final Three-Year Plan with Department

D. Additional Appendices for 10-31-12 Filing

- Glossary
- TRM
- Council Resolutions