



**Northern Utilities Inc.  
d/b/a Unitil**

**Gas Energy Efficiency Program Proposal**

**For the period May 1, 2009 – December 31, 2010**

**Docket No. DG \_\_\_\_\_**

**Filed with the New Hampshire  
Public Utilities Commission  
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## **I. Introduction**

On November 27, 2002, Northern Utilities Inc. (“Northern” or the “Company”) filed with the New Hampshire Public Utilities Commission (“Commission”) a proposed 3-Year Energy Efficiency Program Proposal, docketed as DG 02-106. The Company’s proposal included energy efficiency (“EE”) program descriptions, benefit/cost analyses, program budgets, and program goals for the period January 1, 2003 through April 30, 2006. In addition, a Settlement Agreement between the Company, the Office of the Consumer Advocate (“OCA”), Representative Bill Gabler, New Hampshire Department of Environmental Services (“NHDES”), Governor’s Office of Energy and Community Services (“GOECS”), Save our Homes Organization (SOHO) and Action, Inc. was also filed. On December 31, 2002, the Commission’s Order No. 24,109 approved the Company’s EE Program Proposal and Settlement Agreement. Pursuant to the terms of the Settlement Agreement, beginning in 2004, on or before March 15, Northern was to submit updated program descriptions, benefit/cost analyses, program budgets and program goals to the Commission for each of the subsequent years of the plan. On March 10, 2006, Northern filed an updated 3 Year EE Program Plan (“2006 EE Plan”) for the period beginning May 1, 2006 through April 30, 2009. The 2006 Plan was approved by Commission Order No. 24,630 in Docket No. DG 06-036.

On December 1, 2008, Unitil Corporation (“Unitil”) completed the purchase of Northern from NiSource Inc. and assumed operation of the natural gas distribution utility, including continuing EE planning, design, implementation and evaluation of 2006 EE Plan. Included in the Settlement Agreement in Docket No. DG 08-048, Joint Petition for Approval of Stock Acquisition, between Unitil, Northern, Office of Consumer Advocate, Mary Polcheis and Staff, Unitil agreed to maintain and improve upon Northern’s existing gas EE programs. In addition, the Company is committed to working with other New Hampshire gas and electric utilities to streamline and coordinate delivery of the electric and gas EE programs across the state. The objective is to ensure that the delivery of the various programs is as seamless as possible and to provide all participating customers with access to the same level of benefits.

The following document comprises Northern's proposed Gas Energy Efficiency Program Plan ("2009 Plan") for the period May 1, 2009 through December 31, 2010 ("2009 Gap Plan"). The Company is filing a 20-month plan rather than a 36-month plan as it has in the past in order to synchronize its gas EE program year with its electric EE program year. Doing so will help to increase administrative efficiency and improve coordination between the Company's gas and electric energy efficiency plan filings and program implementation strategies.

In addition to this Introduction, Northern's 2009 Plan consists of the following sections:

**II. Summary of the 2009 Plan** – An overview/listing of the Company's ongoing programs and comparative tables showing proposed program budgets, therm savings goals, estimated participation levels and associated benefit/cost ratios<sup>1</sup>. Program-specific cost-effectiveness results are presented in Appendix A to this report.

**III. Program Descriptions** – Summary of each program covering overviews and objectives, target markets, major market barriers identified, estimated savings goals, and proposed budgets;

**IV. Program Evaluation** – Northern's plans regarding evaluation of its proposed programs; and

**V. Cost Recovery and Performance Incentives** – Description of Northern's current methodology to recover costs incurred to develop, plan, deliver, administer, monitor, and evaluate energy efficiency programs as well as for earning incentives for threshold, design and exemplary levels of performance.

**Appendix A: Program Benefit / Cost Screening Results** – Summarizes the results of the programs cost-effectiveness screening analyses.

**Appendix B: Program Budgets and Goals** – Provides detailed budget and goal information by program and sector for the period May 2009 through December 2010.

**Appendix C: Illustrative Cost-Recovery Schedules** – Offers sample Conservation Charge calculations for the residential and commercial & industrial sectors and documents the allocation of the Low-Income program costs to each sector.

**Appendix D: Projected Performance Incentive** – Provides the calculation of the Company's Performance Incentive for successful implementation of its energy efficiency programs.

Upon Commission approval, the Company is prepared to continue implementation of these proposed programs as described herein, consistent with previous Commission Orders and annual reconciliation and update filing requirements.

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<sup>1</sup> In accordance with the Commission's December 31, 2002 Order (No. 24,109), Unitil will continue to employ the Total Resource Cost ("TRC") Test to calculate the benefit/cost ratios presented in this filing. Since the March 10, 2006 filing, more current avoided cost projections have been developed and have been used by gas and electric utilities in recent regulatory filings in the region. The benefit/cost ratios presented herein reflect these updated avoided cost values.

## II. Summary of Plan

### A. Program Listing

Northern proposes to continue to deliver a number of Company-specific energy efficiency (“EE”) and regional market transformation (“MT”) programs to its residential non-low income, residential low-income, multifamily and commercial/industrial customers in New Hampshire. These programs are tailored to the Company’s customer base and are designed to improve collaboration with the CORE electric utility programs, offering seamless program services to our NH customers. In addition, the programs reflect best practices that have emerged as a result of implementation and collaboration in New Hampshire during the past six years, and in other states where Northern’s affiliates also deliver successful programs. Table II-1 presents a brief listing of the programs being proposed for the 20-month period beginning May 1, 2009 through December 31, 2010. Detailed descriptions about each program are presented in Section III of this proposal.

**Table II -1: Proposed Energy Efficiency Program Listing**

#### **Residential Programs**

- Residential Home Energy Assessment Program (“RHEAP”) – (referred to as the Residential Conservation Services in the 2006 Plan) offers customers in single family and 2-4 unit multifamily homes energy efficiency education and no obligation home-specific energy assessments at a reduced cost. The objective is to encourage behavioral modifications and/or installations of energy efficiency measures, including those available through other residential programs
- Home Performance with ENERGY STAR® (HPwES) – (referred to as the Residential Custom Measures in the 2006 Plan) is modeled after a national effort sponsored by the U.S. Environmental Protection Agency (“EPA”) and the U.S. Department of Energy (“DOE”) that offers a comprehensive, whole-house approach to improving energy efficiency and comfort at home, while helping to protect the environment. This program targets existing residential housing.
- Residential ENERGY STAR® Homes Program – is another national effort sponsored by the EPA and DOE with the primary mission of improving the energy performance and comfort of new homes. The program design offers a comprehensive, whole-house approach to educating builders on energy efficient building techniques, provides incentives to encourage energy efficiency improvements and measures the proposed and actual energy performance of new homes.
- Residential GasNetworks® – (consolidation of the four individual residential GasNetworks programs included in the 2006 Plan) is a group of regional natural gas companies serving residential and commercial and industrial (“C&I”) customers throughout the region. Its mission is to “work with governmental agencies and affiliates to promote energy efficient technologies, create common energy efficiency programs, educate consumers and promote contractor training and awareness of ever-changing natural gas technologies.” The residential GasNetworks® initiatives offer incentives to customers who install eligible heating and water heating equipment, programmable thermostats and energy efficient windows.

**Table II -1: Proposed Energy Efficiency Program Listing**

<p><b>Residential Programs: (cont.)</b></p> <ul style="list-style-type: none"><li>▪ <u>Self Install Rebate Program</u> – offers rebates to customers for self installation of immediate savings measures.</li><li>▪ <u>Residential Low Income Program</u> – offers low-income eligible customers, in coordination with the Fuel Assistance and Community Action Agencies (“CAA”), free energy audit services; installation of domestic hot water (DHW) measures; building shell; duct and pipe insulation; clock thermostats; and gas-saving air sealing measures.</li></ul>
<p><b>Commercial/Industrial (C&amp;I) and Multifamily Programs</b></p> <ul style="list-style-type: none"><li>▪ <u>Multifamily Custom Measures Program</u> – offers multifamily buildings (greater than 4 dwelling units with a master-metered account) energy assessment services and multiple custom measure services on a site-specific basis.</li><li>▪ <u>Small Commercial and Industrial Custom Measures Program</u> – offers small C&amp;I customers multiple basic and custom measure services on a site-specific basis.</li><li>▪ <u>Medium and Large Commercial and Industrial Custom Measures Program</u> – offers medium and large C&amp;I customers incentives for independent engineering analyses and multiple custom measure services on a site-specific basis.</li><li>▪ <u>Commercial and Industrial GasNetworks®</u> – (consolidation of the four individual C&amp;I GasNetworks initiatives included in the 2006 Plan) is a group of regional natural gas companies serving residential and C&amp;I customers throughout the region. Its mission is to “work with governmental agencies and affiliates to promote energy efficient technologies, create common energy efficiency programs, educate consumers and promote contractor training and awareness of ever-changing natural gas technologies.” The C&amp;I GasNetworks® initiatives offer incentives to customers who install eligible heating, infrared heating and food services equipment, as well as programmable thermostats.</li></ul>
<p><b>Additional Market Transformation Activities</b></p> <ul style="list-style-type: none"><li>▪ Memberships in energy efficiency organizations and collaboratives</li><li>▪ GasNetworks® Education and Outreach - offers education, outreach and other support through multiple GasNetworks® efforts</li><li>▪ Training</li><li>▪ Regional Studies and Evaluations</li></ul>

### ***B. Program Cost-Effectiveness***

Northern has employed the Total Resource Cost ("TRC") Test, as required and approved by the Commission in Order No. 23,850, to analyze the cost-effectiveness of its gas energy efficiency programs included in this Plan. The benefit/cost ratios for the Company's proposed custom-measure and regional GasNetworks® programs for this upcoming 3-year period have been assessed using the benefit/cost model used by New Hampshire's Electric Utilities in their 2009 Core Energy Efficiency Plan approved by Commission Order No. 24,930 dated January 5, 2009. Additionally, the Company has incorporated the most recent avoided regional gas cost projections developed for the Avoided Energy Supply Component Study Group in October 2007.<sup>2</sup> Table II-2 presents a summary of the TRC test results for each of the Company's proposed programs. For more detailed information about the benefits and costs associated with the individual programs, see Appendix A – Program Cost-Effectiveness Screening Results.

**Table II-2: 2009 Energy Efficiency Programs Summary of Total Resource Cost Test**

<b>Program Name</b>	<b>TRC Test</b>
Residential Home Energy Assessment Program	N/A <sup>3</sup>
Residential Home Performance with ENERGY STAR ®	1.1
Residential ENERGY STAR® Homes	1.5
Residential GasNetworks®	1.6
Self Install Rebate Program	1.6
<b>Residential Sector Level Ratio</b>	1.2
Low Income Program	1.4
<b>Low Income Sector Level Ratio</b>	1.4
Multifamily Custom Measures Program	3.3
Small C&I Custom Measures Program	3.3
Medium and Large C&I Custom Measures Program	3.4
Commercial & Industrial GasNetworks®	1.4
<b>Commercial/Industrial and Multifamily Sector Level Ratio</b>	3.1
<b>Additional Market Transformation Activities</b>	N/A <sup>4</sup>
<b>Portfolio Level Ratio</b>	2.4

<sup>2</sup> Avoided Energy Supply Costs in New England, Synapse Energy Economics, Inc., August 10, 2007.

<sup>3</sup> The Residential Home Energy Assessment Program is an educational and audit service offered by Unitil and has no readily quantifiable savings.

<sup>4</sup> Unitil actively supports ongoing regional initiatives including education, energy efficiency, evaluation, and training. Since benefits associated with these initiatives and activities are non-quantifiable, benefit/cost analyses have not been performed on these activities. Costs incurred for these activities are included in the Company's proposed budgets and are included in the sector and portfolio-level benefit/cost analyses.

### *C. Program Budgets*

Table II-3 summarizes the budgets for each of the Company's gas energy efficiency programs. Detailed budget information is presented in Appendix B –Program Budgets and Goals.

**Table II-3: 2009 Energy Efficiency Program Budgets<sup>5</sup>**

<b>Program Name</b>	<b>5/2009 – 12/2010</b>
<b>Residential Programs (including Low-Income)</b>	
Residential Home Energy Assessment Program	\$73,595
Residential Home Performance with ENERGY STAR® Program	\$142,768
Residential ENERGY STAR® Homes Program	\$80,677
Residential GasNetworks® Program	\$141,136
Self Install Rebate Program	\$27,264
Residential Low Income Program	<u>\$122,141</u>
<b>Total Residential:</b>	<b>\$587,581</b>
<b>Commercial and Industrial Programs</b>	
Multifamily Custom Measures Program	\$254,858
Small C&I Custom Measures Program	\$164,904
Medium & Large C&I Custom Measures Program	\$241,966
C&I GasNetworks® Program	<u>\$55,246</u>
<b>Total Commercial/Industrial and Multifamily:</b>	<b>\$716,974</b>
<b>Additional Market Transformation Activities</b>	<b>Captured above</b>
<b>Total – Proposed Direct Program Budget:</b>	<b>\$1,207,922</b>
<b>Design-Level Performance Incentive (Portfolio Level)</b>	<b>\$96,634</b>
<b>Total – Proposed Energy Efficiency Budget:</b>	<b>\$1,304,555</b>

### *D. Monitoring, Evaluation and Reporting*

In planning evaluation activities for the coming year, the Company considered several factors, including the length of time since a program or end-use was evaluated, the maturity of the program, the significance of expected savings for the end-use or project in the recently completed program year, the stability of prior evaluation results for the program aspect under consideration, and expected opportunities to participate in joint-utility and/or regional studies in the coming year. For information regarding the Company's evaluation plans, see Section IV – Program Evaluations.

<sup>5</sup> Budgets include direct program spending and set-asides for design level performance incentives.



### **III. Program Descriptions**

#### ***A. Residential Programs***

##### **A.1. Residential Home Energy Assessment Program** (formerly the Residential Conservation Services)

Background, Objective and Description: The Residential Home Energy Assessment Program (RHEAP) is offered to residential single and 2-to-4 unit multi-family homes. The program is designed to educate customers about energy efficiency and to identify improvements that will save energy and money through greater energy efficiency in their homes. Under the program, customers will receive a \$215 incentive towards a home energy assessment performed by a qualified contractor for a whole-house assessment consistent with Residential Energy Services Network (“RESNET”) national standards for home energy audits. Only contractors with Building Performance Institute (“BPI”) training or similar industry expertise approved by Unitil will be allowed to participate in this program. Contractors must use an approved energy modeling software tool to conduct the home energy assessment and must provide customers with a detailed report that identifies energy savings improvements, provides estimated costs of the improvements, prioritizes the improvements based on a simple payback analysis and identifies any health and safety issues that might exist within the home. In addition, participants will receive educational energy saving tips and low-cost energy savings products free-of-charge.

Customers are provided a choice of pre-qualified contractors to provide program services or the customer may choose to have Unitil assign a contractor directly. The goal of this delivery strategy is to provide more flexibility to the customer, allow choice, create demand, and allow contractors to be creative and competitive in the delivery of the home energy assessment.

Qualified participants will receive a whole house audit which will identify energy savings opportunities and educate customers on weatherization needs and benefits. The audit includes an inspection of the heating and cooling systems, windows, insulation, air infiltration, as well as a safety check of combustion zones. Also included is an inspection to address potential moisture issues and to identify potential health and safety problems within the home.

The RHEAP is educational in nature and associated therm savings are not readily quantifiable. As with all of its programs, the Company will continue to pursue both internal and external

opportunities to streamline the administration of the RHEAP. This includes continued efforts to establish coordinated delivery mechanisms for energy efficient products and services with statewide organizations, other stakeholders and with the Core Electric Energy Efficiency Programs (“Core Programs”). The integration of the home energy assessment with other energy efficiency programs increases customer convenience; supports market development; and provides a more focused approach for achieving significant realized savings.

Target Market / Market Approach: This program directly targets all residential customers residing in single and 2-to-4 unit multi-family homes. Income eligible customers seeking to participate in the program will be referred to the Company’s Residential Low Income Program to receive comprehensive services at no cost. See section III.A.6. for additional details related to the Company’s proposed Residential Low-Income Program. The marketing approach for the RHEAP will include utility bill inserts, news letters, trade shows and other low cost/no cost community outreach efforts. In addition, trade allies will be utilized to recruit participants through contractor marketing efforts.

Market Barriers Addressed by this Proposed Program: The market barriers addressed by this proposed program are:

- limited access to education regarding energy efficient practices and behavioral modifications;
- limited awareness about energy efficient products and services;
- reluctance of consumers to consider installing high efficiency equipment and/or technologies; and
- customer’s lack of cash or credit to fully fund a home energy assessment.

Proposed Budget, Projected Savings Goal, and Estimated Participation Levels: Table III-1 provides a summary of the Company’s 20-month budget, projected savings goal, and estimated participation levels for its Residential Home Energy Assessment Program.

<b>Table III-1: Residential Home Energy Assessment Program</b>	<b>5/2009 – 12/2010</b>
Direct Program Budget	\$68,147
Lifetime Savings Goal	N/A
Estimated Participation	193

## **A.2. Home Performance with ENERGY STAR® Program (formerly the Residential Custom Measures)**

Background, Description and Objective: The Home Performance with ENERGY STAR Program (“HPwES”) program is a national effort sponsored by the U.S. EPA and U.S. DOE with the primary mission of improving the energy performance and comfort of existing homes. The program design offers a comprehensive, whole-house approach to improving energy efficiency and comfort at home, while helping to protect the environment. The HPwES format will provide brand recognition to support the program mission, to capture all cost effective gas saving opportunities in existing residences, to educate customers on the benefits of whole house weatherization and to insure that the program adheres to national best practices in weatherization. The objective of the program is to weatherize gas heated homes, capture all cost effective opportunities for saving gas, and collaborate with other programs to improve program effectiveness, capture electric and other energy saving opportunities and to deliver seamless services to our customers.

Design of the Company’s proposed HPwES will conform with the national standards established by EPA and DOE, however, at this time, the program is not yet certified. Attaining certification will be a priority in 2009.

The company will offer qualifying customers incentives of 75% of project costs up to a cap of \$4,000 on all cost-effective gas energy savings home improvements recommended through Unitil’s Residential Home Energy Assessment Program. In addition, certain pre-approved measures, including low-flow domestic hot water measures, door sweeps, thermostats and other low-cost energy savings items will be installed free-of-charge.

Program services will be delivered by Company staff in conjunction with Building Performance Institute (“BPI”) certified home improvement contractors. Customer enrollment will be facilitated by an application process which will document total fuel consumption, square footage of living space, specific areas of concerns and weatherization needs. Customers will have the choice of selecting their own BPI-certified contractor or having a BPI-certified contractor assigned directly by the Company.

The outcome of a whole house audit is a recommendation report that identifies energy saving opportunities, prioritizes improvements based on a payback analysis, identifies carbon reduction effects and informs customers of health and safety needs. During the audit, customers may receive, at no charge, low flow faucet and showerhead aerators, domestic hot water and heating pipe wrap, educational literature and materials, as well as other simple cost-effective improvements. Customers identified as needing comprehensive improvements such as air sealing, insulation, weather stripping will be offered a 75 percent incentive toward cost-effective measure installation up to \$4,000. In addition, the HPwES program will identify cost effective opportunities to upgrade inefficient gas HVAC equipment and will offer incentives to encourage the installation of high-efficiency gas HVAC equipment via the Residential GasNetworks® Program.

Recommended technologies include air sealing, duct sealing, insulation, thermostats, heating system controls, high efficiency heating system and DHW replacements, and custom cost effective improvements that advance the goal of “Deep Energy Retrofits.” The program will also incorporate renewable technologies when appropriate, such as Solar Thermal or Combined Heat Power equipment. Other improvements which are paid by the customer may include; ventilation, drywall, siding and other non-energy saving construction related to the installation of approved energy saving measures.

Target Market / Market Approach: The primary focus is all non-low income residential customers living in gas heated single-family houses or 2-to-4 unit multifamily buildings, who are committed to making their homes more energy efficient. The marketing approach will be to collaborate with other electric and gas utilities in New Hampshire to establish a statewide Home Performance with ENERGY STAR program, leverage national marketing materials, utility bill inserts, news letters, trade shows and other low-cost/no-cost community outreach efforts, develop trade allies to recruit participants through contractor marketing efforts.

Market Barriers Addressed by this Proposed Program: The major market barriers addressed by this proposed program are:

- customer’s lack of cash or credit to fund high first cost items/measures;
- limited product awareness by consumers, contractors, supply houses, and other market actors;

- higher initial purchase price of efficient equipment and items/measures;
- customers being required to wait for a home energy assessment before they can contract with an installation contractor; and
- reluctance of consumers and contractors to purchase and install high efficiency equipment and/or consider new technologies.

Proposed Budget, Projected Savings Goal, and Estimated Participation Levels: Table III-2

summarizes the Company's 20-month budget, projected savings goal, and estimated participation levels for its Residential Custom Measures Program.

<b>Table III-2: Home Performance with ENERGY STAR®</b>	<b>5/2009 – 12/2010</b>
Total Program Budget	\$132,184
Lifetime Savings Goal	19,674 MMBtu
Estimated Participation	85

### **A.3. Residential ENERGY STAR® Homes**

#### **Background, Objective and Description:** The Residential ENERGY STAR® Homes

Program is a national effort sponsored by the U.S. EPA and U.S. DOE with the primary mission of improving the energy performance and comfort of new homes. The program design offers a comprehensive, whole-house approach to educating builders on energy efficient building techniques, provides incentives to encourage energy efficiency improvements and measures the proposed and actual energy performance of new homes. The program objectives are to help builders construct energy efficient new homes that exceed national ENERGY STAR standards, capture all gas savings related to ENERGY STAR homes certified through this program as compared to the average home built in the state of New Hampshire and to collaborate with other ENERGY STAR Homes programs in the region.

Program services will be delivered via HERS-certified ENERGY STAR building consultants. The Company staff will recruit new projects, will work to educate builders on the benefits of energy efficiency and will work with HERS consultants to insure that national program standards are exceeded.

Recommended technologies include efficient building techniques, air sealing, duct sealing, high performance insulation, thermostats, heating system controls, high efficiency heating and DHW systems. The program will also seek to incorporate renewable technologies such as solar thermal, solar DHW or combined heat and power equipment. The Company will incent 100% of the cost of the ENERGY STAR rating fees for gas heated homes and will work directly with the New Hampshire electric utilities' Core ENERGY STAR Homes Program sponsors to implement electric savings measures and to manage the program in a statewide collaborative process. Rating fees are typically less than \$750 for single family homes and less than \$500 for multifamily residences.

Table A.3: ENERGY STAR Homes Builder/Customer Incentives:

#### **Single Family Homes:**

- \$500 for earning HERS score of 80
- \$40 per point below HERS score of 80

#### **Townhouse and Multifamily Homes:**

- \$250 per unit for earning HERS score of 80
- \$25 per point below HERS score of 80

Target Market / Market Approach: The primary focus is one to three story gas heated residential new construction projects. The marketing approach will include: leveraging existing national and regional ENERGY STAR Homes program implementation and marketing materials; utility bill inserts, news letters, trade shows and other low-cost/no-cost builder outreach efforts; developing trade allies to recruit participants through contractor marketing efforts; and collaborating with electric utilities to recruit projects.

Market Barriers Addressed by this Proposed Program: The major market barriers addressed by this proposed program are:

- higher first cost of energy efficiency measures;
- builder's reluctance to adopt newer building technologies;
- lack of a competitive market for companies that provide Home Energy Ratings;
- lack of knowledge by consumers, builders, appraisers, lenders, and other key actors of the full range of benefits of building energy efficient homes;
- lack of consideration of the value of efficiency in financing;
- limited access to education regarding technologies or benefits;
- limited product awareness by consumers, plumbing and contractors, supply houses, and other market actors;
- reluctance of consumers and contractors to purchase and install high efficiency equipment and/or consider new technologies; and

Proposed Budget, Projected Savings Goal, and Estimated Participation Levels: Table III-3 summarizes the Company's 20-month budget, projected savings goal, and estimated participation levels for its Residential ENERGY STAR® Homes Program.

<b>Table III-3: Residential ENERGY STAR® Homes Program</b>	<b>5/2009 – 12/2010</b>
Total Program Budget	\$74,713
Lifetime Savings Goal	16,170 MMBtu
Estimated Participation	25

#### **A.4. Residential GasNetworks® - (consolidation of four individual residential GasNetworks® components)**

**Background, Objective and Description:** GasNetworks® is a collaborative of natural gas companies serving customers in New Hampshire, Maine, and Massachusetts. Its mission is to “work with governmental agencies and affiliates to promote energy efficient technologies, create common energy efficiency programs, educate consumers and promote contractor training and awareness of ever-changing natural gas technologies”. The Residential GasNetworks® Program is designed to promote the installation of high efficiency gas furnaces and hot water boilers, energy efficient steam boilers, high-efficiency gas-fired water heating equipment, ENERGY STAR®-labeled programmable thermostats and ENERGY STAR®-labeled windows in residential homes. The objective of the program is to increase the demand and market share for this high-efficiency gas equipment and measures through rebates, education, and increased customer, builder/developer, and plumbing/heating contractor awareness about the benefits of these technologies.

Rebate applications are available through installation contractors, supply houses, the utility; the GasNetworks® rebate administrator, and the internet.

Components of the GasNetworks program include;

##### *A.4.1. Residential High Efficiency Heating Equipment*

Qualifying customers are eligible to receive mail-in rebates per unit for installation of high efficiency heating equipment. The incentive levels and equipment criteria for residential heating customers are provided in Table III-4.

<b>Table III-4: Residential Heating Equipment*</b>		
Furnaces (forced hot air)	AFUE* 92% or greater	\$100 Rebate
Warm Air Furnaces with ECM	AFUE* 92% or greater	\$400 Rebate
Boilers (forced hot water)	AFUE* 85% or greater	\$500 Rebate
Boilers (forced hot water)	AFUE* 90% or greater	\$1,000 Rebate
Combined Boiler & Water Heating Unit	AFUE* 90% or greater	\$1,300 Rebate
Boilers (steam with electronic ignition)	AFUE* 82% + Rating	\$200 Rebate

\* Incentive levels offered thru GasNetworks® are modified as market conditions evolve.



#### *A.4.2. Residential High Efficiency Water Heating*

The GasNetworks® rebate structure offers \$300 per qualified energy efficient unit installed. Eligible equipment includes 30-75 gallon high efficiency indirect fired water heaters and on-demand tankless water heating systems, each with 0.82 Energy Factor (EF) or greater with electronic ignition.

#### *A.4.3. Residential ENERGY STAR® Programmable Thermostats*

Residential heating customers are eligible for a \$25 mail-in rebate each, on the purchase and installation of up to two ENERGY STAR programmable clock thermostats. Research has shown that by turning thermostats back 10 to 15 degrees for 8 hours each day, a customer can save about 5 to 15 percent per year on their heating bill; a savings of up to one percent for each degree if the setback period is eight hours long. Thermostats may be installed by heating contractors, homeowners, or energy auditors. Over 180 thermostat models currently meet ENERGY STAR standards.

#### *A.4.4. Residential ENERGY STAR® Windows*

Eligible participants receive a rebate for the installation of high efficiency windows in existing residential dwellings. To receive a rebate, a participant must be a residential heating customer; the installed window(s) must carry the ENERGY STAR® label, and must have a U-factor of .35 or less. When applying for a rebate, the participant must submit a rebate application accompanied by a dated sales receipt or invoice with the purchase price and a copy of the National Fenestration Rating Council ("NFRC") label(s) for the window(s) installed. To ensure that eligible equipment is installed properly, the first two installations per new installation contractor will be inspected and the Company will randomly inspect installations thereafter. Qualifying participants will be eligible to receive an incentive of ten dollars per window installed up to a maximum of \$500 per participant (maximum fifty windows).

Target Market / Market Approach: This program directly targets New Hampshire homeowners and landlords in the residential market, heating/plumbing contractors who plan/install systems, home improvement contractors, as well as manufacturers, distributors and retailers who bring these products to market.

The Residential GasNetworks® program will be promoted through the RHEAP program, bill inserts, customer newsletters, the Company website, various company-sponsored plumbing and heating training events, and home shows. In addition to Company-specific marketing activities, the Company will continue to promote the program through trade shows and trade ally events in conjunction with GasNetworks®. Further, the Company will promote program education and awareness utilizing opportunities at the manufacturer/distributor level by using their marketing and training infrastructure as a platform to educate contractors and wholesalers at a regional level.

Market Barriers Addressed by this Proposed Program: The market barriers that will be addressed by this proposed program include:

- higher first cost of energy efficient measures compared to standard products;
- limited access to education regarding technologies, benefits and savings associated with these products; and
- reluctance of consumers and home improvement contractors to incorporate energy efficiency measures into design.

Proposed Budget, Projected Savings Goal, and Estimated Participation Levels: Table III-5 summarized the Company's 20 month budget, projected savings goal, and estimated participation levels for its Residential GasNetworks® Program.

<b>Table III-5: Residential GasNetworks® Program</b>	<b>5/2009 – 12/2010</b>
Total Program Budget	\$130,690
Lifetime Savings Goal	31,493 MMBtu
Estimated Participation	287

### **A.5. Self-Install Rebate Program**

Background, Description and Objective: The Self-Install Rebate Program is designed to promote the installation of basic weatherization and other energy-saving measures in existing residential homes. The program encourages residential customers to take pro-active steps to install weatherization and other energy saving measures specifically tailored to their home. The Self-Install Rebate Program empowers customers to save energy immediately without the need to wait for an audit or major measure installation under one of the Company's other energy efficiency programs. The objective of the program is to give customers an easy, immediate means to help reduce energy bills by self-installing readily available and low cost energy saving materials. The concept is that a customer is able to go to his or her local hardware or home improvement store, purchase and install the qualifying measures that are most needed, and submit, for full reimbursement, up to \$25.00 per customer, for the cost of the materials. Customers are required to sign the rebate form which contains a statement verifying actual installation of the materials in their home. The Company may perform spot inspections of participating customers to ensure installations.

The Company offers up to \$25 in rebates for basic weatherization and other simple energy saving measures that may be installed directly by the homeowner without the services of an installation contractor. Eligible measures include:

- Weather-stripping
- Caulking
- Door sweeps
- Pipe insulation
- Foam insulation spray
- Faucet aerators
- Low-flow showerheads
- Poly wrap for windows
- Rigid Board Insulation
- Garage Door Seals

Target Market / Market Approach: This program directly targets New Hampshire residential customers who heat their homes with natural gas. The residential Self-Install Rebate Program is promoted through the RHEAP program, bill inserts, customer newsletters, local hardware stores, national chain "big box" stores, and during other customer outreach activities.

Major Market Barriers Addressed by this Proposed Program: The market barriers that will be addressed by this proposed program include:

- lead time from when the customer becomes interested in energy efficiency until the service is delivered and savings are realized;
- higher cost of hiring professional contractors;
- lack of contractors willing to install small and low cost (low profit margin) measures; and
- cost of conducting energy efficiency improvements in existing homes.

Proposed Budget, Projected Savings Goal, and Estimated Participation Levels: Table III-6 summarizes the Company's 20 month budget, projected savings goal, and estimated participation levels for the Weatherization Program.

<b>Table III-6: Self Install Rebate Program</b>	<b>5/2009 – 12/2010</b>
Total Program Budget	\$25,230
Lifetime Savings Goal	6,156 MMBtu
Estimated Participation	616

## **A.6. Residential Low-Income Program**

Background, Description and Objective: The Company will continue to offer a Low-Income Energy Efficiency Program to its residential customers who meet the 185% federal poverty guidelines established by New Hampshire's Weatherization Assistance Program as coordinated by the Office of Energy and Planning. The objective of the program is to increase the energy efficiency of low income households, and reduce the energy cost burden for income-eligible customers through customer-specific energy efficiency education and the installation of gas-related energy efficiency measures. The following measures will be installed at no cost to the participating income-qualifying customers:

- Attic insulation
- Wall insulation
- Heating pipe/duct insulation
- Clock thermostats
- Water heater tank wrap
- Low-flow showerhead
- Faucet aerator
- Gas-saving air sealing measures

The Company delivers this program in cooperation and coordination with the Community Action Agencies (CAAs) in its service territory. Working in partnership with the CAAs provides an opportunity to leverage various other energy efficiency program resources available to the target customers, in addition to the Company's program, including the federal Department of Energy's Weatherization Assistance Program, the CORE electric utility programs, as well as other state, and local resources. The Company works closely with the CAAs to ensure comprehensiveness and flexibility necessary to address a program participant's particular and/or extraordinary circumstances related to gas energy efficiency and savings opportunities that are not included in the standard list of measures.

Target Market / Market Approach: This program directly targets low-income customers who are on the Company's discount rate, are pre-qualified, and/or whose participation in LIHEAP is verifiable. The Company will collaborate its marketing activities with the CAAs and other electric and gas utilities in New Hampshire to identify projects, leverage discount rate enrollment

information, bill inserts, customer newsletters, the Company's website, and other low cost/no cost community outreach efforts.

Market Barriers Addressed by this Proposed Program: The market barriers that will be addressed by this program include: limited access to education regarding technologies or benefits; the customer's lack of cash or credit to fund high first-cost items/measures; the higher initial purchase price of efficient equipment and items/measures; reluctance of consumers and contractors to purchase and install high efficiency equipment and/or consider new technologies; and, the split incentive between landlords and tenants.

Proposed Budget, Projected Savings Goal, and Estimated Participation Levels: Table III-7 summarizes the Company's 20-month budget, projected savings goal, and estimated participation levels for the Residential Low-Income Program.

<b>Table III-7: Residential Low Income Program</b>	<b>5/2009 – 12/2010</b>
Total Budget	\$113,093
Lifetime Savings Goal	17,678 MMBtu
Estimated Participation	45

## ***B. Commercial & Industrial Programs***

### **B.1. Multifamily Custom Measures Program**

Background, Objective and Description: The Company proposes to continue offering its custom-measures energy efficiency program targeting multifamily, master-metered customers and landlords. Master-metered accounts are those buildings with greater than four (4) dwelling units on a single meter and on a commercial rate. The program is designed to inform, educate, guide and assist customers in ways to save energy and money by making their buildings more energy-efficient.

This multifamily custom measures program offers a no-cost, no-obligation energy audit of the building, to be delivered by a Multifamily Administrative and Auditing Contractor. At the conclusion of the energy audit, the auditor will discuss identified opportunities to save energy with the customer/owner. If the customer/owner indicates an interest in pursuing some or all of the identified energy saving measures, the auditor will follow-up with a computer-generated model of the building to estimate the potential savings. Eligible measures will then be presented to the customer/building owner on a printed report, including estimated costs for implementation. If the customer elects to adopt some or all of the measures identified in the report, the auditor will contract with the customer and coordinate the installation by contracting with qualified subcontractors. Alternatively, after executing a written agreement with the Multifamily Administrative and Auditing Contractor to secure the incentive, the customer may contract with independent installation contractors to perform the energy efficiency related work.

Measures offered to participants of the proposed Multifamily Custom Program include:

- Attic/roof/wall insulation (R-11 or less existing)
- Floor/basement/ceiling insulation
- Heating pipe/duct insulation
- Hot water pipe insulation
- Temperature turndown
- Boiler reset control
- Automatic temperature controls
- Low-flow showerhead
- Faucet aerator
- Heating system electronic/pilotless ignition
- Burner replacement/upgrade
- Whole heating plant replacement (does not include distribution system)
- Other measures determined on a site-specific basis

The Company offers an incentive up to 50% of the total eligible cost of purchasing and installing the above energy-saving measures with an incentive cap of \$50,000 per master-metered account.

Target Market / Market Approach: This program directly targets multifamily (greater than four unit dwellings), master-metered customers and landlords on the Company's commercial rates. Key elements of the marketing approach include direct outreach, direct mail to target market, and collaboration with cities and towns, as well as bill inserts, customer newsletters and the Company website.

Major Market Barriers Addressed by this Proposed Program: The major market barriers that will be addressed include: limited access to education regarding technologies or benefits; disproportionate focus on first costs rather than long term costs; customer's lack of cash or credit to fund high first cost items; lack of product awareness by consumers, plumbing and heating contractors, supply houses, and other market actors; higher initial purchase price of efficient equipment and items/measures; reluctance of consumers and contractors to purchase and install high efficiency equipment and/or consider new technologies; and incorrect installation techniques that result in suboptimal performance of energy efficient products

Proposed Budget, Projected Savings Goal, and Estimated Participation Levels: Table III-8 summarizes the Company's 20 month budget, projected savings goal, and estimated participation levels for the Multifamily Custom Measures Program.

<b>Table III-8: Multifamily Custom Measures Program</b>	<b>5/2009 – 12/2010</b>
Total Program Budget	\$23,681
Lifetime Savings Goal	150,545 MMBtu
Estimated Participation	29



## **B.2. Small Commercial & Industrial Custom Measures Program**

Background, Objective and Description: The Company offers a custom-measures energy efficiency program to its Small Commercial & Industrial (“C&I”) customers with annual consumption less than 40,000 therms that use natural gas for the purpose of space conditioning, water heating and/or process heat. The program is designed to inform, educate, guide and assist customers in ways to save energy and money by making their buildings and businesses more energy-efficient.

The Small C&I custom-measures program offers a no-cost, no-obligation energy audit of the building or business. A Small C&I Administrative and Auditing Contractor will deliver the energy audit. At the conclusion of the energy audit, the auditor will discuss identified opportunities to save energy with the customer/owner. If the customer/owner indicates an interest in pursuing some or all of the identified energy saving measures, the auditor will follow-up with a computer-generated model of the building to estimate the potential savings. Eligible measures will then be presented to the customer/building owner on a printed report, including estimated costs for implementation. If the customer elects to adopt some or all of the measures identified in the report, the auditor will contract with the customer and coordinate the installation by contracting with qualified subcontractors. Alternatively, after executing a written agreement with the Multifamily Administrative and Auditing Contractor to secure the incentive, the customer may contract with independent installation contractors to perform the energy efficiency related work. Measures offered to participants of the Small C&I Custom Program include:

- Attic/roof/wall insulation (R-11 or less existing)
- Floor/basement/ceiling insulation
- Heating pipe/duct insulation
- Hot water pipe insulation
- Temperature turndown
- Boiler reset control
- Automatic temperature controls
- Low-flow showerhead
- Faucet aerator
- Heating system electronic/pilotless ignition
- Burner replacement/upgrade
- Water heating system improvements
- Gas-fired process equipment improvements
- Gas-fired steam absorption chillers
- Temperature control improvements

- Heat recovery measures
- Whole heating plant replacement (does not include distribution system)
- Infrared heating systems
- Other measures determined on a site-specific basis

The Company offers an incentive up to 50% of the total eligible cost of purchasing and installing the above energy-saving measures with an incentive cap of \$50,000 per master-metered account.

Target Market/Marketing Approach: This program directly targets the Company's small commercial and industrial customers with annual consumption less than 40,000 therms on the Company's commercial rates. Key elements of the marketing approach include direct outreach, direct mail to target customers, outreach to local business associations, and collaboration with local cities and towns, as well as bill inserts, customer newsletters and the Company website.

Major Market Barriers Addressed by this Proposed Program: The major market barriers that will be addressed include: limited access to education regarding technologies or benefits; disproportionate focus on first costs rather than long term costs; customer's lack of cash or credit to fund high first cost items; lack of product awareness by consumers, plumbing and heating contractors, supply houses, and other market actors; higher initial purchase price of efficient equipment and items/measures; reluctance of consumers and contractors to purchase and install high efficiency equipment and/or consider new technologies; and incorrect installation techniques that result in suboptimal performance of energy efficient products.

Proposed Budget, Projected Savings Goal, and Estimated Participation Levels: Table III-9 summarizes the Company's program budget, projected savings goal, and estimated participation levels for the Small C&I Custom Measures Program.

<b>Table III-9: Small C&amp;I Custom Measures Program</b>	<b>5/2009 – 12/2010</b>
Total Program Budget	\$152,884
Lifetime Savings Goal	86,556
Estimated Participation	15

### **B.3. Medium and Large C&I Custom Measures Program**

Background, Objective and Description: The Company offers a custom-measures energy efficiency program to its medium and large C&I customers and businesses with annual consumption greater 40,000 and 75,000 respectively that use natural gas for the purpose of space conditioning, water heating and/or process heat. The program is designed to inform, educate, guide and assist customers in ways to save energy and money by making their buildings and businesses more energy-efficient.

This medium and large C&I custom-measures program offers customers the ability to contract with any independent engineering or auditing firm of its choice to conduct a site survey and preliminary analysis of energy saving potential at the place of business. The Company will contribute up to 50% of the cost of the site survey/preliminary analysis, with a cap of \$7,500 per analysis. In the event that a customer/business owner does not have an independent engineering firm of choice, the Company will provide a list of qualified engineering firms from which the customer can choose. At the conclusion of the site survey/preliminary analysis, a copy of a written report will be submitted to the Company for review and qualification of the proposed energy efficiency measures. If the customer/business owner indicates an interest in pursuing some or all of the identified energy-saving measures, gas-related energy savings measures will then be run through a cost benefit test by the Company to determine eligibility for incentives. If the customer elects to adopt some or all of the gas-related measures identified in the report, the customer will contract with the Company for incentives and independently contract with an engineering firm or installation contractor for the implementation of the measures. At the conclusion of the installation of the measures, the Company will perform an on-site inspection to verify the installation of the equipment indicated in the preliminary analysis. Measures offered to participants of the proposed Medium and Large C&I Custom Measures Program include:

- Attic/roof/wall insulation (R-11 or less existing)
- Floor/basement/ceiling insulation
- Heating pipe/duct insulation
- Hot water pipe insulation
- Temperature turndown
- Boiler reset control
- Automatic temperature controls
- Low-flow showerhead

- Heating system electronic/pilotless ignition
- Burner replacement/upgrade
- Water heating system improvements
- Gas-fired process equipment improvements
- Gas-fired steam absorption chillers
- Temperature control improvements
- Heat recovery measures
- Whole heating plant replacement (does not include distribution system)
- Infrared heating systems
- Other measures determined on a site-specific basis

The Company will contribute up to 50% of the cost of the site survey/preliminary analysis, with a cap of \$7,500 per analysis and will offer up to 50% of the total cost of purchasing and installing the above energy-saving measures with an incentive cap of \$50,000 per master-metered account.

Target Market / Market Approach: This program directly targets the Company's medium and large commercial and industrial customers with annual consumption greater than 40,000 and 75,000 therms respectively on the Company's commercial rates. Key elements of the marketing approach include direct outreach, direct mail to target customers, outreach to local business associations, and collaboration with local cities and towns, as well as bill inserts, customer newsletters and the Company website.

Major Market Barriers Addressed by this Proposed Program: The major market barriers addressed include: limited access to education regarding technologies or benefits; disproportionate focus on first costs rather than long term costs; customer's lack of cash or credit to fund high first cost items; lack of product awareness by consumers, plumbing and heating contractors, supply houses, and other market actors; higher initial purchase price of efficient equipment and items/measures; and reluctance of consumers and contractors to purchase and install high efficiency equipment and/or consider new technologies.

Proposed Budget, Projected Savings Goal, and Estimated Participation Levels: Table III-10 summarizes the Company's 20 month program budget, projected savings goal, and estimated participation levels for the Medium and Large C&I Custom Measures Program.

<b>Table III-10: Medium/Large C&amp;I Custom Measures Program</b>	<b>5/1/2009 – 12/31/2010</b>
Total Program Budget	\$199,414
Lifetime Savings Goal	111,582 MMBtu
Estimated Participation	4

#### **B.4. Commercial & Industrial GasNetworks® Program**

Background, Objective and Description: As with residential customers, GasNetworks® offers rebates and energy conservation programs designed to help commercial and industrial customers reduce energy consumption through collaboratively-implemented market transformation initiatives. The Company, working with other GasNetworks® members, seeks to ensure that these market transformation initiatives are implemented on a consistent basis throughout the region utilizing the best currently available information and technologies. The Company proposes to offer the following C&I GasNetworks® initiatives:

##### *B.4.1. Small C&I High Efficiency Heating*

The Small C&I High Efficiency Heating initiative is designed to promote the installation of ENERGY STAR®-rated high efficiency gas furnaces and hot water boilers, and energy efficient steam boilers in small commercial and industrial applications. Rebates are offered for new construction and replacement equipment (i.e., lost-opportunity) applications. Rebate applications are typically available through the installation contractor, supply houses, Unitil, the GasNetworks® rebate administrator, and the GasNetworks® website at [www.gasnetworks.com](http://www.gasnetworks.com). The objective of the program is to overcome current market barriers to this equipment through rebates, education and increased awareness of customers, builder/developers, and plumbing/heating contractors.

Eligible customers can receive a mail-in rebate per unit installed for qualifying heating equipment. The incentive levels and equipment criteria for Small C&I heating customers who participate in this program are as follows:

<b>Table III-11 Commercial and Industrial Heating Equipment *</b>		
Furnaces (forced hot air)	AFUE* 92% or greater	\$100 Rebate
Warm Air Furnaces with ECM	AFUE* 92% or greater	\$400 Rebate
Boilers (forced hot water)	AFUE* 85% or greater	\$500 Rebate
Boilers (forced hot water)	AFUE* 90% or greater	\$1,000 Rebate
Combined Boiler & Water Heating Unit	AFUE* 90% or greater	\$1,300 Rebate
Boilers (steam with electronic ignition)	AFUE* 82%+ Rating	\$200 Rebate

\* Incentive levels offered through GasNetworks® are modified as market conditions evolve.

#### *B.4.2. C&I Infrared Heating*

The GasNetworks® C&I Infrared Heating initiative offers rebates for low intensity, gas-fired infrared space heaters. Qualifying customers are eligible to receive a prescriptive rebate of \$500 per unit installed, with a maximum rebate of \$2,500 (i.e., up to 5 units) per gas account. The objective is to increase awareness about the benefits of energy efficient equipment and offer information on the benefits of this technology through the application process.

#### *B.4.3. C&I ENERGY STAR® Programmable Thermostats*

The objective of the GasNetworks® C&I ENERGY STAR® Thermostat Rebate initiative is to increase and transform the market for small commercial energy efficient products and services. This is accomplished by providing direct savings to customers while, at the same time, making their place of business more comfortable and affordable. The program is designed to induce lasting changes in the structure, function or behavior of the market (especially at times that otherwise would result in lost opportunities) that result in an increased adoption of energy efficiency products and services.

Qualified customers are eligible for a \$25 mail-in rebate each, on the purchase and installation of up to two ENERGY STAR® programmable clock thermostats. Research has shown that by turning thermostats back 10 to 15 degrees for 8 hours each day, a customer can save about 5 to 15 percent per year on their heating bill; a savings of up to one percent for each degree if the setback period is eight hours long. Thermostats may be installed by heating contractors, business owners, or energy auditors. Over 125 thermostat models meet ENERGY STAR® standards.

#### *B.4.4. Food Services Equipment Program*

The Company, in conjunction with GasNetworks®, is proposing to offer rebates of \$300 or \$500 for the installation of high efficiency “hot oil” type fryers. Program eligibility requires that a fryer be ENERGY STAR® labeled in order to qualify for a rebate. Depending on brand and model, the \$300 and \$500 rebates amount to approximately 50% of the incremental cost of the eligible high efficiency equipment. The rebates will be paid through a mail-in application form and all installations are subject to inspection. The objective of this program is to promote the widespread use of this energy efficient technology in a market segment that, by its operational

nature, tends to use energy rather inefficiently. The Company will use utility bill inserts, trade publications and selected trade show participation to reach the various segments of the food service market. A separate and concerted effort is directed at food service equipment manufacturers and distributors who cater to the equipment needs of this industry.

Target Market / Market Approach: This program directly targets the Company's Small C&I customers who heat their businesses with natural gas, food service operations, the builders/developers and heating/plumbing contractors who plan/install these systems, as well as the manufacturers, distributors, and wholesalers who bring this equipment to market.

This program is promoted through bill inserts, customer newsletters, the Company website, various company-sponsored plumbing and heating training events, and home shows. In addition to company specific marketing activities, the Company promotes this rebate program through trade shows and trade ally events in conjunction with GasNetworks®. Further, the Company will promote program education and awareness utilizing opportunities at the manufacturer/distributor level by using their marketing and training infrastructure as a platform to educate contractors and wholesalers at a regional level.

Market Barriers Addressed by this Proposed Program: The market barriers that will be addressed by this proposed program include:

- limited access to education regarding technologies or benefits;
- disproportionate focus on first costs rather than long term costs;
- customer's lack of cash or credit to fund high first cost items/measures;
- limited product awareness by consumers, plumbing and heating contractors, supply houses, and other market actors;
- higher initial purchase price of efficient equipment and items/measures; and,
- reluctance of consumers and contractors to purchase and install high efficiency equipment and/or consider new technologies.



Proposed Budget, Projected Savings Goal, and Estimated Participation Levels: Table III-12 summarizes the Company's 20 month budget, projected savings goal, and estimated participation levels for its Residential GasNetworks® Program.

<b>Table III-12: C&amp;I GasNetworks® Program</b>	<b>5/2009 – 12/2010</b>
Total Program Budget	\$76,134
Lifetime Savings Goal	16,845 MMBtu
Estimated Participation	75

### ***C. Additional Market Transformation Activities***

According to the Consortium for Energy Efficiency (CEE), “MT is a strategy that promotes the manufacture and purchase of energy-efficient products and services. The goal of this strategy is to induce lasting structural and behavioral changes in the marketplace, resulting in increased adoption of energy-efficient technologies.” The Company’s 2009 Plan incorporates multiple strategies that promote market transformation with the intent of achieving this goal.

Description and Objective: The role of statewide market transformation initiatives, sponsored by the Company and GasNetworks®, is to promote the use of high efficiency natural gas technologies and increased energy efficiency levels for targeted products and services. Initiatives are designed to target new markets as they are identified. Energy efficiency programs and initiatives introduce new technologies to customers; demonstrate their effectiveness in reducing gas bills, and make homes and businesses more comfortable and efficient. In addition, as these new technologies become standard equipment for builders/contractors and owners, higher energy efficiency standards are adopted and made mandatory. This strategy supports and is an integral part of the Company’s effort to create demand for energy efficiency products, as well as promote and support a competitive market to deliver them.

Another objective of the Company’s market transformation activities is to promote market transformation programs, often on a regional basis in conjunction with other GasNetworks® member utilities, and to support training and education for consumers, trade allies, building officials and contractors in order to eliminate or reduce market barriers. The Company’s market transformation activities are used to promote all residential and C&I programs through vehicles such as home shows, trade-ally shows and training, consumer brochures, and direct mail pieces. Such efforts normally promote either all residential energy efficiency programs or all C&I energy efficiency programs; however, in some cases such as contractor training and newsletters, combined marketing target both sectors.

Websites - Another example of combined marketing is through the use of websites. The GasNetworks® website ([www.gasnetworks.com](http://www.gasnetworks.com)) was introduced in February 2001. The website provides customers and trade-allies the ability to use an on-line, interactive resource for

obtaining an array of information about regional market transformation programs and natural gas energy efficiency. The site includes:

- Downloadable application forms for regional market transformation programs;
- Links to federal and state agencies as well as other energy efficiency related websites;
- Consumer tips on saving energy and buying high efficiency heating and water heating equipment;
- Customer Q&A feedback form
- Newsletter registration form;
- Industry related 'News and Events' and upcoming 'Contractor Training Seminars' and 'Other Training' sections; and
- Links to GasNetworks® member utility websites for access to company specific information and efficiency programs.

In addition to the consumer and contractor focus, the website reflects the Company's and GasNetworks®' overall commitment to promoting energy efficiency and new natural gas technologies. It enhances GasNetworks® regional presence as the website is used to attract and encourage memberships from other regional natural gas utilities.

Education and Training Programs are marketed to residential and C&I customers, contractors, homebuilders, building officials, and homebuyers through direct-mail promotions, contractor training seminars, the Company website, GasNetworks® website and newsletters, Company newsletters, bill messages, and bill inserts. The Company also educates and promotes awareness of programs through industry-related organizations (e.g., Consortium of Energy Efficiency, American Council for an Energy-Efficient Economy, the New Hampshire Plumbing-Heating-Cooling Contractors, New Hampshire Sea Coast Chambers of Commerce, The New Hampshire Lodging & Restaurant Association) and other energy efficiency programs (e.g., ENERGY STAR® Homes and RCS).

The Company, together with GasNetworks®, recognized early on that contractor education and training is an integral part of transforming the marketplace to accept new and more efficient equipment technologies. GasNetworks has focused on promoting new technologies, promoting ENERGY STAR® gas heating equipment and providing professional training seminars and programs to contractors and trade allies throughout the region. GasNetworks® has been providing state-of-art training programs since 1998. The group has made significant advances in

its goal of providing contractors with the necessary knowledge and tools to install and promote ENERGY STAR® gas heating equipment and other energy efficiency natural gas equipment. In addition to producing its own training programs and providing sponsorship to other energy efficiency efforts, GasNetworks® has teamed up with various organizations and manufacturers to promote and sponsor additional professional development training courses. Partnerships have included ASHRAE Boston, Honeywell and Weil-McLain. The members of GasNetworks® have built strong working relationships with manufacturers and distributors of these products, as well as with the plumbing and heating contractor community through their involvement in the marketplace, resulting in increased availability and acceptance of high efficiency equipment. To date, GasNetworks® has provided training to over 5,400 contractors and installers. As new market transformation programs and technologies are introduced, the Company, together with GasNetworks®, plans to continue contractor, trade ally, and building inspector trainings. These relationships provide greater recognition for GasNetworks® market transformation programs.

The Company's proposed budget will also support market research and evaluation efforts associated with market transformation programs. Joint evaluations result in significant savings for the Company and its customers. They also enhance the ability to perform a more detailed study of the markets being assessed that may otherwise be precluded due to individual budget constraints. The Company expects to continue to support the regional evaluation efforts for the rebate programs and other market transformation programs.

Target Market: Market transformation programs directly target, as a whole and/or individually, eligible customer sectors, all market segments, including homeowners, eligible C&I facility owners, landlords, homebuilders and buyers, building officials, contractors, natural gas equipment manufacturers, equipment wholesalers/distributors and other trade allies across New Hampshire and the region.

Market Barriers Addressed by this Program: The market barriers that will be addressed by this proposed program include:

- Higher first cost of energy efficient measures;
- Heating/water heating contractors and builders may be unwilling to adopt newer natural gas technologies;

- Lack of knowledge by residential and small commercial consumers, builders, heating/water heating contractors, building officials, and other key actors, of the full range of benefits of energy efficiency;
- Consumers' and builders' inability to differentiate between high efficiency heating and water heating and standard efficiency in the market; and
- Lack of consideration of the value of efficiency.

Proposed Budgets: The costs associated with all non-energy saving or non-quantified activities that support market transformation have been allocated among all Company and regional programs.

#### IV. Program Evaluation

In planning evaluation activities for the coming year, the Company considers several factors, including the length of time since a program or end-use was evaluated, the maturity of the program, the significance of expected savings for the end-use or project in the recently completed program year, the stability of prior evaluation results for the program aspect under consideration, and expected opportunities to participate in joint-utility and/or regional studies in the coming year. By participating in joint baseline, market assessment, process and impact evaluations, market transformation effects can be more accurately determined, while minimizing administrative costs for individual utilities.

The Company anticipates that its evaluation and market research efforts will continue to address research about new technologies and services, including:

- Review the 2009 GDS Associates, Inc. report, Additional Opportunities for Energy Efficiency in New Hampshire for information useful for identifying future cost effective energy efficiency programs and other planning and evaluation activities.
- Review the results of 2009 GasNetworks® 2008 Update of the Massachusetts Market Transformation Scoping Study that is currently underway. The 2008 Update uses a 1997 study as a template to evaluate technologies and practices, but expands the scope to include all cost-effective technologies and practices that save gas or save energy as part of a comprehensive approach in a multi-fuel environment. This update has two goals:
  - Identify all cost effective existing and emerging natural gas technologies that offer site-specific gas savings regardless of current fuel source
    - non-gas technologies that save gas
    - initiatives and opportunities that save gas
    - integrated multi-fuel energy saving projects that save gas or are gas neutral
  - Identify the most promising technologies, initiatives and opportunities for deploying cost effective prescriptive or custom programs during the next five years, including:
    - Retrofit and new construction
    - Residential and C&I customers
    - Comprehensive multi-fuel approaches to saving energy

Unitil will continue to track, monitor, evaluate and assess progress towards specific program goals as well as monitor the quality of program implementation through customer satisfaction surveys and on-site post-installation inspections.

## **V. Cost Recovery and Performance Incentives**

### ***A. Cost Recovery***

The Company intends to recover all internal and external costs related to its energy efficiency and market transformation program activities through a Conservation Charge (“CC”) that is adjusted periodically as part of its cost-of-gas-adjustment (“CGA”) filing, consistent with the Settlement Agreement in Docket No. DG 02-106. Such costs include but are not limited to those incurred to develop, plan, deliver, administer, monitor, and evaluate energy efficiency programs<sup>6</sup>. The Company intends to file revised CCs as part of its first CGA following Commission approval of this Proposal. A projected CC calculation is included in Appendix C – Illustrative Cost-Recovery Schedules.

### ***B. Performance Incentives***

The Company proposes to continue to collect Performance Incentives, consistent with the Commission’s Order No. 23,850. In that Order, the Commission approved the NH Energy Efficiency Working Group’s proposed Utility Performance Incentive which is designed to encourage a utility to achieve superior program cost-effectiveness while maximizing program savings. It is a sliding scale incentive with a design level equal to 8% of the Company’s program budgets (before incentives) and a maximum of 12% of the budgets. There are also threshold performance criteria, explained below, which the Company must achieve before any incentive is earned.

#### Methodology:

The Performance Incentive has two components. The cost-effectiveness component is based on the relationship between the projected TRC test and the actual program-year-end TRC test. The energy savings component is based on the relationship between lifetime installed energy savings (in therms for a gas utility) and the actual lifetime energy savings. Each of these ratios are calculated at the sector level, one for the combined residential (including low income) programs

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<sup>6</sup> Costs associated with on-going collaborative efforts and settlement commitments will be recovered by the company through the CC. Minimal costs have been set aside; however, any significant costs have not been included as part of the budget or the performance incentive calculation.



and one for the combined C&I programs, and then applied to each sector's program budgets.

The Company's Performance Incentives is calculated as follows:

$$\text{Incentive}_{\text{RES}} = \text{Budget}_{\text{RES}} \times [(4\% * \text{TRC}_{\text{Actual}} / \text{TRC}_{\text{Projected}}) + (4\% * \text{Lifetime Savings}_{\text{Actual}} / \text{Lifetime Savings}_{\text{Projected}})]$$

Plus

$$\text{Incentive}_{\text{C\&I}} = \text{Budget}_{\text{C\&I}} \times [(4\% * \text{TRC}_{\text{Actual}} / \text{TRC}_{\text{Projected}}) + (4\% * \text{Lifetime Savings}_{\text{Actual}} / \text{Lifetime Savings}_{\text{Projected}})]$$

Threshold:

The Company must achieve minimum "threshold" performance before being eligible to earn an incentive. For the cost-effectiveness component, the Company must achieve a sector level actual year-end TRC of at least 1.0 before any incentive can be earned on this component. Likewise, for the energy savings component, the Company must achieve annually a minimum of 65% of projected lifetime therm savings before becoming eligible to earn an incentive for that year. Once the threshold is achieved, the earned incentive will be on a sliding scale from 0% to 12%, with a design-level target incentive of 8%.

Appendix D – Projected Performance Incentive presents the Company's projected performance incentives for the 20-Month Program Year.

## APPENDIX A: PROGRAM BENEFIT/COST SCREENING RESULTS

**TABLE A-1**  
**2009 TRC BENEFIT COST TEST**  
**Northern Utilities - NH Division**  
**Summary of Benefits (2009 \$s)**  
**Total Resource Cost Test**

BCR Activity	TRC Benefit/ Cost	TRC Net Benefit (\$000)	NPV Total Benefits (\$000)	NPV Total Costs (\$000)	NPV PA Costs (\$000)
<b>Residential</b>					
A02a ENERGY STAR Homes	1.5	\$48.9	\$145.3	\$96.4	\$80.7
A03a Home Performance w/ES	1.1	\$16.7	\$186.3	\$169.6	\$142.8
A03b Residential Self Install	1.6	\$23.5	\$66.2	\$42.7	\$27.3
A04a Res GasNetworks	1.6	\$115.4	\$310.3	\$194.9	\$141.1
** A05a Res Home Assessment	-	(\$73.6)	\$0.0	\$73.6	\$73.6
<b>Subtotal: Residential</b>	<b>1.2</b>	<b>\$130.9</b>	<b>\$708.1</b>	<b>\$577.2</b>	<b>\$465.4</b>
<b>Low Income</b>					
B03a Low Income Retrofit 1-4	1.4	\$54.9	\$177.1	\$122.1	\$122.1
<b>Subtotal: Low Income</b>	<b>1.4</b>	<b>\$54.9</b>	<b>\$177.1</b>	<b>\$122.1</b>	<b>\$122.1</b>
<b>Com/Ind</b>					
C03a Large C&I Custom	3.4	\$802.4	\$1,142.8	\$340.5	\$215.4
C03b Small C&I Custom	3.3	\$599.0	\$859.8	\$260.8	\$165.1
C03C Multifamily	3.3	\$1,020.3	\$1,464.9	\$444.6	\$255.2
C04a C&I GasNetworks	1.4	\$44.7	\$148.0	\$103.3	\$82.2
<b>Subtotal: C&amp;I</b>	<b>3.1</b>	<b>\$2,466.3</b>	<b>\$3,615.5</b>	<b>\$1,149.2</b>	<b>\$717.9</b>
<b>Grand Total</b>	<b>2.4</b>	<b>\$2,652.1</b>	<b>\$4,500.6</b>	<b>\$1,848.5</b>	<b>\$1,305.5</b>

\*\* The Residential Home Assessment Program is an educational program offering a low-cost no-obligation home energy assessment. Since there are no readily quantifiable savings associated with the program, the BCR is equal to 0. At the sector level, however, all of the residential programs are cost-effective.

## APPENDIX B: PROGRAM BUDGETS AND GOALS

**TABLE B-1**  
**Northern Utilities - NH Division**  
**Detailed Program Budget**  
**May 2009 - December 2010**

Sector	Program	Internal Administration	External Administration	Internal Implementation	Marketing	Customer Incentives	Monitoring & Evaluation	Shareholder Incentive	Grand Total
A - Residential	A02a ENERGY STAR Homes	\$ 5,887	\$ 61	\$ 16,829	\$ 6,338	\$ 40,835	\$ 4,762	\$ 5,965	\$ 80,677
	A03a Home Performance w/ES	\$ 7,667	\$ 1,239	\$ 21,414	\$ 9,996	\$ 80,632	\$ 11,236	\$ 10,584	\$ 142,768
	A03b Residential Self Install	\$ 1,463	\$ 237	\$ 4,087	\$ 1,908	\$ 15,390	\$ 2,145	\$ 2,034	\$ 27,264
	A04a Res GasNetworks	\$ 9,214	\$ 1,247	\$ 24,203	\$ 17,721	\$ 70,463	\$ 7,841	\$ 10,447	\$ 141,136
	A05a Res Home Assessment	\$ 3,953	\$ 639	\$ 11,040	\$ 5,154	\$ 41,570	\$ 5,793	\$ 5,447	\$ 73,595
A - Residential Total		\$ 28,183	\$ 3,423	\$ 77,573	\$ 41,117	\$ 248,891	\$ 31,776	\$ 34,477	\$ 465,440
B - Low Income	B03a Low Income Retrofit 1-4	\$ 8,219	\$ 470	\$ 22,890	\$ 8,488	\$ 66,586	\$ 6,439	\$ 9,047	\$ 122,141
B - Low Income Total		\$ 8,219	\$ 470	\$ 22,890	\$ 8,488	\$ 66,586	\$ 6,439	\$ 9,047	\$ 122,141
C - Commercial & Industrial	C03a Large C&I Custom	\$ 15,035	\$ 213	\$ 37,215	\$ 17,118	\$ 125,098	\$ 4,735	\$ 15,953	\$ 215,367
	C03b Small C&I Custom	\$ 9,599	\$ 195	\$ 24,575	\$ 19,065	\$ 94,517	\$ 4,932	\$ 12,231	\$ 165,115
	C03C Multifamily	\$ 14,835	\$ 301	\$ 37,981	\$ 29,465	\$ 146,076	\$ 7,623	\$ 18,902	\$ 255,184
	C04a C&I GasNetworks	\$ 4,780	\$ 97	\$ 12,238	\$ 9,494	\$ 47,068	\$ 2,456	\$ 6,091	\$ 82,225
C - Commercial & Industrial Total		\$ 44,250	\$ 805	\$ 112,010	\$ 75,143	\$ 412,759	\$ 19,747	\$ 53,177	\$ 717,890
Grand Total		\$ 80,653	\$ 4,698	\$ 212,473	\$ 124,748	\$ 728,236	\$ 57,962	\$ 96,702	\$ 1,305,471

**TABLE B-2**  
**Northern Utilities - NH Division**  
**Program Goals**  
**May 2009 - December 2010**

Sector	Program	Annual Gas MMBTU	Lifetime Gas MMBTU	# of Participants
<b>A - Residential</b>	ENERGY STAR Homes	731	16,170	25
	Home Performance w/ ES	984	19,674	85
	Residential Home Assessment **	-	-	193
	Residential Self Install	616	6,156	616
	Residential Gas Networks	2,083	31,493	287
<b>Subtotal Residential</b>		<b>4,413</b>	<b>73,493</b>	<b>1,206</b>
<b>B - Low Income</b>	Low Income Retrofit	1,179	17,678	45
<b>Subtotal Low Income</b>		<b>1,179</b>	<b>17,678</b>	<b>45</b>
<b>C - Commercial &amp; Industrial</b>	C & I GasNetworks	1,083	16,845	75
	Large C&I Custom Measures	8,453	111,582	4
	Small C&I Custom Measures	5,513	86,556	15
	Multifamily	8,603	150,545	29
<b>Subtotal C&amp;I</b>		<b>23,652</b>	<b>365,527</b>	<b>122</b>
<b>Grand Total</b>		<b>29,243</b>	<b>456,698</b>	<b>1,373</b>

\*\* The Residential Home Assessment Program is an educational program offering a low-cost no-obligation home energy assessment. There are no readily quantifiable savings associated with the program.

## APPENDIX C: ILLUSTRATIVE COST-RECOVERY SCHEDULES

**APPENDIX C: Schedule 1 Summary of Projected Energy Efficiency Charges**

**Northern Utilities, Inc. - New Hampshire Division  
Energy Efficiency Programs  
Summary of Projected Conservation Charges  
For Effect May 2009 December 2010**

**CONSERVATION CHARGES (CC): \$ per Therm**

**Projected May 1, 2009 through December 31, 2010**

<b>Residential</b>	<b>Commercial &amp; Industrial</b>
<b>\$0.0113</b>	<b>\$0.0107</b>

Note: Shareholder Incentive costs are included in the DSM Expenditures shown on Schedules 2 and 3.



**APPENDIX C: Schedule 2 Illustrative Implementation Charge Calculation**

**Northern Utilities, Inc. - New Hampshire Division  
Residential Energy Efficiency Programs  
Conservation Charge Calculation  
Effective May 2009 - December 2010**

Month	Actual or Forecast	Beginning Balance (Over)/Under	DSM Rate Per Therm	DSM Collections	Residential Expenditures Inc. SHI	25% of Low-Income Expenditures	Ending Balance (Over)/Under	Average Balance (Over)/Under	Interest Prime Rate	Interest @ Prime Rate	Ending Bal. Plus Interest (Over)/Under	Residential Therm Sales	# of Days
Jan-09	Actual	(386,793)	\$0.0113	35,548	30,928	397	(391,015)	(388,904)	4.00%	(1,321)	(392,336)	3,145,836	31
Feb-09	Forecast	(392,336)	\$0.0113	31,819	15,515	1,261	(407,380)	(399,858)	4.00%	(1,227)	(408,607)	2,815,865	28
Mar-09	Forecast	(408,607)	\$0.0113	27,413	18,099	1,425	(416,497)	(412,552)	4.00%	(1,402)	(417,898)	2,425,949	31
Apr-09	Forecast	(417,898)	\$0.0113	21,044	18,099	1,345	(419,498)	(418,698)	4.00%	(1,377)	(420,874)	1,862,280	30
May-09	Forecast	(420,874)	\$0.0113	12,069	12,313	813	(419,818)	(420,346)	4.00%	(1,428)	(421,246)	1,068,057	31
Jun-09	Forecast	(421,246)	\$0.0113	6,395	41,865	2,763	(383,013)	(402,129)	4.00%	(1,322)	(384,335)	565,890	30
Jul-09	Forecast	(384,335)	\$0.0113	4,832	9,851	650	(378,666)	(381,500)	4.00%	(1,296)	(379,962)	427,593	31
Aug-09	Forecast	(379,962)	\$0.0113	4,005	24,626	1,625	(357,716)	(368,839)	4.00%	(1,253)	(358,969)	354,435	31
Sep-09	Forecast	(358,969)	\$0.0113	4,259	12,313	813	(350,102)	(354,535)	4.00%	(1,166)	(351,268)	376,903	30
Oct-09	Forecast	(351,268)	\$0.0113	6,202	12,313	813	(344,344)	(347,806)	4.00%	(1,182)	(345,526)	548,861	31
Nov-09	Forecast	(345,526)	\$0.0113	11,893	12,313	813	(344,293)	(344,909)	4.00%	(1,134)	(345,427)	1,052,495	30
Dec-09	Forecast	(345,427)	\$0.0113	21,876	59,104	3,900	(304,299)	(324,863)	4.00%	(1,104)	(305,403)	1,935,901	31
Jan-10	Forecast	(305,403)	\$0.0113	34,065	12,313	813	(326,342)	(315,872)	4.00%	(1,073)	(327,415)	3,014,580	31
Feb-10	Forecast	(327,415)	\$0.0113	32,063	14,776	975	(343,727)	(335,571)	4.00%	(1,030)	(344,757)	2,837,442	28
Mar-10	Forecast	(344,757)	\$0.0113	27,623	17,239	1,138	(354,004)	(349,380)	4.00%	(1,187)	(355,190)	2,444,499	31
Apr-10	Forecast	(355,190)	\$0.0113	21,212	17,239	1,138	(358,026)	(356,608)	4.00%	(1,172)	(359,198)	1,877,140	30
May-10	Forecast	(359,198)	\$0.0113	12,160	12,313	813	(358,233)	(358,716)	4.00%	(1,219)	(359,451)	1,076,103	31
Jun-10	Forecast	(359,451)	\$0.0113	6,437	41,865	2,763	(321,261)	(340,356)	4.00%	(1,119)	(322,380)	569,668	30
Jul-10	Forecast	(322,380)	\$0.0113	4,861	9,851	650	(316,741)	(319,561)	4.00%	(1,086)	(317,826)	430,203	31
Aug-10	Forecast	(317,826)	\$0.0113	4,028	24,626	1,625	(295,603)	(306,715)	4.00%	(1,042)	(296,645)	356,504	31
Sep-10	Forecast	(296,645)	\$0.0113	4,284	12,313	813	(287,803)	(292,224)	4.00%	(961)	(288,764)	379,073	30
Oct-10	Forecast	(288,764)	\$0.0113	6,243	12,313	813	(281,882)	(285,323)	4.00%	(969)	(282,851)	552,504	31
Nov-10	Forecast	(282,851)	\$0.0113	11,979	12,313	813	(281,704)	(282,277)	4.00%	(928)	(282,632)	1,060,078	30
Dec-10	Forecast	(282,632)	\$0.0113	22,038	93,581	6,175	(204,915)	(243,773)	4.00%	(828)	(205,743)	1,950,291	31

Totals May-09 to Dec-10	\$258,524	\$465,440	\$30,713							(\$22,498)		22,878,220
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Residential Conservation Charge	
Effective May-09 - Dec-10	
Forecasted Beginning Balance as of May-09	(\$420,874)
Projected DSM Expenditures May-09 through Dec-2010	\$ 496,153
Projected Interest	(\$22,498)
Projected Ending Balance as of Dec-10	<u>\$205,743</u>
<b>Total Charges</b>	<b>\$258,524</b>
Projected Therm Sales	<u>22,878,220</u>
Residential Rate	<b>\$0.0113</b>

**APPENDIX C: Schedule 3 Illustrative Implementation Charge Calculation**

**Northern Utilities, Inc. - New Hampshire Division  
Commercial & Industrial Energy Efficiency Programs  
Conservation Charge Calculation  
Effective May 2009 - December 2010**

Month	Actual or Forecast	Beginning Balance (Over)/Under	DSM Rate Per Therm	DSM Collections	C&I Expenditures Inc. SHI	75% of Low-Income Expenditures	Ending Balance (Over)/Under	Average Balance (Over)/Under	Interest Prime Rate	Interest @ Prime Rate	Ending Bal. Plus Interest (Over)/Under	C&I Therm Sales	# of Days
Jan-09	Actual	(35,100)	\$0.0069	46,331	1,366	1,133	(78,932)	(57,016)	4.00%	(194)	(79,125)	7,973,333	31
Feb-09	Forecast	(79,125)	\$0.0069	43,318	36,834	2,810	(82,799)	(80,962)	4.00%	(248)	(83,048)	6,278,020	28
Mar-09	Forecast	(83,048)	\$0.0069	39,065	27,625	3,325	(91,163)	(87,105)	4.00%	(296)	(91,459)	5,661,618	31
Apr-09	Forecast	(91,459)	\$0.0069	32,533	46,041	3,405	(74,546)	(83,002)	4.00%	(273)	(74,819)	4,714,951	30
May-09	Forecast	(74,819)	\$0.0107	35,076	23,460	2,419	(84,015)	(79,417)	4.00%	(270)	(84,285)	3,269,377	31
Jun-09	Forecast	(84,285)	\$0.0107	23,267	54,741	8,224	(44,587)	(64,436)	4.00%	(212)	(44,799)	2,168,679	30
Jul-09	Forecast	(44,799)	\$0.0107	21,533	15,640	1,935	(48,756)	(46,777)	4.00%	(159)	(48,915)	2,007,036	31
Aug-09	Forecast	(48,915)	\$0.0107	20,266	46,921	4,837	(17,423)	(33,169)	4.00%	(113)	(17,535)	1,888,992	31
Sep-09	Forecast	(17,535)	\$0.0107	21,568	46,921	2,419	10,237	(3,649)	4.00%	(12)	10,225	2,010,293	30
Oct-09	Forecast	10,225	\$0.0107	26,884	23,460	2,419	9,220	9,722	4.00%	33	9,253	2,505,835	31
Nov-09	Forecast	9,253	\$0.0107	37,999	31,281	2,419	4,953	7,103	4.00%	23	4,977	3,541,866	30
Dec-09	Forecast	4,977	\$0.0107	52,462	31,281	11,610	(4,595)	191	4.00%	1	(4,594)	4,889,960	31
Jan-10	Forecast	(4,594)	\$0.0107	72,030	23,460	2,419	(50,746)	(27,670)	4.00%	(94)	(50,840)	6,713,881	31
Feb-10	Forecast	(50,840)	\$0.0107	67,699	31,281	2,902	(84,355)	(67,597)	4.00%	(207)	(84,563)	6,310,171	28
Mar-10	Forecast	(84,563)	\$0.0107	61,037	23,460	3,386	(118,753)	(101,658)	4.00%	(345)	(119,098)	5,689,170	31
Apr-10	Forecast	(119,098)	\$0.0107	50,823	39,101	3,386	(127,434)	(123,266)	4.00%	(405)	(127,839)	4,737,128	30
May-10	Forecast	(127,839)	\$0.0107	35,228	23,460	2,419	(137,188)	(132,513)	4.00%	(450)	(137,638)	3,283,548	31
Jun-10	Forecast	(137,638)	\$0.0107	23,358	54,741	8,224	(98,031)	(117,834)	4.00%	(387)	(98,418)	2,177,160	30
Jul-10	Forecast	(98,418)	\$0.0107	21,620	15,640	1,935	(102,463)	(100,440)	4.00%	(341)	(102,804)	2,015,170	31
Aug-10	Forecast	(102,804)	\$0.0107	20,341	46,921	4,837	(71,387)	(87,095)	4.00%	(296)	(71,683)	1,895,983	31
Sep-10	Forecast	(71,683)	\$0.0107	21,654	46,921	2,419	(43,997)	(57,840)	4.00%	(190)	(44,187)	2,018,374	30
Oct-10	Forecast	(44,187)	\$0.0107	26,980	23,460	2,419	(45,288)	(44,738)	4.00%	(152)	(45,440)	2,514,778	31
Nov-10	Forecast	(45,440)	\$0.0107	38,143	31,281	2,419	(49,884)	(47,662)	4.00%	(157)	(50,041)	3,555,299	30
Dec-10	Forecast	(50,041)	\$0.0107	52,715	84,458	18,382	85	(24,978)	4.00%	(85)	(0)	4,913,488	31

Totals May-09 to Dec-10	\$730,681	\$717,890	\$91,428							(\$3,819)		68,106,186
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Commercial & Industrial Conservation Charge Effective May-09 - Dec-10	
Forecasted Beginning Balance as of May-09	(\$74,819)
Projected DSM Expenditures May-09 through Dec-2010	\$ 809,318
Projected Interest	(\$3,819)
Projected Ending Balance as of Dec-10	\$0
<b>Total Charges</b>	<b>\$730,681</b>
Projected Therm Sales	68,106,186
<b>Commercial &amp; Industrial Rate</b>	<b>\$0.0107</b>

## APPENDIX C: Schedule 4 Low Income Program Budget Allocation

### Northern Utilities, Inc. - New Hampshire Division Energy Efficiency Program - Low Income Program Budget Customer Class Allocation Effective May-09 - Dec-10

<u>Forecasted Sales</u>	<u>Sales Forecast</u>	<u>Sector Percentage</u>	
(1) Residential	22,878,220	25%	(1)/(3)
(2) Commercial and Industrial	68,106,186	75%	(2)/(3)
(3) Total Therms	90,984,406	100%	
<u>Filed Budgets</u>			
(3) Low-Income		\$ 122,141	
(4) Residential		\$ 465,440	
(5) Commercial and Industrial		\$ 717,890	
(6) Total Budget		\$ 1,305,471	
<u>Low-Income Budget Allocated to Classes</u>			
(7) Low-Income Budget allocated to Residential		\$ 30,713	% line 1 X line 3
(8) Low-Income Budget allocated to Commercial and Industrial		\$ 91,428	% line 2 X line 3
(9) Total Low-Income Budget		122,141	
<u>Class Budgets Including Low-Income Allocation</u>			
(10) Total Residential (plus allocation of Low-Income)		496,153	line 7 + line 4
(11) Commercial and Industrial (plus allocation of Low-Income)		809,318	line 8 + line 5
(12) Total Budget		1,305,471	

## APPENDIX D: PROJECTED PERFORMANCE INCENTIVE

**Table D-1**  
**Northern Utilities - New Hampshire Division**  
**Energy Efficiency Program Cost-Effectiveness**  
**May 2009 to December 2010**

	Total Resource Benefit/Cost Ratio	Net Present Value			Lifetime MMBTu Savings	Number of Cust. Served
		Benefit (\$000)	Utility Costs <sup>(1)</sup> (\$000)	Customer Costs (\$000)		
Res Non-Low Income Programs						
ENERGY STAR Homes	1.5	145.3	80.7	15.70	16,170	25
Home Performance w/ ENERGY STAR	1.1	186.3	142.8	26.80	19,674	85
Residential Self-Install	1.6	66.2	27.3	15.40	6,156	616
Residential GasNetworks	1.6	310.3	141.1	53.80	31,493	287
Residential Home Energy Assessment	-	-	73.6	-	-	193
Subtotal Residential	1.2	\$ 708.1	\$ 465.5	\$ 111.7	73,493	
Residential Low Income Program						
Residential Low Income Retrofit	1.4	177.1	122.1	-	17,678	45
Subtotal Residential LI	1.4	\$ 177.1	\$ 122.1	\$ -	17,678	
Commercial/Industrial Programs						
Large C&I Custom Measures	3.4	1,142.8	215.4	125.10	111,582	4
Small C&I Custom Measures	3.3	859.8	165.1	95.70	86,556	15
C&I Multifamily	3.3	1,464.9	255.2	189.40	150,545	29
C&I GasNetworks	1.4	148.0	82.2	21.10	16,845	75
Subtotal C&I	3.1	\$ 3,615.5	\$ 717.9	\$ 431.3	365,528	
Total	2.4	\$ 4,500.7	\$ 1,305.5	\$ 543.0	456,699	

(1) Utility Costs include direct program costs plus projected Shareholder Incentive.

**Table D-2**  
**Northern Utilities - New Hampshire Division**  
**Shareholder Incentive Calculation - 2009**  
**May 2009 to December 2010**

	<u>Planned</u>
<b>Residential Incentive (including Low-Income)</b>	
1. Benefit / Cost Ratio	1.3
2. Threshold Benefit / Cost Ratio	1.0 <sup>(1)</sup>
3. Lifetime MMBtu Savings	91,171
4. Threshold Lifetime MMBtu Savings (65%)	59,261 <sup>(2)</sup>
5. Direct Program Budget	\$ 544,076
6. Benefit / Cost Percentage of Budget	4.00%
7. Lifetime MMBtu Percentage of Budget	4.00%
8. Residential Incentive	\$43,524
9. Cap (12%)	\$65,289
<b>Commercial &amp; Industrial Incentive</b>	
10. Benefit/Cost Ratio	3.1
11. Threshold Benefit / Cost Ratio	1.0 <sup>(1)</sup>
12. Lifetime MMBtu Savings	365,528
13. Threshold Lifetime MMBtu Savings (65%)	237,593 <sup>(2)</sup>
14. Direct Program Budget	\$ 664,723
15. Benefit / Cost Percentage of Budget	4.00%
16. Lifetime kWh Percentage of Budget	4.00%
17. C&I Shareholder Incentive	\$53,177
18. Cap (12%)	\$79,767
19. TOTAL INCENTIVE	\$ 96,702

**Notes**

1. Actual Benefit / Cost Ratio for each sector must be greater than or equal to 1.0.
2. Actual Lifetime kWh Savings for each sector must be greater than or equal to 65% of projected savings.

**Table D-3**  
**Northern Utilities - New Hampshire Division**  
**Planned Benefit / Cost Ratio by Sector**  
**May 2009 to December 2010**

	<u>Planned</u>
<b>Residential:</b>	
1. Benefits (Value) From Eligible Programs	\$ 885,200
2. Direct Program Budgets - Excludes SHI	\$ 544,076
3. Customer Contribution	<u>\$ 111,700</u>
4. Total Costs Excluding Shareholder Incentive	\$ 655,776
5. Benefit/Cost Ratio - Residential Sector	<b>1.3</b>
 <b>Commercial &amp; Industrial:</b>	
6. Benefits (Value) From Eligible Programs	\$ 3,615,500
7. Direct Program Budgets - Excludes SHI	\$ 664,723
8. Customer Contribution	<u>\$ 431,300</u>
9. Total Costs Excluding Shareholder Incentive	\$ 1,096,023
10. Benefit/Cost Ratio - C&I Sector	<b>3.1</b>

**Table D-3**  
**Northern Utilities - New Hampshire Division**  
**Lifetime Energy Savings by Sector and Program**  
**May 2009 to December 2010**

	<b><u>Lifetime</u></b> <b><u>MMBtu Savings</u></b>
<b>Residential (including Low Income):</b>	
ENERGY STAR Homes	16,170
Home Performance w/ ENERGY STAR	19,674
Residential Self-Install	6,156
Residential GasNetworks	31,493
Residential Home Energy Assessment	0
Residential Low Income Retrofit	<u>17,678</u>
 Total Residential Included for Incentive Calculation	 <b>91,171</b>
 <b>Commercial &amp; Industrial:</b>	
Large C&I Custom Measures	111,582
Small C&I Custom Measures	86,556
C&I Multifamily	150,545
C&I GasNetworks	<u>16,845</u>
 Total Commercial & Industrial Included for Incentive Calculation	 <b>365,528</b>