

**NEW HAMPSHIRE PUBLIC UTILITIES COMMISSION**

**ENERGYNORTH NATURAL GAS, INC.**

**D/B/A**

**NATIONAL GRID NH**

**ENERGY EFFICIENCY PLAN**

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

**May 8, 2009**

**nationalgrid**

# TABLE OF CONTENTS

<b>I. FORWARD.....</b>	<b>1</b>
<b>II. OVERVIEW OF ENERGY EFFICIENCY PROGRAMS.....</b>	<b>4</b>
<b>III. RESIDENTIAL PROGRAMS.....</b>	<b>7</b>
A. Residential High-Efficiency Heating, Water Heating and Controls Program .....	7
B. New Home Construction with ENERGY STAR® .....	10
C. Energy Audit and Home Performance .....	14
1. One to Four Unit Homes.....	14
2. Five or More Unit Homes - Individually Metered Units .....	15
D. Residential Weatherization Program .....	18
1. Residential Weatherization .....	18
2. ENERGY STAR® Replacement Windows.....	21
3. Energy Analysis: Internet Audit .....	22
E. Residential Building Practices and Demonstration Program.....	24
F. Residential Low Income Program .....	26
<b>IV. COMMERCIAL AND INDUSTRIAL PROGRAMS.....</b>	<b>29</b>
A. The Commercial Energy Efficiency Program.....	29
1. Commercial Energy Efficiency.....	29
Audit services.....	29
<i>Energy Assessment</i> .....	29
<i>Custom Assessment</i> .....	30
<i>Technical assistance</i> .....	30
New Construction Services.....	31
Incentives .....	32
<i>Prescriptive Incentives</i> .....	32
<i>Custom Incentives</i> .....	33
<i>Steam Savings Initiative</i> .....	34
<i>Solar Incentives</i> .....	34
2. Multifamily Housing.....	35
3. Economic Redevelopment .....	37
B. Commercial High-Efficiency Heating Program .....	40
C. Building Practices and Demonstration Program.....	44
D. Business Energy Analyzer Program .....	45
<b>V. OUTREACH AND COMMUNICATION.....</b>	<b>48</b>
A. Energy Efficiency Communication and Education.....	48
B. Trade Ally Training and Codes & Standards Program.....	48
C. Building Operators Certification Program.....	49
<b>VI. EVALUATION AND REPORTING .....</b>	<b>50</b>
1. Evaluation .....	50
2. Reporting.....	52
Quarterly Reports:.....	53

Updated Program Plans for 2010:.....	53
Shareholder Incentive Report: .....	53
Next Multi-Year Energy Efficiency Plan: .....	53
<b>VII. SHAREHOLDER INCENTIVE.....</b>	<b>53</b>

## LIST OF TABLES

<b>Table I:</b>	May 1, 2009 - December 31, 2010 Budget
<b>Table II:</b>	Energy Efficiency Programs
<b>Table III:</b>	Residential High-Efficiency Heating, Water Heating and Controls Program
<b>Table IV:</b>	New Home Construction with ENERGY STAR®
<b>Table V:</b>	Energy Audit and Home Performance
<b>Table VI:</b>	Residential Weatherization
<b>Table VII:</b>	ENERGY STAR® Replacement Windows
<b>Table VIII:</b>	Energy Analysis - Internet Audit Program
<b>Table IX:</b>	Building Practices and Demonstration Program
<b>Table X:</b>	Residential Low Income Program
<b>Table XI:</b>	Prescriptive Incentives for Installed Measures
<b>Table XII:</b>	Commercial Energy Efficiency
<b>Table XIII:</b>	Multifamily Housing
<b>Table XIV:</b>	Economic Redevelopment
<b>Table XV:</b>	Commercial High-Efficiency Heating Program
<b>Table XVI:</b>	Commercial High-Efficiency Heating Program Incentive Qualifications
<b>Table XVII:</b>	Building Practices and Technology Demonstration
<b>Table XVIII:</b>	Business Energy Analyzer Program
<b>Table XIX:</b>	Building Operator Certification

## **LIST OF APPENDICIES AND EXHIBITS**

**Appendix A:** Explanation of Budget Categories

**Exhibit A:** Projected Program Expenses: presents detailed budgets by program and year.

**Exhibit B:** Benefit Cost Analysis: summarizes the two-year benefit cost (BC) ratios for the programs as well as each year's BC ratio by sector with and without shareholder incentive.

**Exhibit C:** Program Input Assumptions: shows the per participant savings, costs, and rebates for each program measure.

**Exhibit D:** Shareholder Incentive Calculation: estimates the Company's projected shareholder incentive for successful implementation of its energy efficiency programs.

## **I. FORWARD**

This document presents to the New Hampshire Public Utilities Commission (NHPUC or the Commission) EnergyNorth Natural Gas, Inc.<sup>1</sup> d/b/a National Grid NH's (the Company) proposed Energy Efficiency (EE) plan for the twenty-month period May 1, 2009<sup>2</sup> through December 31, 2010. The Company's current programs, which were approved by Commission Order 24,636, were set to expire on April 30, 2009. By Secretarial Letter dated April 21, 2009, the Commission authorized the continuation of those programs until a new energy efficiency plan is approved. This proposed EE Plan provides updated program descriptions, benefit/cost analyses, program budgets and program goals for this twenty-month time period and is premised on the existing program structure. The Company is proposing a few additions to its current program offerings. On the residential side, the Company is including rebates for residential energy efficient storage water heaters and adding a program element to address individually metered gas multifamily facilities (five or more units) in both the Residential Weatherization program and Energy Audit and Home Performance program. The Residential Weatherization program provides insulation to customers in conjunction with air sealing. Energy Audit and Home Performance provides education to participants either through phone support or an in-home audit. The Low Income Program will also be expanded and will serve individually metered gas multifamily facilities within the Low Income Program. Low Income program budgets have been increased to account for these individually metered low income multifamily facilities and to accommodate the expiration of other funding sources. The increased budget will allow the Company to serve a similar volume of participants as in the past two years. New commercial and industrial initiatives include the steam savings initiative and enhanced commercial kitchens.

National Grid's Energy Efficiency Plan covers a twenty-month period rather than the traditional three-year plan in anticipation of a joint electric and gas Energy Efficiency multi-year plan beginning on January 1, 2011. The proposed budget for the Company's

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<sup>1</sup> EnergyNorth Natural Gas, Inc. is one of four local distribution companies that do business as National Grid Energy Delivery New England. The other companies provide service in Massachusetts as Boston Gas Company, Colonial Gas Company and Essex Gas Company.

<sup>2</sup> The Company initially proposed that the Plan take effect on May 1, 2009. The Company will implement the proposed Plan upon approval by the Commission.

EE efforts for the eight months in 2009 is \$2,815,786 and is \$4,986,415 in calendar year 2010. Detailed budgets are set forth in Table I.

This energy efficiency plan incorporates several changes and enhancements compared to prior plans submitted by the Company. One change to this plan, as compared to previous gas energy efficiency filings, is the adoption of the cost categories currently in use in the electric energy efficiency plan filings when presenting the energy efficiency budget (Exhibit A). In addition, the current Plan covers a shorter time period than the three-year plans that have been submitted by the Company in prior years. After a CORE Electric meeting on February 9, 2009, National Grid discussed with PUC staff and OCA the potential of moving toward common planning elements between the gas and electric utilities. The discussion concluded with an agreement that the gas energy efficiency plan would consist of the twenty-month period May 2009 through December 2010 in anticipation of a joint electric and gas EE plan beginning January 1, 2011. At that meeting, National Grid also noted its intent to transition the previously used traditional gas cost categories to the electric cost categories so that efforts to better coordinate gas and electric energy efficiency efforts will be simplified. Appendix A defines the traditional gas and electric cost categories. The 2008 energy efficiency plan costs are mapped to both the prior gas cost categories and the electric costs categories that the Company proposes to adopt moving forward. In Exhibit A: Projected Program Expenses, costs are also presented in gas cost categories as well as electric cost categories for 2009 and 2010.

Exhibit B, the Benefit Cost Analysis, uses the same benefit cost model as the CORE electric utilities. Avoided energy costs are from the regional "Avoided Energy Supply Costs in New England: 2007 Final Report." Both the costs and benefits are presented in 2009 dollars for the twenty-month period. Information for a specific program year is presented in that year's dollars. Finally, Exhibit D, the Shareholder Incentive Calculation is presented in a similar manner as the electric Shareholder Incentive calculations. The target Benefit/Cost ratio is net of shareholder incentive. Target Incentive levels are 8% of utility costs or total resource costs minus participant costs and shareholder incentives.

<b>Table-I: May 1, 2009 - December 31, 2010 Budget</b>			
<b>Electric Cost Categories</b>	<b>2009 Budget</b>	<b>2010 Budget</b>	<b>Gas Cost Categories</b>
Internal Administration	\$272,602	\$437,475	Company Administration
External Administration	\$225,702	\$381,323	Vendor Admin/Support
Rebates/Services	\$1,862,548	\$3,483,770	Services
Internal Implementation	\$0	\$0	Other
Marketing (sum of communication and trade ally)	\$363,486	\$519,636	
	\$272,388	\$382,575	Communication
	\$91,098	\$137,061	Trade Ally
Evaluation	\$91,448	\$164,211	Evaluation and Reporting
<b>Total</b>	<b>\$2,815,786</b>	<b>\$4,986,415</b>	

In an effort to begin to achieve some consistency between the gas and electric energy efficiency programs, the Company is presenting some aspects of this filing in a different format than its prior filings:

1. The electric utilities provide program budgets in different cost categories than have been used by the Company in its gas energy efficiency filings. In this filing, the Company is providing its proposed EE budgets using the budget categories in the electric energy efficiency filings.
2. The presentation of the performance-based shareholder incentive mechanism has been different in the gas and electric EE plans. The Company is adopting the presentation that can be found in the electric EE plans here (see Exhibit D) but maintaining the current methodology for calculation of the incentive.

The remainder of this EE Plan provides an overview of proposed programs, a more detailed discussion of EE efforts for residential customers, a more detailed



discussion of EE efforts for commercial and industrial customers, proposed outreach and communication efforts, evaluation and reporting, and a discussion about proposed performance-based shareholder incentives.

Four exhibits are provided in support of this EE Plan:

1. Exhibit A: Projected Program Expenses presents detailed budgets by program and year.
2. Exhibit B: Benefit Cost Analysis summarize the two-year benefit cost (BC) ratios for the programs as well as each year's BC ratio by sector with and without shareholder incentive.
3. Exhibit C: Program Input Assumptions shows the per participant savings, costs, and rebates for each program measure.
4. Exhibit D: Shareholder Incentive Calculation estimates the Company's projected shareholder incentive for successful implementation of its energy efficiency programs.

## **II. OVERVIEW OF ENERGY EFFICIENCY PROGRAMS**

This document presents the Company's twenty-month (May 1, 2009 through December 31, 2010) EE plan (the Plan). Regional initiatives and collaborative groups also have influenced the Plan. Many of the programs described are a continuation of programs currently offered and approved by the Commission. Overall, the Company has developed programs that address a wide variety of energy efficiency opportunities for natural gas customers. These programs are summarized in Table II. The Company has included recent rebate changes and program updates agreed to by the regional GasNetworks<sup>™</sup> collaborative to ensure the same rebate levels are offered by Northern Utilities and gas companies throughout the region and to support coordinated program delivery with NH Saves (Core electric programs).

**Table-II: Proposed Energy Efficiency Plan Offerings (Programs) of the Company**

<b>Table-II: Energy Efficiency Programs</b>	
<b>Residential Market</b>	
High-Efficiency Heating, Water Heating, and Controls Program	<p>\$500 incentive for boilers (85% AFUE), \$1000 incentive (90% AFUE) \$200 incentive for steam boilers (with electronic ignition, 82% AFUE), \$400 incentive for high-efficiency furnaces (92% AFUE) with ECM Motor and \$100 incentive on furnaces (92% AFUE).</p> <p>\$300 incentive for indirect water heating system connected to an ENERGY STAR® rated natural gas forced hot water boiler and \$300 for on demand water heaters (EF .82 with an electronic ignition). \$50 for ENERGY STAR® .62 EF storage water heaters.</p> <p>\$25 incentive each for up to two ENERGY STAR® labeled programmable thermostats. \$100 for boiler reset controls.</p>
New Home Construction with ENERGY STAR®	Free building plans review and certification for new ENERGY STAR® residential construction.
Residential Weatherization Program: Residential Weatherization, ENERGY STAR® Replacement Windows, and Energy Analysis: Internet Audit	<p>\$10.00 each for qualifying ENERGY STAR® labeled windows (U-factor of .35 or less). \$500 maximum. Incentive available in 2009 and no longer available in 2010.</p> <p>Incentive of 75% of installed cost of qualifying insulation and weatherization measures installed by participating contractors up to \$4,000 for 1-4 unit homes, up to \$750 for 5+ unit dwellings where each dwelling is individually metered. Air sealing on average up to \$650.</p> <p>Free online energy analysis service that makes customized energy efficiency recommendations based on a customer's energy consumption profile.</p>
Energy Audit and Home Performance	Tier One – Educational, technical, and audit assistance by phone. Tier Two – Home Energy Assessment and low-cost energy saving measures.
Residential Building Practices and Demonstration Program	Participate in funding for demonstration projects that apply to new or underutilized technologies.
Residential Low Income Program	Energy audit conducted and measures installed (up to \$4,500 per residence) at no cost to income eligible customers (up to 200% of Federal Poverty Level Guidelines).
<b>Commercial &amp; Industrial Markets</b>	
Commercial Energy Efficiency Program	<p>Co-funding for Energy Auditing or Engineering Services; Prescriptive and custom incentives for more sophisticated systems and controls up to \$100,000. New construction projects eligible for up to \$250,000.</p> <p>Incentive of up to 50% of projects installed costs for eligible measures, cap of \$100,000 per project. Multifamily projects include redesign of space heating or water heating systems, steam system upgrades, building insulation, high-efficiency windows, and related measures.</p> <p>Matching grants up to \$100,000 for energy saving measures in commercial properties in designated Economic Redevelopment areas.</p>
Commercial and Industrial High-Efficiency Heating Equipment Program	Incentives up to \$6,000 for high-efficiency furnaces (90% AFUE), boilers (85% thermal efficiency) or steam boilers (82% thermal efficiency).
Building Practices & Demonstration Program	Participate in funding for demonstration projects that apply to new or underutilized technologies.
Business Energy Analyzer	Free online energy analysis service that makes customized energy efficiency recommendations based on a commercial customer's energy consumption profile.
<b>Codes Training Outreach etc.</b>	
Building Operator Certification	Energy management training sessions targeted to individuals responsible for the maintenance and operation of equipment and systems in commercial buildings, industrial plants, and public facilities. Provide information and training on energy efficiency issues to plumbing & heating contractors, builders, architects, engineers, realtors, appraisers and others.

During the 2009 – 2010 program years, the Company will build upon the existing portfolio of programs by:

- Continuing to manage existing programs cost-effectively;
- Coordinating closely with the NH Saves Core Electric Energy Efficiency programs and Northern Utilities;
- Identifying and developing new, cost-effective programs; and,
- Integrating discrete initiatives to more comprehensively address all energy uses and markets and barriers to energy efficiency.

The energy efficiency programs provide incentives to customers to choose energy efficient products. These products may be purchased from and installed by any qualified contractor selected by the customer. The Company's programs are designed to encourage contractor participation. The Company generally does not perform direct product installations. Customers are afforded the opportunity to use the contractor of their choice for some programs. All contractors are permitted to compete for the customer's business on an equal basis, though weatherization contractors will need to be trained in proper air sealing techniques to participate in program rebates.. Through its trade ally program, the Company provides training and encourages contractors to recommend and provide bids for qualifying energy efficient products.

In designing the proposed energy efficiency programs, wherever practical, the Company has established efficiency standards consistent with the ENERGY STAR® labeling program standards of the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Energy (DOE). ENERGY STAR® is a collaborative effort of the DOE and EPA to prevent pollution and encourage conservation by helping consumers buy products that use less energy. The ENERGY STAR® label and promotional activities raise awareness of the environmental and economic benefits of energy efficient products and help consumers easily identify them.

In other instances the Company has established program criteria consistent with the specifications adopted by Consortium for Energy Efficiency (CEE) on products including furnaces, boilers and windows.

### III. RESIDENTIAL PROGRAMS

#### *A. Residential High-Efficiency Heating, Water Heating and Controls Program*

The foundation for this program is incentives for customers to purchase high-efficiency gas heating equipment and controls. The program goals include:

- Making customers aware of high-efficiency gas heating equipment, controls, and the energy savings achievable;
- Increasing market sector awareness and demand for high-efficiency gas heating equipment and controls;
- Facilitating the purchase of high efficiency gas heating equipment and controls;
- Providing training to Trade Allies such as plumbing and heating contractors and increasing trade ally awareness of the benefits of high-efficiency gas heating equipment and controls.

The program is jointly operated with GasNetworks™ and will be promoted through a variety of marketing and educational awareness campaigns including, but not limited to: direct mail campaigns, bill inserts, trade ally events, sponsorships, and program brochures. The program will also be promoted via the Company's website, [www.nationalgrid.com](http://www.nationalgrid.com) and the GasNetworks™ website, [www.gasnetworks.com](http://www.gasnetworks.com), where consumers and contractors will have the opportunity to download program incentive applications, as well as learn about program announcements and updates. The Company's products website, [www.thinksmarththinkgreen.com](http://www.thinksmarththinkgreen.com), will also be used to promote this program.

In addition, the Company will continue its retailer outreach program with national home improvement chains, local hardware stores, suppliers, and distributors. This outreach effort provides training for sales personnel regarding the rebate programs and coordinates the ongoing distribution of program brochures and rebate applications.

A strong emphasis will be placed on working with builders and contractors who install gas heating equipment and controls. Target markets for the program include both new construction and existing residences. Incentives are available to residential customers (builders and/or homeowners).

The Company encourages customers to choose high-efficiency by offsetting a portion of the high efficiency price premium. Information collected from the Company's field services contractors suggests that installation contractors have a large impact on the choice of heating equipment to be installed. The Company will also offer an incentive to installation contractors to further stimulate the installation of high-efficiency heating equipment. The Company may make changes to incentive levels for eligible heating, water heating, and control equipment during the program year. Additional cost effective measures may also be added if there is reliable evidence of cost effectiveness. See Table II for a list of eligible measures and the associated incentive level.

The Advanced Residential Controls category includes programmable thermostats and boiler reset controls. The ENERGY STAR® Programmable Thermostat initiative has been a mainstay of National Grid's residential energy efficiency offerings. National Grid plans to continue to offer its customers incentives for high performance programmable thermostats, which the Company views as an excellent means of controlling and reducing energy use. The following describes National Grid's ongoing commitment to the highly-successful thermostat program and incentives for boiler reset controls.

National Grid's residential heating customers are eligible for a \$25 mail-in incentive for the installation of up to two ENERGY STAR® qualified programmable thermostats, for a maximum of \$50 per household. When applying for a thermostat incentive, customers are required to submit proof-of-purchase for the unit. Eligible thermostats may be installed by homeowners and HVAC contractors.

Earning the ENERGY STAR® label means products meet strict energy efficiency guidelines. ENERGY STAR® thermostats are more accurate than manual models and contain no mercury. When used properly, they can save a notable amount of energy, and are better for the environment. Because older model thermostats are a common source of mercury, these thermostats should be properly recycled. On the Company's website and incentive forms, National Grid directs its customers to recycle mercury thermostats through municipal hazardous waste collection programs.

The U.S. Environmental Protection Agency (EPA) modified its thermostat program from a performance specification to consumer education on May 1, 2007. The EPA's action is based partly on studies weighted toward regions of the country where

central cooling is the major energy load and, as a result, use of programmable thermostats result in minimal savings. However, in New England, where a major energy load is heating, there is ample evidence that ENERGY STAR® thermostats can significantly reduce energy consumption. A 2007 RLW Analytics study, commissioned by GasNetworks™, estimated an average savings of 75 ccf of natural gas per heating season per thermostat installed. While there will be changes to this EPA designation, National Grid continues to see merit in promoting programmable thermostats and thus intends to continue offering incentives to customers.

National Grid is offering incentives for the installation of boiler reset controls. This technology works by monitoring the outdoor temperature and adjusting the frequency that the boiler responds to heat demand. For example, on a relatively mild winter day, a thermostat won't call for heat as often, so the boiler will not need to work as hard. The reset control adjusts the water supply temperature allowing it to drop to lower temperatures before firing.

Boiler reset controls have been available for residential heating systems for more than 30 years. However, due to relatively high installation costs, lack of promotion by manufacturers, and the lack of incentives in energy efficiency programs, there has been little market penetration. The Company offers an incentive of \$100 per reset control installed. This incentive is only available for newer boilers without built-in controls.

<b>Table-III: Residential High-Efficiency Heating, Water Heating and Controls Program</b>			
<b>Electric Cost Categories</b>	<b>2009 Budget</b>	<b>2010 Budget</b>	<b>Gas Cost Categories</b>
Internal Administration	\$24,585	\$36,695	Company Administration
External Administration	\$8,825	\$13,170	Vendor Admin/Support
Rebates/Services	\$226,373	\$361,300	Services
Internal Implementation	\$0	\$0	Other
Marketing (sum of communication and trade ally)	\$142,922	\$190,680	
	<i>\$112,922</i>	<i>\$160,680</i>	<i>Communication</i>
	<i>\$30,000</i>	<i>\$30,000</i>	<i>Trade Ally</i>
Evaluation	\$16,630	\$24,555	Evaluation and Reporting
Total	\$419,335	\$626,400	
<b>Goals</b>			
<b>High Efficiency Heating</b>	<b>404 participants</b>	<b>551 participants</b>	
<b>High Efficiency Water Heating</b>	<b>131 participants</b>	<b>257 participants</b>	
<b>Advanced Controls</b>	<b>212 participants</b>	<b>704 participants</b>	
<b>Total</b>	<b>747 participants</b>	<b>1,512 participants</b>	

***B. New Home Construction with ENERGY STAR®***

National Grid will continue its support of energy efficient new home construction through the New Hampshire New Home Construction with ENERGY STAR® Program. This Program is designed to encourage builders to construct their homes to a higher level of energy efficiency beyond standard code requirements. The New Home Construction With ENERGY STAR® Program offers a combination of utility incentives geared specifically to home buyers and builders, incentives which promote the construction of homes that meet national ENERGY STAR® Home efficiency standards. The program's

objective is to transform the residential new construction market to build homes that are designed beyond code expectations and meet stricter guidelines for energy efficiency.

ENERGY STAR® Homes are recognized nationally for lower operating costs and energy consumption, increased durability, comfort, safety and greater resale value. ENERGY STAR® Homes feature the best in efficient building practices and technologies, including: increased insulation levels, high-efficiency heating and air conditioning equipment, superior duct systems, and high performance windows. Most segments of the housing market are eligible to participate in the New Homes with ENERGY STAR® Program, including new and existing residential single family and low-rise multifamily dwellings, townhouses and condominium developments.

All participants in the program receive design and technical support services, testing and inspection of energy efficiency measures, and an ENERGY STAR® certification following the passing of the ENERGY STAR® Homes rating test by qualified home raters. Each participating home receives a complete plan evaluation, computer energy model, and inspections during construction, and ongoing builder consultation, and on-site training as the home is being built. In order to earn an ENERGY STAR® Homes certificate, each house, or sampling of model units within a larger development, is performance tested to verify the quality of installed energy features. This involves conducting a blower-door test once the home is completed to measure the building's overall air leakage, and a ventilation test to verify airflow rates.

This program is jointly sponsored through a consortium of participating New Hampshire utilities that meet on a regular basis to plan and implement the program. The natural gas and electric utility provider in the specific territory of an ENERGY STAR® Home being developed will share the costs of providing technical support and certification testing services, from "sign-up" through certification testing for each qualifying home. This sharing of administrative and implementation fees between gas and electric sponsors are replicated with other gas utility sponsors of the New Hampshire ENERGY STAR® Homes program. In certain cases, the Company may pay the entire cost of an ENERGY STAR® Home's participation fee if the home is constructed in a community served by a municipal electric utility that does not participate in the Program.



Since the Company began its support of the New Hampshire ENERGY STAR® Homes program, Conservation Services Group, Inc. (CSG) has been the Company's sole rater for the ENERGY STAR® Homes program in New Hampshire. CSG is a third-party energy conservation consulting group responsible for the review and certification of each participating house in the Company's territory to ensure it meets strict ENERGY STAR® criteria. In the coming year, the Company may explore the opportunity to further align both gas and electric ENERGY STAR® Homes programs.

Marketing activities for the ENERGY STAR® Homes program consist primarily of direct outreach to builders by qualified home raters and home inspectors throughout the state's most active building regions. The ENERGY STAR® Homes toll-free phone number and website are essential resources for prospective builders that link home construction projects to participating home raters in the region. In addition to outreach, participating utilities may sponsor ENERGY STAR® training sessions specifically for builders and homebuyers throughout the year.

During the coming year, National Grid anticipates that participation in this program could be impacted by certain barriers, including the downturn in the New Hampshire new construction market. In an effort to combat this, National Grid will look to increase builder trainings as well as program marketing.

<b>Table-IV: New Home Construction with ENERGY STAR®</b>			
<b>Electric Cost Categories</b>	<b>2009 Budget</b>	<b>2010 Budget</b>	<b>Gas Cost Categories</b>
Internal Administration	\$1,260	\$1,680	Company Administration
External Administration	\$1,980	\$2,640	Vendor Admin/Support
Rebates/Services	\$10,800	\$14,400	Services
Internal Implementation	\$0	\$0	Other
Marketing (sum of communication and trade ally)	\$3,060	\$4,080	
	\$2,700	\$3,600	Communication
	\$360	\$480	Trade Ally
Evaluation	\$1,415	\$2,044	Evaluation and Reporting
<b>Total</b>	<b>\$18,515</b>	<b>\$24,844</b>	
<b>Goal</b>	<b>20 participants</b>	<b>30 participants</b>	

### ***C. Energy Audit and Home Performance***

The Energy Audit and Home Performance program, formerly known as Residential Conservation Services, is designed to help customers who either live in 1 to 4 unit homes or in individually metered multifamily dwellings with 5 or more units to optimize their home's energy use. The program provides a free assessment of a customer's energy usage and recommends various ways customers can improve their home's energy efficiency. Customers are provided with a detailed report containing recommendations for action and how to utilize the Company's other energy efficiency programs.

National Grid has become an active participant in the New Hampshire Residential Energy Performance Association (REPA), a New Hampshire organization whose goals are to provide training and promote consistency in the delivery of energy efficiency services. The auditor who performs the majority of the Company's audits in New Hampshire, as well as the vendor's supervisory staff, participates in REPA. The Company has also established [www.energyfederation.org/nationalgrid](http://www.energyfederation.org/nationalgrid). This website assists customers in purchasing materials to make their homes more energy efficient. Selections include all non-major measures that are recommended during the audit. The Company plans to promote the Energy Audit and Home Performance program through advertising, including bill inserts, direct mail, the National Grid website [www.thinksmarthinkgreen.com](http://www.thinksmarthinkgreen.com), and its product website [www.energyfederation.org/nationalgrid](http://www.energyfederation.org/nationalgrid), online Home Energy Analyzer and *e-efficiency news* electronic newsletters. Customers can also call the toll-free number to learn more about the Energy Audit and Home Performance program and all of the Company's residential energy efficiency programs.

#### **1. One to Four Unit Homes**

For customers living in 1 to 4 unit homes, there are two levels of service provided by the program. Tier One screening offers referrals to educational web sites and information about energy efficiency programs, and captures requests for literature such as the DOE "Energy Savers" booklet. Technical assistance regarding installation of energy savings measures is also available by phone. The Company has adopted a customized

version of the online audit tool to guide the customer through Tier One. The tool provides the customer service representatives with discussion points that allow a dialogue to better understand the customer's needs. Ultimately, the information collected by Tier One staff may result in a referral to Tier Two services.

Tier Two services consist of two audits. The first, the walk through audit, provides a home energy assessment and includes the installation of low-cost energy efficiency Instant Savings Measures (ISMs) that have an average total value of \$30. These measures are installed by the energy auditors at no charge to the customer as a way of educating the customer to the value of do-it-yourself measures. The customer is also provided a computer generated report describing the results of the home energy assessment which includes recommendations for energy saving measures. If the customer is willing to implement additional energy efficient measures, a combustion safety test will be performed at the walk through. The primary goal of the home energy assessment is to give customers an opportunity to understand the impact of energy efficiency measures and to motivate them to implement the recommendations.

The second audit National Grid is proposing is a two person energy audit team for customers who will proceed with energy efficiency upgrades. The two person team would provide a comprehensive home assessment in conjunction with whole house air sealing. This added value service averages \$650 and would be provided at no cost to the customer. To address health and safety concerns, pre-and post-blower door and CO testing is required. The procedures described in Tier 1 and Tier 2 above will be performed through a single implementation coordinator (IC) Selected by the Company. The cost, participation and benefits of customers who continue to this second audit will be accounted for in the Residential Weatherization program.

## 2. Five or More Unit Homes - Individually Metered Units

For customers living in individually metered units in a facility with five or more dwelling units, this program provides a free, comprehensive assessment of energy use in the individual unit. Customers will be given a detailed report containing the recommendations of the audit including information about improving the efficiency of their home which may lead to participation in other energy efficiency programs.

Incentives will be provided to encourage participation and overcome the split incentive that often exists between landlords owning buildings but not paying utility bills and tenants paying utility bills but not owning the properties and therefore not having an incentive to invest in energy efficiency.

Tenants and landlords will benefit from improvements made by their utility in their facilities. Insulation, air sealing, and domestic hot water measures will improve tenant health and comfort and reduce tenant heating bills.

National Grid will administer the Energy Audit and Home Performance Program through a single implementation coordinator (IC). This IC will be responsible for the day to day administration of the Program. This IC will perform all site visits to determine which measures can be installed. Eligible building owners, and/or facility managers or associations will receive a comprehensive energy audit, energy education, and the installation of no-cost efficiency measures. The implementation coordinator will be responsible for all air sealing and DHW measures. All insulation measures for properties with greater than 20 units will be put out to competitive bid. Insulation contractors that have been previously approved by the Company will be eligible to bid on these jobs.

The Company plans to promote the Energy Audit and Home Performance Program through advertising, including bill inserts, direct mail, and the National Grid website. Customers interested in learning more about the program will be able to call a toll-free number where they will also be able to learn about all of the Company's residential energy efficiency programs. The program will be coordinated with the New Hampshire electric utilities' multifamily building programs.

Major measures will include attic insulation, wall insulation, basement/crawl space insulation, rim joist insulation, duct insulation, heating system pipe insulation, attic ventilation (in conjunction with attic insulation), ductwork leakage testing, ductwork leakage sealing, air infiltration testing, and air infiltration sealing. In addition, this Program will be coordinated with the New Hampshire electric utilities. Other measures may be added to the program menu, upon demonstration of cost-effectiveness and subject to available funding.

The Company will pay 50% of the cost of installed insulation measures, duct insulation and duct sealing up to a maximum of \$750 per dwelling unit. The Company

will pay 100% of the cost of air sealing and installed domestic hot water measures such as showerheads, aerators, pipe wrap and tank wraps installed by the IC. The customer will be responsible for paying 100% of the cost of installing attic ventilation.

Customers will apply for incentives for residential-sized heating and hot water heating equipment, thermostats and window rebates through the Residential High Efficiency Heating, Water Heating and Controls Program, and the ENERGY STAR® Replacement Windows Program. Facilities with central heating plants and domestic hot water systems that are interested in natural gas savings measures will be served through the Commercial High-Efficiency Heating and Commercial Energy Efficiency Programs

<b>Table-V: Energy Audit and Home Performance</b>			
<b>Electric Cost Categories</b>	<b>2009 Budget</b>	<b>2010 Budget</b>	<b>Gas Cost Categories</b>
Internal Administration	\$2,009	\$3,789	Company Administration
External Administration	\$3,158	\$5,955	Vendor Admin/Support
Rebates/Services	\$30,333	\$57,020	Services
Internal Implementation	\$0	\$0	Other
Marketing (sum of communication and trade ally)	\$8,772	\$16,543	
	\$8,198	\$15,460	Communication
	\$574	\$1,083	Trade Ally
Evaluation	\$3,028	\$5,893	Evaluation and Reporting
<b>Total</b>	\$47,300	\$89,200	
<b>Goal</b>	<b>450 participants</b>	<b>900 participants</b>	

#### ***D. Residential Weatherization Program<sup>3</sup>***

##### **1. Residential Weatherization**

The Residential Weatherization program currently provides an incentive covering 75% of the cost of installing weatherization measures in residential heating customers' homes. The maximum incentive offered through this program currently is \$4,000 in homes with 1-4 units and \$750 per dwelling unit in homes with five or more units where each unit is individually metered. In order to be eligible for the weatherization incentive, the residential customer must first have a site visit performed by the Energy Audit and Home Performance program as a pre-requisite to the following measures: attic insulation, attic stairs insulators, wall insulation, basement/crawl space insulation, rim joist insulation, duct insulation, heating system pipe insulation, attic ventilation (only in conjunction with attic insulation), ductwork leakage testing, ductwork leakage sealing, and air infiltration testing. Air sealing is required to be performed prior to installing any insulation measures. Other measures may be added to the program menu upon demonstration of cost effectiveness.

To be eligible for an incentive, a National Grid pre-qualified contractor must install program measures. Do-it-yourself work is not permitted. Contractors wishing to become a pre-qualified contractor eligible to offer this program to the Company's heating customers must meet Company contractor requirements. This includes providing evidence of Building Performance Institute (BPI) certification and carrying insurance in amounts and coverage at the Company's contractor partner specified levels.

The Company will continue to reach out to the contractor community in order to increase the number of pre-qualified contractors participating in the program. For quality control purposes, at least twenty percent (20%) of completed jobs will be inspected. The inspection process will consist of a visual review of all work reported to be performed at the job site. Infrared scanning may be selectively employed to inspect wall insulation and air sealing work that cannot be observed with the naked eye. Infrared scanning not only provides a quality control tool, but also serves to raise insulation installation standards.

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<sup>3</sup> This program is available to residential customers living in homes with 1 – 4 units and to residential customers with individually metered dwelling units where the facility has 5 or more units.

Ongoing annual training will be conducted to familiarize contractors with industry building science best practices.

It is the responsibility of the installation contractor to complete and submit incentive applications with proper supporting documentation to verify that the work was performed. Work completed through the program must meet all applicable state and local code requirements. It is anticipated that all measures installed will meet ENERGY STAR® OR Building Performance Institute (BPI) guidelines, where applicable.

The program is promoted to residential heating customers through National Grid's contractor allies, home shows, direct mail promotions, and bill inserts. The program is also marketed through the Company's *e-efficiency news* electronic newsletter, the Home Energy Analyzer on-line audit, and the corporate website.

Potential participants are also made aware of the Residential Weatherization program through their participation in the Residential Energy Audit and Home Performance program. Energy Audit and Home Performance program energy auditors receive supplemental training for the purpose of seamlessly integrating the Weatherization program and the Energy Audit and Home Performance program.

Utilizing a Building Performance Institute (BPI) certified installation contractor is required to be eligible for the maximum incentive. To address health and safety concerns, pre- and post-blower door and CO testing is required.

In conjunction with the enhanced incentive, National Grid will require BPI certification of installers. BPI is a recognized global leader in setting building science based standards. BPI certification ensures that knowledge and competency are demonstrated by means of written and field testing.

National Grid will require BPI certification and will provide contractors with a percentage of reimbursement incentives for training and the purchase of required diagnostic tools. In this manner, National Grid will assist in building an infrastructure of trained and certified contractors to deliver the highest quality workmanship to customers, and the public at large.

The Company will continue to seek out opportunities to better serve National Grid customers by integrating the offerings of all of its energy efficiency programs, and by utilizing programs administered by other utilities.



**Table–VI: Residential Weatherization**

<b>Electric Cost Categories</b>	<b>2009 Budget</b>	<b>2010 Budget</b>	<b>Gas Cost Categories</b>
Internal Administration	\$17,571	\$34,464	Company Administration
External Administration	\$27,307	\$61,372	Vendor Admin/Support
Rebates/Services	\$462,090	\$901,484	Services
Internal Implementation	\$0	\$0	Other
Marketing (sum of communication and trade ally)	\$82,480	\$131,365	
	<i>\$56,549</i>	<i>\$88,436</i>	<i>Communication</i>
	<i>\$25,931</i>	<i>\$42,929</i>	<i>Trade Ally</i>
Evaluation	\$5,408	\$3,380	Evaluation and Reporting
<b>Total</b>	\$594,856	\$1,132,065	
<b>Goal</b>	<b>550 participants</b>	<b>1,100 participants</b>	

## 2. ENERGY STAR® Replacement Windows

The Company will continue to promote the installation of ENERGY STAR® Replacement Windows in the Residential Weatherization program, and will provide a \$10 mail-in incentive for each high-efficiency window installed in existing residential customers' homes. Eligible participants must be residential heating customers who have installed ENERGY STAR® labeled replacement windows with a U-factor of .35 or less<sup>\*4</sup> during the program year as specified on the incentive form. Windows installed in new construction or home additions will not qualify for the per window incentive. Each customer will be subject to a \$500 maximum incentive per account. National Grid will continue working with contractors for multi-family or other large residential renovation projects on a case- by-case basis.

When applying for this incentive, residential customers are required to submit proof-of-purchase, as well as proof of the windows' U-factor. Efficiency ratings can be confirmed by the customer using either a copy of the National Fenestration Rating Council (NFRC) label from the window, or by providing detailed specifications from the window manufacturer confirming the window's U-Factor. The Company recommends inspections of the first two installations per new participating installation contractor. In addition, random inspections of self-installations may be administered to verify that the windows noted on the incentive forms were, in fact, installed.

The Company will promote ENERGY STAR® Replacement Windows through The Residential GasNetworks™ program using various methods, including the Company website: [www.thinksmarthinkgreen.com](http://www.thinksmarthinkgreen.com) and its product website: [www.efi.org/nationalgrid/](http://www.efi.org/nationalgrid/), the *e-efficiency news* electronic newsletter, as well as through bill inserts. In addition, the Company has established an outreach program with retailers Home Depot® and Lowe's®, and regional hardware stores. This outreach includes training of the retailer's sales personnel regarding the Company's replacement window incentive, and supplying those stores within the Company's territory with incentive applications.

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<sup>4</sup> The U-Factor is a measurement of thermal conductivity. A lower U-factor indicates a higher level of window insulation.

National Grid recognizes that an efficient window is only as good as its installation. As such, the Company will expand its contractor training and outreach efforts, and promote best practices guidelines among “do-it-yourselfers” as well as professional window installers.

The Company and GasNetworks™ plan to discontinue this incentive in 2010.

<b>Table-VII: ENERGY STAR® Replacement Windows</b>			
<b>Electric Cost Categories</b>	<b>2009 Budget</b>	<b>2010 Budget</b>	<b>Gas Cost Categories</b>
Internal Administration	\$4,026	\$0	Company Administration
External Administration	\$6,327	\$0	Vendor Admin/Support
Rebates/Services	\$30,000	\$0	Services
Internal Implementation	\$0	\$0	Other
Marketing (sum of communication and trade ally)	\$19,778	\$0	
	\$18,628	\$0	Communication
	\$1,150	\$0	Trade Ally
Evaluation	\$0	\$0	Evaluation and Reporting
<b>Total</b>	\$60,132	\$0	
<b>Goal</b>	<b>300 participants</b>	<b>0 participants</b>	

### 3. Energy Analysis: Internet Audit

This self-service audit tool allows customers to complete an electronic survey about their home, including age, size, appliances and average use patterns. The process starts with twelve basic questions to produce a report that compares the participant’s home with similar homes and generates their “Top Ways to Save,” including estimated annual cost savings if recommended measures are taken.

Subsequent steps require more detailed information from the customer, resulting in more personalized tips to improve the home’s efficiency. The analyzer is fuel blind and lists opportunities to save in heating/cooling, lighting, water use, etc. The customer

also receives information about any relevant energy efficiency opportunities such as incentive programs.

There are several levels of service the customer can receive through the analyzer, all of which can be accessed through the Company's website. A continued analysis consists of more in-depth questions about the numbers and types of appliances, the current state of the home's weatherization and mechanical equipment, and offers additional advice on how to improve the energy efficiency and comfort of the home. Users are invited to sign up to receive the Company's seasonal electronic newsletter, which includes seasonal tips to save energy, information about new energy saving technologies and the Company's other energy efficiency programs, and a link to continue the analysis of their homes.

<b>Table-VIII: Energy Analysis - Internet Audit</b>			
<b>Electric Cost Categories</b>	<b>2009 Budget</b>	<b>2010 Budget</b>	<b>Gas Cost Categories</b>
Internal Administration			Company Administration
External Administration			Vendor Admin/Support
Rebates/Services	\$8,404	\$16,007	Services
Internal Implementation			Other
Marketing (sum of communication and trade ally)			
			<i>Communication</i>
			<i>Trade Ally</i>
Evaluation			Evaluation and Reporting
Other	\$8,404	\$16,007	
<b>Goal</b>	<b>660 participants</b>	<b>1,053 participants</b>	

***E. Residential Building Practices and Demonstration Program***

The purpose of the Residential Building Practices and Demonstration Program is to explore and demonstrate new and/or underutilized energy efficiency practices and equipment that can enhance a home's overall energy saving potential. This unique program allows the Company to support new and/or advanced energy saving technologies installed by residential customers.

The Company plans to explore renewable energy for water heating, advanced home heating systems, insulation and building envelope techniques, and new home construction practices. Ideas will be drawn from experience in the Company's Commercial & Industrial Building Practices and Demonstration Program, as well as from other utilities, program vendors, and interested business partners. Eligible participants in this program will include home owners, landlords, and new home builders. Each participant may be asked to allow monitoring of the installation and publication of the results in case study format.

Marketing of the program will rely on networking with industry, developing or offering new or underutilized natural gas energy efficiency technologies, as well as other interested organizations, such as the Office of Energy and Planning Renewable Energy Program, Massachusetts Technology Collaborative (MTC), the Northeast Sustainable Energy Association (NESEA), and the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED).

<b>Table-IX: Building Practices and Demonstration Program</b>			
<b>Electric Cost Categories</b>	<b>2009 Budget</b>	<b>2010 Budget</b>	<b>Gas Cost Categories</b>
Internal Administration	\$1,750	\$3,500	Company Administration
External Administration	\$2,750	\$5,500	Vendor Admin/Support
Rebates/Services	\$14,999	\$30,000	Services
Internal Implementation	\$0	\$0	Other
Marketing (sum of communication and trade ally)	\$4,250	\$8,500	
	<i>\$3,750</i>	<i>\$7,500</i>	<i>Communication</i>
	<i>\$500</i>	<i>\$1,000</i>	<i>Trade Ally</i>
Evaluation	\$2,394	\$3,112	Evaluation and Reporting
<b>Total</b>	\$26,144	\$50,612	
<b>Goal</b>	<b>15 participants</b>	<b>20 participants</b>	

***F. Residential Low Income Program***

The Residential Low Income Program offers weatherization services to income eligible customers at up to 200% of the Federal Poverty Level Guidelines. The Residential Low-Income program currently allows eligible customers to receive up to \$4,500 in qualifying measures at no cost to the customer. Whenever possible, program funds are leveraged with Department of Energy (DOE) weatherization and participating electric utility funding. The Company continues to seek out opportunities to strengthen its relationships with the State administered weatherization program, and other utility administered programs, in order to leverage funds and better serve National Grid customers.

Eligible measures provided through the program include an energy audit, attic insulation, wall insulation, air sealing, heating system repair/replacement (on a qualifying basis) and safety inspections. Small energy-related repairs for eligible heating units can also be performed. The Company will continue to install water saving measures (low-flow showerheads and aerators) and to fund the installation of carbon monoxide detectors when DOE is unable to fund this measure.

New Hampshire Community Action Program (CAP) agencies are responsible for ensuring that customers meet the eligibility requirements for program participation, and for providing weatherization services to customers. CAP agencies work with installation contractors to ensure that program requirements are met.

The CAP agencies provide Action Energy, Inc. (Action), the Company's administrative vendor for the program, detailed documentation demonstrating the work that was performed. Action also conducts quality control oversight of the work performed through the program.

The Company holds quarterly meetings with Action, the CAP agencies, and the Office of Energy and Planning to improve program implementation, address questions or emerging concerns, and to ensure that program goals are being met.

The Low Income Weatherization internet website, [www.weatherize.net](http://www.weatherize.net), continues to be a valuable tool. This website serves as a central information source for all of the CAP agencies and for Company personnel associated with the program. Weatherize.net has the capability to search data and determine whether a particular applicant is eligible

for assistance. The site can also be used to communicate with the CAP agencies and provide timely information and updates.

The Company solicits direct feedback from program participants through its post-installation comment cards. The card, mailed directly to those customers where weatherization work was performed, allows customers to share their input and impressions of the program directly with the Company. The Company then shares the customers' responses with the corresponding CAP agency. This direct link from customer to CAP allows the Company to monitor program performance and customer perception of the program. The Company markets the program via Company brochures, bill inserts, and the National Grid website.

The Company continues to work with the CAP agencies to identify and enlist additional contractors to participate in the program. The Company is committed to train its existing contractors and market to new, eligible contractors in order to expand the contractor base. Efforts may also include outreach to technical/trade schools, and providing assistance to potential contractors for technical training.

The primary focus of the program will continue to be servicing income eligible customers in the 1-4 unit housing stock, as well as income eligible customers living in individually metered multifamily dwellings with five or more units. The Company will continue to explore energy saving opportunities, on a case-by-case basis, to provide weatherization services to organizations that provide critical services to the program's target audience, e.g. housing authorities, food banks, homeless shelters, and organizations whose mission is to work with low income citizens.



<b>Table-X: Residential Low Income Program</b>			
<b>Electric Cost Categories</b>	<b>2009 Budget</b>	<b>2010 Budget</b>	<b>Gas Cost Categories</b>
Internal Administration	\$57,744	\$90,847	Company Administration
External Administration	\$79,060	\$124,376	Vendor Admin/Support
Rebates/Services	\$252,536	\$397,977	Services
Internal Implementation	\$0	\$0	Other
Marketing (sum of communication and trade ally)	\$8,223	\$12,959	
	\$5,641	\$8,890	Communication
	\$2,583	\$4,070	Trade Ally
Evaluation	\$6,976	\$9,838	Evaluation and Reporting
<b>Total</b>	\$404,540	\$635,997	
<b>Goal</b>	<b>180 participants</b>	<b>260 participants</b>	

## IV. COMMERCIAL AND INDUSTRIAL PROGRAMS

### *A. The Commercial Energy Efficiency Program*

#### 1. Commercial Energy Efficiency

The Commercial Energy Efficiency Program “CEEP” is designed to provide support services and financial incentives that encourage the Company’s Commercial, Industrial and Multifamily customers to install energy efficient natural gas related equipment. Energy efficient technologies or system designs that exceed the minimum requirements of the local energy code and are not covered by another utility company program offering may be eligible for an incentive under this program. This program is open to all firm gas rate customers on any of the Company’s commercial tariffs. Incentives provided through this program must be pre-approved by the Company and/or the administrative vendor prior to delivery and installation of product(s) and/or service(s).

Customers may apply for program services or incentives via a variety of channels including contacting Company representatives, plumbing and heating contractors, engineering firms, energy service companies, or equipment vendors. Customers will be able to take advantage of audit services that range in scope from a prescriptive level to custom review to technical assistance and new construction design assistance. After reviewing the customer’s energy efficiency needs, the customer will be offered the appropriate program services. Customers will then be able to take advantage of either prescriptive or custom incentives. Services and incentives structures are described in the following sections.

#### **Audit services**

##### *Energy Assessment*

Regardless of market segment, all qualifying customers contacting the Company will be provided with an opportunity for an energy efficiency assessment. This assessment will educate small to medium sized customers on basic gas energy efficiency measures and practices. This assessment will determine which prescriptive incentives a customer may be eligible to receive. Where applicable, the assessment will provide

industry-specific recommendations. As part of the assessment process, customers will receive a report that includes all of the information associated with service delivery, including costs and estimated savings and identifies next steps for implementing energy efficiency measures and information and instruction for receiving energy efficiency incentives. This energy efficiency assessment is currently delivered to the customer as a walk through audit. The Company works with the vendors to determine the most cost-effective way to deliver this assessment, which may include remote delivery mechanisms.

#### *Custom Assessment*

National Grid recognizes the diverse needs of its customers when identifying energy efficiency opportunities. In that regard, the custom assessment will be made available to customers who require more energy analysis than is provided through the energy efficiency assessment. The custom assessment will also be made available for specific applications such as combustion controls, solar DHW, and heat recovery from combined heat and power (CHP). As part of a custom assessment, a site visit will be conducted at multifamily, commercial and industrial facilities in the Company's service area to identify gas energy efficiency opportunities for National Grid customers.

The assessment may also take place as a review of energy efficiency proposals presented by customers or third party vendors for inclusion in the program. Based on the assessment, a customer will receive recommendations on energy efficiency measures eligible for custom gas energy efficiency incentives. Customers will receive a report that includes all of the information associated with service delivery, identifies next steps for implementing energy efficiency measures, and information and instruction on next steps for receiving energy efficiency incentives.

#### *Technical assistance*

Customers requiring energy efficiency assistance beyond the scope of a custom audit will be provided with technical assistance. This may include, but is not limited to, thermal oxidizers in manufacturing, infrared process heat applications, central plant system redesigns, and other complex energy efficiency technologies. Technical assistance studies must be completed by either a Professional Engineer or Certified Energy

Manager. Customers who receive this service will receive a detailed report, including recommended measures, estimated costs, energy saving potential, custom incentives and simple paybacks. Technical assistance will be provided at the discretion of National Grid program management staff. The Company may provide these services at no cost to the customer up to an amount equal to the cost of a custom audit. If the project exceeds the cost of a custom audit, the Company will provide up to 50 percent of the cost of assessment but not more than \$10,000. The Company has under retainer engineering firms that have been selected through a competitive solicitation and qualified to offer customers technical services. Additionally, when appropriate, these firms will identify electric savings as well as gas savings opportunities particularly when working in conjunction with electric energy efficiency programs.

### **New Construction Services**

National Grid proposes to provide New Construction Services, a service in which customers will be guided through a review of the design or design process to increase the energy efficiency of a new building by identifying appropriate energy saving measures for new construction. The intent of these services is to better address the special considerations needed to address energy efficiency at the time of new construction. This process will involve working on the project design with the customer and members of their construction team including, but not limited to, building committees, architects, engineers, and contractors. This service goes beyond engaging customers at the front end of the new construction process. It continues through project completion. New construction resources will be provided through a variety of means including, but not limited to, design team assistance, matched funds for study costs and potential assistance for system commissioning at project completion. Customers will be eligible for up to \$25,000 in total design assistance funding. Customers taking advantage of design assistance must be willing to move forward with the installation of energy efficiency measures with acceptable payback periods. Customers will receive a report about energy efficiency recommendations that include recommended measures, estimated costs, energy savings potential, custom incentives and simple paybacks.

## **Incentives**

Energy efficiency incentives will be made available to customers through the individual programs. Currently both prescriptive and custom incentives are available to National Grid customers. Prescriptive measures include but are not limited to high efficiency heating and water heating, windows, insulation, thermostats, boiler reset control and steam traps. Custom incentives will be developed through the analysis conducted in the Custom Assessment, Technical Assistance and New Construction services. Information regarding incentive structure by program service follows.

### *Prescriptive Incentives*

Prescriptive incentives will be available for common energy efficiency measures including programmable thermostats, boiler reset controls, steam trap replacements, pipe and duct insulation, building shell (wall, roof, floor, and crawlspace) insulation, and high-efficiency windows. Other prescriptive measures include high efficiency commercial kitchen equipment, such as high efficiency fryers, steamers, and combination ovens. The company proposes to incorporate high efficiency dishwashers, broilers, woks, combination ovens, and griddles into the commercial kitchen equipment program after evaluation. Prescriptive incentives will be targeted primarily toward the small and medium sized Commercial & Industrial customers. The Company will rely primarily upon contractors and engineers to locate qualified facilities and to install the eligible prescriptive measures. This effort will be supported by the extensive outreach and education effort to contractors and engineers, as well as promotions directed to customers themselves. Energy audits will not be required for participation and no pre-approval will be required for applications at a single customer site. As outlined in the program terms and conditions, the Company reserves the right to negotiate incentives for multiple installations at a single site and/or multiple installations within a portfolio of properties. The Company also reserves the right to inspect the property for the installation of the measures prior to issuing the rebate. The Company plans to evaluate the prescriptive

rebate incentives during the 2009 program year. Results of the evaluation will be used in the next available planning cycle.

**Table-XI: Prescriptive Incentives for Installed Measures**

<b>Measure</b>	<b>Available Incentive</b>
Programmable Thermostat	\$25.00 each, up to 5 units
Digital Boiler Reset Control	\$150.00 single stage; \$250.00 multi-stage
Steam Trap Replacements	\$25.00/replaced trap
Pipe or Duct Insulation; duct sealing	\$1.50/lf up to 500lf
Building shell insulation (roof, wall, or floor)	Up to 20% of project cost with a maximum of \$10,000.00
Premium efficiency windows	\$1.00/ft <sup>2</sup> of rough window opening with a maximum of \$2,500.00
High Efficiency Gas Fryers	\$1,000.00/each
ENERGY STAR® Gas Steamers	\$1,000.00/each
ENERGY STAR® Gas Convection Oven	\$1,000.00/each

#### *Custom Incentives*

Custom incentives will be available for projects that demonstrate the use of natural gas more efficiently than typical industry practices, or more efficiently than the minimum building code requirements. Incentives will be limited to no more than 50 percent of the eligible installed project costs, and the Company's contribution will be capped at \$100,000 per site and/or project for existing buildings and \$250,000 for buildings under the new construction program.

Custom incentives will be based upon \$2.25 per first year of estimated therm savings for cost-effective projects. Examples of custom projects are redesigned HVAC systems, energy recovery applications, combustion controls, building automation/energy management systems, and advanced technology burners and/or burner controls. Incentives may not be applied toward normal maintenance costs, or for disabling or abandoning equipment without an energy efficiency replacement.

### *Steam Savings Initiative*

The Company plans to implement a new initiative designed to help customers with steam systems to save natural gas. The Steam Savings Initiative includes steam trap surveys, steam system surveys, and focuses on identifying gas savings measures which qualify for prescriptive and custom incentives. Examples of such measures are steam traps, economizers, combustion controls, blow down recovery, water treatment, and condensate control. New construction projects are not eligible.

The Company will pay 25 percent of a steam trap survey, up to \$2,500. Once the survey is completed, and at least 50 percent of the recommended repairs have been installed and paid for, the Company will pay an additional 25 percent of the survey cost, up to \$2,500. In return for funding from the Company, the customer agrees to start a comprehensive steam trap management plan, following the Department of Energy's recommended steam trap management procedures. The customer pays for the other 50 percent of the survey.

### *Solar Incentives*

The Company will continue to offer solar thermal incentives to encourage the installation of highly efficient solar thermal technologies by customers. Examples of these technologies include solar domestic hot water (DHW) heating, solar pool heating, and solar space heating. Solar thermal incentives will be provided at a special incentive of \$5.00 per therm.

<b>Table-XII: Commercial Energy Efficiency Program</b>			
<b>Electric Cost Categories</b>	<b>2009 Budget</b>	<b>2010 Budget</b>	<b>Gas Cost Categories</b>
Internal Administration	\$45,000	\$98,000	Company Administration
External Administration	\$28,095	\$71,415	Vendor Admin/Support
Rebates/Services	\$481,640	\$930,061	Services
Internal Implementation	\$0	\$0	Other
Marketing (sum of communication and trade ally)	\$35,000	\$60,000	
	\$25,000	\$35,000	Communication
	\$10,000	\$25,000	Trade Ally
Evaluation	\$28,549	\$46,169	Evaluation and Reporting
<b>Total</b>	<b>\$618,284</b>	<b>\$1,205,645</b>	
<b>Goal</b>	<b>109 participants</b>	<b>227 participants</b>	

## 2. Multifamily Housing

The Multifamily Housing offering provides energy audits and financial incentives for energy saving measures to multifamily facilities that receive gas service on a qualifying commercial rate. The program includes existing retrofit situations as well as new construction. Examples of measures that qualify for funding through this program include the redesign of space heating or water heating systems, steam system upgrades, building insulation and premium efficiency windows and doors. Programmable thermostats, heat recovery ventilation systems, digital energy management systems, and sophisticated burners and/or controls for boilers are also energy saving measures the Company may recommend or support through this program. The program serves both privately owned properties as well as public housing authorities.

Through the new service delivery model being developed collaboratively with other gas and electric providers, customers can participate in the multifamily program by



accessing incentives, Energy Efficiency Assessment, a custom audit, New Construction Assistance, or Technical Assistance. An increased need for affordable housing in the Company's service territory has brought several new construction projects through the program. The enhanced level of support for new construction ensures that energy efficiency becomes a focus of the project during the design phase, to avoid lost opportunities or the burden of incorporating them later in costly redesigns. Through a customer intake process, the Company will determine the level of energy efficiency advice and oversight needed by the customer. Gas consumption history, building type and size, plans for renovation or expansion and known energy efficiency measures already in place should determine the level of audit necessary for the site. Delivery of energy efficiency services and incentives will also be coordinated with electric services and programs.

Multifamily customers will be eligible for prescriptive and custom incentives. Prescriptive incentives will include high efficiency heating and water equipment, controls, envelope, and restaurant equipment. In addition, custom incentives will be made available to customers who enter the program through the custom audit, new construction assistance or technical assistance services. Savings for this program have been low in recent years so the Company plans to focus on custom projects with controls and steam system enhancements to support higher energy savings for the multifamily segment. The Company also plans to work with customers on benchmarking properties to determine the buildings with the greatest need for energy efficiency upgrades. Custom audits will identify measures for energy efficient installations. These installed measures are eligible to receive an incentive of \$2.25 per first year estimated therm savings for cost-effective energy efficiency installations. Customers will be eligible for up to 50 percent of the eligible installed project costs with a cap of \$100,000 for existing buildings. Customers participating through the new construction program will be eligible for up to 50 percent of the installed project costs with a cap of \$250,000 for new buildings.

The program is promoted through the Company's internal departments such as Sales and Marketing, as well as Customer Service. The Company also promotes the program through industry partners such as the National Association of Housing and Redevelopment Officials, local housing authorities, local chambers of commerce events

and through conference attendance and contractor outreach. The Company will seek out partnerships to leverage the use of energy efficiency funding.

National Grid is beginning coordination efforts between its electric and gas multifamily programs. Gas incentives and services may be adjusted if it is determined that a specific customer may receive a more comprehensive service through coordinated delivery of the two programs.

<b>Table-XIII: Multifamily Housing</b>			
<b>Electric Cost Categories</b>	<b>2009 Budget</b>	<b>2010 Budget</b>	<b>Gas Cost Categories</b>
Internal Administration	\$17,000	\$30,000	Company Administration
External Administration	\$14,960	\$23,895	Vendor Admin/Support
Rebates/Services	\$26,490	\$83,342	Services
Internal Implementation	\$0	\$0	Other
Marketing (sum of communication and trade ally)	\$13,000	\$25,000	
	\$8,000	\$15,000	Communication
	\$5,000	\$10,000	Trade Ally
Evaluation	\$2,210	\$5,018	Evaluation and Reporting
<b>Total</b>	<b>\$73,660</b>	<b>\$167,255</b>	
<b>Goal</b>	<b>10 participants</b>	<b>20 participants</b>	

### 3. Economic Redevelopment

The Economic Redevelopment Program leverages energy efficiency funds to revitalize buildings in our service territory with the aim of rejuvenating the local area. The Company has found that energy saving measures can be the first project design features cut due to the higher incremental costs of installation, and lack of education and technical expertise. This can be particularly true in blighted communities where money is tight and community development corporations (CDC's) and other non-profits are responsible for much of the development.

Funding through the Economic Redevelopment Program ensures energy efficiency measures become part of a viable project. Beyond additional incentive dollars, National Grid works to partner, whenever possible, with other government entities and other energy efficiency programs, serving as a link between various funding sources and providing technical expertise. National Grid's long term commitment to its Economic Redevelopment Program creates opportunities for energy efficient technologies, increases the standard for efficiency in economically-disadvantaged communities, and works to revitalize neighborhoods.

The Economic Redevelopment Program is available to all multifamily, commercial and industrial customers. Maximum funding per project is 50 percent of the project cost up to \$100,000 with a minimum of 50 percent matching funds required from the customer. Qualifying customers entering the program through new construction assistance will be eligible for up to \$250,000 in incentives with a minimum of 50 percent of matching funds required from the customer. Applications for funding must include a description of the redevelopment project, information on the sponsoring organization, identification of additional funding sources, types of energy conserving measures to be installed, project schedule and the community and local economic impacts. Each application for funding is evaluated on these criteria.

An analysis is performed to identify cost-effective opportunities for reducing a customer's energy usage. The analysis performed leads to a report that summarizes recommendations and provides a detailed description of the alternatives evaluated, including: total installation costs, annual energy costs, annual savings and simple payback periods. The analysis establishes projected first year therm savings and the associated incentives available to the customer through the standard Multi-family, Commercial and Industrial Programs based on the therm savings.

The total award amount through the Economic Redevelopment Program uses the standard incentive amount as a baseline, but takes into consideration community and economic impacts in determining a total award amount. All award amounts are paid out as an incentive after the project is completed and all recommended gas saving measures that formed the basis for the award have must be installed in order to receive total funding. Community impacts include, but are not limited to, the overall environmental

impact of a development beyond the gas savings, the creation of low income or affordable housing, aesthetic impact of the development on the surrounding community, recreational and educational services and job creation.

With the new program delivery model for Commercial & Industrial and Multifamily customers, the Company can identify potential participants as candidates for the Economic Redevelopment program through their involvement in custom assessment, technical assistance or new construction assistance. The Company will simultaneously work to increase program awareness and identify candidates through partnerships with other development organizations, business organizations, government agencies, and other energy efficiency groups. This year the Company plans to work with cities and towns to identify projects, which include schools, low-income housing, and public libraries, that are good candidates for this program.

<b>Table-XIV: Economic Redevelopment</b>			
<b>Electric Cost Categories</b>	<b>2009 Budget</b>	<b>2010 Budget</b>	<b>Gas Cost Categories</b>
Internal Administration	\$30,000	\$45,000	Company Administration
External Administration	\$12,620	\$17,000	Vendor Admin/Support
Rebates/Services	\$124,296	\$261,334	Services
Internal Implementation	\$0	\$0	Other
Marketing (sum of communication and trade ally)	\$13,000	\$17,510	
	\$8,000	\$10,010	Communication
	\$5,000	\$7,500	Trade Ally
Evaluation	\$5,564	\$20,851	Evaluation and Reporting
<b>Total</b>	<b>\$185,480</b>	<b>\$361,695</b>	
<b>Goal</b>	<b>4 participants</b>	<b>10 participants</b>	

### ***B. Commercial High-Efficiency Heating Program***

The Commercial High-Efficiency Heating Program is designed to overcome supply side and demand side market barriers to the purchase and installation of high-efficiency heating equipment and water heating equipment. The program is available to National Grid's commercial, industrial, governmental, institutional, non-profit and multifamily facilities. The equipment under the high-efficiency heating program includes a range of innovative technologies in heating systems that are applicable across National Grid's diverse commercial customer base. The incentive schedule is set to reduce the incremental cost between the standard options and high-efficiency equipment in each product category and size range. The Commercial High-Efficiency Heating program will continue to be promoted primarily to engineers, equipment vendors, contractors and other trade allies.

In the small commercial business segment and the smaller multifamily segment, the application of heating and water heating technology is analogous, as is the size range of equipment. Efficiency ratings for smaller furnace and boiler equipment (up to 300,000 Bbtu input) are measured using AFUE ratings. Efficiency ratings for larger boiler equipment, which exceeds the size ranges for AFUE, are measured using thermal efficiency which has been confirmed by a third party.

Since many of the trade allies serving the residential market also serve the smaller multifamily and commercial markets, the program will often be promoted together with the Residential High-Efficiency Heating, Water Heating and Controls Program and the GasNetworks™ program activities. Trade ally training activities will also be leveraged with the residential activities and GasNetworks™ trade ally programs. Trade ally training in the larger equipment markets will continue through product training workshops, participation in industry working groups and trade associations, outreach to engineering firms, advertisements in trade publications, trade shows/seminars, and field calls and site visits.

The program's incentive schedule applies to a variety of product types and a broad range of equipment sizes that are appropriate for the commercial market segments. This range provides equal opportunity for participation among National Grid's small and

large commercial customers. There are also incentives for natural gas fired, low intensity infrared heaters, high-efficiency condensing unit heaters and direct fired make-up air systems that are appropriate for the larger commercial and industrial segments. Boiler incentives are available in a two-tiered matrix: Tier One for high-efficiency non-condensing boilers and Tier Two for high-efficiency fully condensing boilers.

As outlined in the program's terms and conditions, National Grid reserves the right to negotiate a lower incentive amount per-unit for multiple installations at a single site. In large multifamily complexes and facilities, customers and/or contractors making bulk equipment purchases have a lower incremental cost per unit. Negotiating incentives helps to keep the program within budget and maintains the cost effectiveness of installed measures. The incentives are also set to help participants reduce the true incremental costs, considering the bulk purchase cost of installing multiple pieces of high-efficiency heating equipment.

<b>Table-XV: Commercial High-Efficiency Heating Program</b>			
<b>Electric Cost Categories</b>	<b>2009 Budget</b>	<b>2010 Budget</b>	<b>Gas Cost Categories</b>
Internal Administration	\$20,000	\$30,000	Company Administration
External Administration	\$15,620	\$20,000	Vendor Admin/Support
Rebates/Services	\$124,296	\$260,844	Services
Internal Implementation	\$0	\$0	Other
Marketing (sum of communication and trade ally)	\$20,000	\$30,000	
	<i>\$10,000</i>	<i>\$15,000</i>	<i>Communication</i>
	<i>\$10,000</i>	<i>\$15,000</i>	<i>Trade Ally</i>
Evaluation	\$5,564	\$20,851	Evaluation and Reporting
<b>Total</b>	\$185,480	\$361,695	
<b>Goal</b>	<b>90 Incentives</b>	<b>160 Incentives</b>	

**Table-XVI: Commercial High-Efficiency Heating Program Incentive Qualifications**

<b>Product</b>	<b>Rating</b>	<b>Incentive</b>
Furnaces (up to 150 MBtuh)	> 92% AFUE or greater	\$100
Furnaces with ECM	> 92% AFUE or greater	\$400
Condensing unit heaters (151 to 400 MBtuh)	> 90% Thermal Efficiency	\$500
Direct fired heaters / direct fired makeup air (up to 1500 MBtuh)		\$1,000
Direct fired heaters / direct fired makeup air (1501 to 3000 Mbtuh)		\$1,500
Direct fired heaters / direct fired makeup air (3001 and above)		\$2,000
Infrared heaters (all sizes)	low intensity	\$500
Steam Boilers (up to 300 MBtuh)	> 82% AFUE	\$200
Hydronic Boilers (under 300 MBtuh)	> 85% AFUE	\$500
Hydronic Boilers (301 to 499 MBtuh)	> 85% Thermal Efficiency	\$1,000
Hydronic Boilers (500 to 999 MBtuh)	> 85% Thermal Efficiency	\$2,000
Hydronic Boilers (1000 to 1700 MBtuh)	> 85% Thermal Efficiency	\$3,000
Hydronic Boilers (1701 MBtuh and larger)	> 85% Thermal Efficiency	\$4,000
Condensing Boilers (under 300 Mbtuh)	> 90% AFUE	\$1,000
Condensing Boilers (301 to 499 Mbtuh)	> 90% Thermal Efficiency	\$1,500
Condensing Boilers (500 to 999 Mbtuh)	> 90% Thermal Efficiency	\$3,000
Condensing Boilers (1000 to 1700 Mbtuh)	> 90% Thermal Efficiency	\$4,500
Condensing Boilers (1701 Mbtuh and larger)>	90% Thermal Efficiency	\$6,000
Indirect fired water heaters (up to 50 gallon storage)		\$100
Indirect fired water heaters (over 50 gallon storage)		\$300
On-Demand Tankless Water Heaters with and Energy Factor of 0.82 or higher and electronic ignition		\$300



### ***C. Building Practices and Demonstration Program***

The purpose of the Building Practices and Technology Demonstration Program is to establish successful applications of new or underutilized energy efficient procedures, processes, or technologies. Participants in the program may be identified through the Company's other program offerings. Customers interested in presenting a project for consideration may request financial and technical assistance from the Company. Applicants must include a description of the scope of work and an estimate of the savings and benefits to be realized. Participants are required to allow monitoring of the installation and/or results, tours on the installation by potential users or other interested stakeholders, and publication of the results in case study form. To market the program, the Company will rely on the industry vendors and industry organizations such as Gas Technology Institute, Energy Solutions Center, and Consortium for Energy Efficiency developing and/or offering new or underutilized natural gas energy efficiency technologies. The program will also be promoted through the Company's sales force.

Throughout the program's history, National Grid has encountered resistance from customers to install new technologies that often require significant investment on their behalf. In order to overcome market barriers associated with the installation new technologies, National Grid is proposing to develop technologies in two program phases. The first phase would be a direct install by National Grid at one or two customer sites. These initial test sites would allow for increased monitoring and evaluation. The second program phase would be for multiple installations at National Grid customer facilities. This second phase would provide installations with cost-sharing between National Grid and the customer at fifty percent each and again allow for significant monitoring. The increased focus on monitoring and evaluation will require additional resources and funding. As a result, the Company is proposing to limit participation in the Building Practices and Demonstration Program to no more than three participants each year.

National Grid is currently working to identify a superboiler project, commercial kitchen equipment, and a high efficiency HVAC rooftop unit that the Company could include in the Building Practices and Demonstration Program.

<b>Table-XVII: Building Practices and Technology Demonstration</b>			
<b>Electric Cost Categories</b>	<b>2009 Budget</b>	<b>2010 Budget</b>	<b>Gas Cost Categories</b>
Internal Administration	\$31,656	\$40,000	Company Administration
External Administration	\$15,000	\$22,500	Vendor Admin/Support
Rebates/Services	\$58,290	\$150,000	Services
Internal Implementation	\$0	\$0	Other
Marketing (sum of communication and trade ally)	\$5,000	\$15,000	
	\$5,000	\$15,000	Communication
	\$0	\$0	Trade Ally
Evaluation	\$13,710	\$22,500	Evaluation and Reporting
<b>Total</b>	<b>\$123,656</b>	<b>\$250,000</b>	
<b>Goal</b>	<b>2 participants</b>	<b>3 participants</b>	

#### ***D. Business Energy Analyzer Program***

The Business Energy Analyzer is a convenient online self-directed audit tool that provides customers with customized and practical recommendations for saving energy. This user-friendly tool, developed by Aclara Software, provides business customers: (1) an opportunity to learn about energy savings as it relates both to their facility and their industry; (2) the flexibility of addressing energy concerns at their leisure; and (3) the ability to return to the site and review the recommendations. The tool also allows customers to identify the energy-saving incentives for which they may be eligible.

Customers complete a Level I profile that includes their location, business type, size of facility and hours of operation. Based on this information, the system generates energy saving recommendations or "Ways to Save". At this point, the customer can opt to move on to Level II and enter in more specific information about their facility. This information includes actual energy use from utility bills or they can choose to have the

system estimate usage. Based on the additional information, the system generates an analysis of the business's energy usage that provides more accurate energy saving suggestions and targeted "Ways to Save". The customer can view these tips either showing those with the greatest savings or the shortest payback. The recommended measures have been customized to reflect information on incentives for which the customer may be eligible. Customers can also create a plan for energy efficiency from these measures that can be retrieved any time they log on. Additionally, the tool offers the customer the ability to compare their energy usage to similar businesses and view industry-specific case studies.

In the past program year, the Company had great success marketing the tool through direct calling campaigns. The Company found that using direct calling to contact customers and then assisting each customer in using the energy analyzer was the best way to increase awareness and utilization of this online program. Once a customer completes the online audit with the help of a call center representative, a comprehensive report is e-mailed to the customer highlighting the results and the best ways to save. A profile is set up so that the customer can return to the site at any time to review their results, work on an energy plan, and learn more about the Company's other energy efficiency offerings. The Company will continue to market the energy analyzer in this way. Additionally, the energy analyzer is being marketed through the Company's sales force, energy efficiency staff, trade organizations and outreach events.

The Company will continue to provide energy efficiency information to businesses through the business version of the *e-efficiency news*. *E-efficiency news* is an e-mail based, quarterly newsletter that customers can opt to receive while at the Business Energy Analyzer website. The first issue of the *e-efficiency news* was e-mailed to customers in September of 2005 and continues to be sent on a quarterly basis.

With the goal of continuing to improve the products and services provided to our customers, the Company may evaluate other online energy analyzers. Evaluation of other online energy analyzer will include, but not be limited to, quality of energy efficiency information, ease of use and cost. If it is determined that another energy analyzer provides more value for our customers, appropriate changes will be made.

**Table-XVIII: Business Energy Analyzer Program**

<b>Electric Cost Categories</b>	<b>2009 Budget</b>	<b>2010 Budget</b>	<b>Gas Cost Categories</b>
Internal Administration	\$10,000	\$12,500	Company Administration
External Administration	\$5,000	\$7,500	Vendor Admin/Support
Rebates/Services	\$0	\$0	Services
Internal Implementation	\$0	\$0	Other
Marketing (sum of communication and trade ally)	\$5,000	\$5,000	
	<i>\$5,000</i>	<i>\$5,000</i>	<i>Communication</i>
	<i>\$0</i>	<i>\$0</i>	<i>Trade Ally</i>
Evaluation	\$0	\$0	Evaluation and Reporting
<b>Total</b>	\$20,000	\$25,000	
<b>Goal</b>	<b>40 level 1 users</b>	<b>60 level 1 users</b>	

## **V. OUTREACH AND COMMUNICATION**

### ***A. Energy Efficiency Communication and Education***

Communication to and education of customers and trade allies is critical to the success of the Company's energy efficiency efforts. One of the most common barriers to the increased use of energy efficient equipment or practices is a lack of awareness by customers of the potential energy and financial savings. Another common barrier is the lack of customer awareness as to how their utility can help reduce their energy costs. To overcome these barriers and help customers make informed energy decisions, the Company plans to maintain a consistent and high level of program outreach to its customers and trade allies.

One component of program outreach will be the ongoing development and refinement of brochures, direct mail pieces, bill inserts, and educational literature for the Company's initiatives.

The Energy Efficiency staff will continue to take advantage of every opportunity to disseminate energy efficiency information through personal contact at home shows, trade shows, community events, landlord events, new homeowner workshops, energy information fairs, and energy awareness events at major employers. The Company also will continue to use its website as a tool to promote energy efficiency. National Grid also offers regular training to its call center representatives about the Company's energy efficiency programs and how to direct customers to participate in energy efficiency programs.

In addition, the Company plans to partner with technical schools, community colleges, contractors, and trade organizations to promote energy efficiency and opportunities in the energy efficiency industry.

### ***B. Trade Ally Training and Codes & Standards Program***

Energy efficiency awareness by the Company's trade allies and customers is crucial to reducing market barriers to energy efficiency and increasing acceptance of new

technologies. Educational activities will be a critical piece of the Company's promotion efforts.

The Company will support and undertake a wide range of training events in collaboration with GasNetworks™ and the manufacturing representatives and other trade allies. GasNetworks™ was recently authorized to award continuing education credits for the Plumbing, Heating and Cooling Contractors (PHCC) of New Hampshire. The PHCC requires training and education credits as a part of membership.

Additional outreach will extend to engineers, architects, builders, landlords, facility managers, housing authorities and other customers. The objective of all training activities will be to increase trade ally awareness of the benefits of energy efficiency and the technology options in high-efficiency equipment. Trade ally training also works to provide trade allies with the technical tools to properly size, install and maintain energy efficient products and provide customers with the knowledge to select energy efficient products. Training activities will be promoted via site visits, direct mail and newsletters. The Company works with the PHCC local chapters and attends the regional shows.

The GasNetworks™ website ([www.gasnetworks.com](http://www.gasnetworks.com)) will also be used as a vehicle for promotion, offering trade allies a central source of information on special event training efforts, in addition to joint energy efficiency programs.

The budget for the Trade ally training program is included within each program's budget.

### ***C. Building Operators Certification Program***

The Company plans to offer the Building Operator Certification (BOC) program. The BOC program provides curriculum selection, instructors, testing, certifications, as well as administrative functions. The target audience for the BOC program is individuals responsible for the maintenance and operation of equipment and systems in commercial buildings, industrial plants and public facilities. A BOC certificate is awarded to students who complete eight full days of classroom instruction, homework projects and testing.

In 2009, the BOC program will offer two to four sessions throughout the New England region. Each session will enroll approximately 40 students. The gas program will coordinate with the electric programs to reach out to a greater number of building

operator population. Each student is scheduled for two days of classroom instruction per month over a four month training cycle.

<b>Table-XIX: Building Operator Certification</b>			
<b>Electric Cost Categories</b>	<b>2009 Budget</b>	<b>2010 Budget</b>	<b>Gas Cost Categories</b>
Internal Administration	\$10,000	\$11,000	Company Administration
External Administration	\$5,000	\$6,000	Vendor Admin/Support
Rebates/Services	\$12,000	\$20,000	Services
Internal Implementation	\$0	\$0	Other
Marketing	\$3,000	\$3,000	
	\$3,000	\$3,000	<i>Communication</i>
	\$0	\$0	<i>Trade Ally</i>
Evaluation	\$0	\$0	Evaluation and Reporting
<b>Total</b>	<b>\$30,000</b>	<b>\$40,000</b>	
<b>Goal</b>	<b>20 participants</b>	<b>60 participants</b>	

## VI. EVALUATION AND REPORTING

### 1. Evaluation

National Grid anticipates expanding its focus on evaluation during 2009. The Company is conducting a review of how initial savings are calculated in support of the development of a new program tracking system.

Planned evaluation studies include the following:

- Completing an impact evaluation of the Low Income Program.

- With GasNetworks™, completing an impact evaluation of advanced heating and water heating equipment promoted through the Residential High-Efficiency Heating and Water Heating Program<sup>5</sup>.
- Process evaluations to determine customer satisfaction with program services and to identify potential program implementation improvements.
- Ongoing review of measure and program cost-effectiveness, informed by evaluation findings.

National Grid and Northern Utilities plan to go out to bid for a qualified contractor to conduct an impact evaluation of their 2007-2008 Low Income Weatherization Programs. The impact evaluation's primary objective is to re-examine and update impacts across the range of measures offered through the programs. The methodology for the evaluation will most likely be an econometric/statistical billing analysis that will result in savings estimates by measure category and/or a realization rate.

In January of 2009 the Company sent out a Request for Qualifications (RFQ) to 40 consultants to determine what methodologies are currently used in the evaluation of Residential High-Efficiency Heating and Water Heating Programs. The Company is using the responses to that RFQ to develop an RFP for a process and impact evaluation of the program and hopes to work jointly on the study with members of GasNetworks™ including Northern Utilities. The methodology will likely focus on billing analysis, either to determine hours of use which will be used in conjunction with equipment capacity and the difference in rated efficiencies to calculate savings or to do a direct comparison of the usage of customers with standard efficiency units versus high efficiency units. Other methodologies suggested included using various time of use meters to determine equipment runtimes.

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<sup>5</sup> The Company recently conducted an assessment of the gas savings associated with the equipment promoted through the Commercial High-Efficiency Heating program. This assessment suggests that savings for eligible equipment will be lower than previously assumed. In spite of reduced savings per installed piece of equipment, the Company projects that this program will continue to be cost-effective. The per unit decrease in energy savings affects the overall Commercial & Industrial portfolio savings. As noted above, the Company plans to initiate an advanced heating and water heating equipment impact evaluation this next year in collaboration with GasNetworks™.



As part of that RFP, the Company also plans to conduct a process evaluation to evaluate overall program performance and suggest areas for improvement. Key components of that evaluation include an assessment of:

- Level of customer satisfaction
- Trade ally satisfaction
- Company staff and trade ally training
- Effectiveness of the program delivery mechanism
- Effectiveness of program promotion
- Remaining barriers to program participation including an assessment of why some customers choose to not participate in the program
- Review of measures offered through the program, i.e., are they acceptable, appealing, and valued by the customers
- Identification of lessons learned and specific actionable recommendations for program improvement
- A review of program tracking databases to ensure that data that will likely be required to support future program evaluation efforts, including impact evaluations, are being collected

As with the impact evaluation, the Company anticipates conducting this evaluation with members of GasNetworks™ including Northern Utilities.

The Company continually updates its estimates of measure and program savings in its analysis of program cost effectiveness. Results of these evaluations will be used to screen programs for future filings.

Additional impact evaluations may be conducted during this 20-month period.

The budget for evaluation is included within each program's budget. Wherever possible, the Company will explore opportunities to decrease the cost of planned evaluation efforts by performing research in collaboration with industry partners GasNetworks™, GTI, NEEP, AESP, JMC, CEE and other utilities.

## **2. Reporting**

National Grid NH proposes to provide the Commission with the following reports:

#### Quarterly Reports:

The Company, consistent with the practice adopted by the electric utilities in the state, will provide the Commission with quarterly reports about ongoing program efforts. These reports will provide information about program costs and savings compared to annual budgets and savings goals by month. These reports will be filed with the Commission no later than 45 days following the end of each quarter in the year.

#### Updated Program Plans for 2010:

By August 31, 2009, the Company will file an update to its calendar year 2010 energy efficiency plans. The update will include updated program descriptions, benefit/cost analyses, program budgets, and program goals.

#### Shareholder Incentive Report:

By April 15, 2010, the Company will file a report with the Commission to document its performance for the May 1, 2009 – December 31, 2009 time period under the proposed shareholder incentive mechanism. The Company will also file a report with the Commission to document its performance for 2010 by April 15, 2011.

#### Next Multi-Year Energy Efficiency Plan:

National Grid anticipates filing its next multi-year gas energy efficiency plan by October 15, 2010. The Plan will likely be filed jointly with the other gas and electric utilities in the state.

## **VII. SHAREHOLDER INCENTIVE**

For the current EE Plan, the Company's Shareholder Incentive has been designed in accordance with Commission Orders 24,109, 24,636 and the guidelines set forth for electric utilities in NH PUC 23,850. In Order 23,850, the Commission approved a Utility

Performance Incentive designed to encourage utilities 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.

The Company's proposed 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, and the energy savings component is based on the relationship between the projected lifetime installed MMBTU savings and actual lifetime installed MMBTU savings. Each of these ratios are calculated at the sector level, one for the combined residential programs and one for the combined C&I programs, and then applied to each sector's program budgets.

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

# **Appendix A**

## **Explanation of Budget Categories – Traditional Gas Cost Categories**

### **Services**

Costs associated with rebates paid to customers for implementing energy efficiency. Additionally, this includes services provided to customers such as energy audits, technical assessments, engineering studies, plans reviews, blower door tests and infrared scans.

### **Vendor Administration and Support**

Costs associated with vendors and contractors administering programs on the Company's behalf. Tasks associated with this budget category include but are not limited to; lead intake, customer service, rebate application processing, rebate application problem resolution, equipment installation inspections, rebate processing and individual program reporting.

### **Company Administration**

Costs to administer energy efficiency programs that include but are not limited to; staff salaries (management personnel, program managers, accounting personnel, evaluation staff, regulatory staff, and administrative support staff), and company overhead (i.e., office space, supplies, computer and communication equipment, staff training, industry related sponsorships and memberships).

### **Communication**

Promotion of energy efficiency programs which includes but is not limited to; production of all energy efficiency program literature, advertising, promotion, displays, events, promotional items, bill inserts, internal and external communications. Advertising encompasses all forms of media such as direct mail, print, radio, television, and internet.

**Trade Ally Training**

Trade Ally Training includes all activity associated with energy efficiency training/education of the trade ally community which includes but is not limited to; heating contractors, weatherization contractors, efficiency equipment/products installers, residential and C&I auditors, residential and C&I builders and developers.

**Evaluation and Reporting**

All activities associated with the evaluation of current and potential energy efficiency programs. These activities include but are not be limited to; benefit cost ratio analysis, program logic models, cost per therm analysis, efficiency product saturation analysis, customer research and all ad hoc analyses that are necessary for program evaluation. In addition any activities that pertain to regulatory compliance or reporting conducted by energy efficiency group personnel or contractors would fall under this category. Expenses associated with evaluation include all internal and external costs (i.e., consultant contracts including legal services).

**Other**

Database administration costs associated with the Low Income program. When mapped to the Electric Cost Categories, this expense is divided 50% between internal administration and 50% between external administration.

## **Explanation of Budget Categories – Traditional Electric Cost Categories**

### **Internal Administration = Company Administration from gas categories**

Internal utility costs associated with program design, development, regulatory support, and quality assurance of energy efficiency programs. Costs include but are not limited to; staff salaries (management personnel, program managers, accounting personnel, evaluation staff, regulatory staff, and administrative support staff), and company overhead (i.e., office space, supplies, computer and communication equipment, staff training, industry related sponsorships and memberships).

### **External Administration = Vendor Administration from gas categories**

Costs associated with vendors and contractors administering programs on the Company's behalf. Tasks associated with this budget category include but are not limited to; lead intake, customer service, rebate application processing, rebate application problem resolution, equipment installation inspections, rebate processing and individual program reporting.

### **Rebates/Services = Services from above**

Costs associated with rebates paid to customers for implementing energy efficiency. Additionally, this includes services provided to customers such as energy audits, technical assessments, engineering studies, plans reviews, blower door tests and infrared scans.

### **Internal Implementation = Gas accounting does not differentiate this from internal administration**

Internal utility costs associated with delivering program services to customers. Costs to implement energy efficiency programs include but are not limited to; staff salaries (management personnel, program managers, accounting personnel,

evaluation staff, regulatory staff, and administrative support staff), and company overhead (i.e., office space, supplies, computer and communication equipment, staff training, industry related sponsorships and memberships). There are no gas internal implementation expenses tracked by the Company's accounting system.

#### **Marketing – Combines Communication and Trade Ally gas categories**

Promotion of energy efficiency programs which includes but is not limited to; production of all energy efficiency program literature, advertising, promotion, displays, events, promotional items, bill inserts, internal and external communications. Advertising encompasses all forms of media such as direct mail, print, radio, television, and internet. The marketing category also includes trade ally training associated with energy efficiency training/education of the trade ally community which includes but is not limited to; heating contractors, weatherization contractors, efficiency equipment/products installers, residential and C&I auditors, residential and C&I builders and developers.

#### **Evaluation = Evaluation and Reporting from gas categories**

All activities associated with the evaluation of current and potential energy efficiency programs. These activities include but are not be limited to; benefit cost ratio analysis, program logic models, cost per therm analysis, efficiency product saturation analysis, customer research and all ad hoc analyses that are necessary for program evaluation. In addition any activities that pertain to regulatory compliance or reporting conducted by energy efficiency group personnel or contractors would fall under this category. Expenses associated with evaluation include all internal and external costs (i.e., consultant contracts including legal services).

**Appendix A: Explanation of Budget Categories    National Grid NH Gas Energy Efficiency Preliminary Budget Traditional Gas Cost Categories**  
**New Hampshire Program Year THREE (5/1/08-4/30/09)**

Program	Services	Vendor Admin/Sup	Company Admin	Communication	Trade Ally Training	Evaluation & Reporting	Other	Budget Total	Participant Goal
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	= Sum (a-g)	
<b>Residential</b>									
Low Income	\$ 278,598	\$ 77,837	\$ 54,494	\$ 6,223	\$ 2,849	\$ 4,672	\$ 18,191	\$ 442,864	160
Residential Weatherization	\$ 42,344	\$ 7,763	\$ 4,940	\$ 20,586	\$ 10,395	\$ 3,529	\$ -	\$ 89,557	45
Residential High Efficiency Heating	\$ 172,500	\$ 7,500	\$ 21,043	\$ 45,093	\$ 10,012	\$ 15,031	\$ -	\$ 271,179	500
Residential Water Heating	\$ 45,000	\$ 3,864	\$ 5,031	\$ 20,781	\$ 1,438	\$ 5,594	\$ -	\$ 81,708	150
ENERGY STAR® Windows	\$ 30,000	\$ 6,327	\$ 4,026	\$ 18,628	\$ 1,150	\$ 2,876	\$ -	\$ 63,008	300
Advanced Residential Controls	\$ 10,000	\$ 7,185	\$ 1,942	\$ 14,162	\$ 555	\$ 1,387	\$ -	\$ 35,231	325
New Home Construction with ENERGY STAR®	\$ 39,337	\$ 7,212	\$ 4,589	\$ 9,834	\$ 1,311	\$ 3,278	\$ -	\$ 65,561	55
Energy Analysis: Internet Audit	\$ 18,837	\$ 2,416	\$ 2,868	\$ 16,146	\$ 820	\$ 2,049	\$ -	\$ 43,136	600
Energy Audit and Home Performance (RCS)	\$ 58,356	\$ 5,772	\$ 3,673	\$ 14,985	\$ 1,049	\$ 2,623	\$ -	\$ 86,459	200
Building Practices and Demo	\$ 27,775	\$ 5,092	\$ 3,240	\$ 6,944	\$ 926	\$ 2,315	\$ -	\$ 46,291	12
<b>Residential Total</b>	<b>\$ 722,746</b>	<b>\$ 130,968</b>	<b>\$ 105,848</b>	<b>\$ 173,381</b>	<b>\$ 30,505</b>	<b>\$ 43,354</b>	<b>\$ 18,191</b>	<b>\$ 1,224,992</b>	<b>2,347</b>
<b>Commercial &amp; Industrial</b>									
Comm Energy Efficiency Program	\$ 267,856	\$ 81,904	\$ 30,049	\$ 117,824	\$ 5,710	\$ 39,275	\$ -	\$ 542,617	150
Multifamily Housing Program	\$ 74,520	\$ 35,000	\$ 20,820	\$ 44,613	\$ 5,948	\$ 14,871	\$ -	\$ 195,773	60
Comm High Efficiency Heating	\$ 99,600	\$ 1,500	\$ 161	\$ 345	\$ 5,642	\$ 14,556	\$ -	\$ 121,803	50
Economic Redevelopment	\$ 240,405	\$ 7,950	\$ 19,751	\$ 42,324	\$ 5,643	\$ 14,108	\$ -	\$ 330,182	3
Building Practices and Demo	\$ 160,150	\$ 24,000	\$ 7,519	\$ 16,113	\$ 2,148	\$ 5,371	\$ -	\$ 215,301	6
Energy Analysis: Internet Audit	\$ 12,673	\$ 2,323	\$ 1,479	\$ 3,168	\$ 422	\$ 1,056	\$ -	\$ 21,122	50
<b>Commercial Total</b>	<b>\$ 855,204</b>	<b>\$ 152,677</b>	<b>\$ 79,779</b>	<b>\$ 224,387</b>	<b>\$ 25,515</b>	<b>\$ 89,237</b>	<b>\$ -</b>	<b>\$ 1,426,799</b>	<b>319</b>
<b>GRAND TOTAL</b>	<b>\$ 1,577,951</b>	<b>\$ 283,645</b>	<b>\$ 185,627</b>	<b>\$ 397,768</b>	<b>\$ 56,019</b>	<b>\$ 132,590</b>	<b>\$ 18,191</b>	<b>\$ 2,651,791</b>	<b>2,666</b>



**Appendix A: Explanation of Budget Categories**    **National Grid NH Gas Energy Efficiency Preliminary Budget Traditional Electric Cost Categories**  
**New Hampshire Program Year THREE (5/1/08-4/30/09)**

Program	Internal Admin	External Admin	Rebates/ Services	Internal Impl	Marketing	Evaluation	Budget Total	Participant Goal
	= (c)	= (b)	= (a)	= (g)	= (d) + (e)	= (f)	= Sum (c,b,a,g,d,e,f)	
<b>Residential</b>								
Low Income	\$ 54,494	\$ 77,837	\$ 278,598	\$ 18,191	\$ 9,072	\$ 4,672	\$ 442,864	160
Residential Weatherization	\$ 4,940	\$ 7,763	\$ 42,344	\$ -	\$ 30,981	\$ 3,529	\$ 89,557	45
Residential High Efficiency Heating	\$ 21,043	\$ 7,500	\$ 172,500	\$ -	\$ 55,105	\$ 15,031	\$ 271,179	500
Residential Water Heating	\$ 5,031	\$ 3,864	\$ 45,000	\$ -	\$ 22,219	\$ 5,594	\$ 81,708	150
ENERGY STAR® Windows	\$ 4,026	\$ 6,327	\$ 30,000	\$ -	\$ 19,778	\$ 2,876	\$ 63,008	300
Advanced Residential Controls	\$ 1,942	\$ 7,185	\$ 10,000	\$ -	\$ 14,717	\$ 1,387	\$ 35,231	325
New Home Construction with ENERGY STAR®	\$ 4,589	\$ 7,212	\$ 39,337	\$ -	\$ 11,145	\$ 3,278	\$ 65,561	55
Energy Analysis: Internet Audit	\$ 2,868	\$ 2,416	\$ 18,837	\$ -	\$ 16,966	\$ 2,049	\$ 43,136	600
Energy Audit and Home Performance (RCS)	\$ 3,673	\$ 5,772	\$ 58,356	\$ -	\$ 16,034	\$ 2,623	\$ 86,459	200
Building Practices and Demo	\$ 3,240	\$ 5,092	\$ 27,775	\$ -	\$ 7,869	\$ 2,315	\$ 46,291	12
<b>Residential Total</b>	<b>\$ 105,848</b>	<b>\$ 130,968</b>	<b>\$ 722,746</b>	<b>\$ 18,191</b>	<b>\$ 203,886</b>	<b>\$ 43,354</b>	<b>\$ 1,224,992</b>	<b>2,347</b>
<b>Commercial &amp; Industrial</b>								
Comm Energy Efficiency Program	\$ 30,049	\$ 81,904	\$ 267,856	\$ -	\$ 123,534	\$ 39,275	\$ 542,617	150
Multifamily Housing Program	\$ 20,820	\$ 35,000	\$ 74,520	\$ -	\$ 50,562	\$ 14,871	\$ 195,773	60
Comm High Efficiency Heating	\$ 161	\$ 1,500	\$ 99,600	\$ -	\$ 5,987	\$ 14,556	\$ 121,803	50
Economic Redevelopment	\$ 19,751	\$ 7,950	\$ 240,405	\$ -	\$ 47,968	\$ 14,108	\$ 330,182	3
Building Practices and Demo	\$ 7,519	\$ 24,000	\$ 160,150	\$ -	\$ 18,261	\$ 5,371	\$ 215,301	6
Energy Analysis: Internet Audit	\$ 1,479	\$ 2,323	\$ 12,673	\$ -	\$ 3,591	\$ 1,056	\$ 21,122	50
<b>Commercial Total</b>	<b>\$ 79,779</b>	<b>\$ 152,677</b>	<b>\$ 855,204</b>	<b>\$ -</b>	<b>\$ 249,901</b>	<b>\$ 89,237</b>	<b>\$ 1,426,799</b>	<b>319</b>
<b>GRAND TOTAL</b>	<b>\$ 185,627</b>	<b>\$ 283,645</b>	<b>\$ 1,577,951</b>	<b>\$ 18,191</b>	<b>\$ 453,788</b>	<b>\$ 132,590</b>	<b>\$ 2,651,791</b>	<b>2,666</b>

## Exhibit A: Projected Program Expenses

National Grid NH Gas Energy Efficiency Preliminary Budget with Gas Cost Categories  
New Hampshire Program Year ONE (May 1, 2009 - December 31, 2009)

Program	Services	Vendor Admin/Support	Company Admin	Communication	Trade Ally Training	Evaluation & Reporting	Other	Total Program Budget	Participant Goal
<b>Residential</b>									
Low Income	\$ 252,536	\$ 79,060	\$ 57,744	\$ 5,641	\$ 2,583	\$ 6,976	\$ -	\$ 404,540	180
Residential Weatherization	\$ 462,090	\$ 27,307	\$ 17,571	\$ 56,549	\$ 25,931	\$ 5,408	\$ -	\$ 594,856	550
ES Windows	\$ 30,000	\$ 6,327	\$ 4,026	\$ 18,628	\$ 1,150	\$ 0	\$ -	\$ 60,132	300
Energy Audit and Home Performance	\$ 30,333	\$ 3,158	\$ 2,009	\$ 8,198	\$ 574	\$ 3,028	\$ -	\$ 47,300	450
Residential High-Efficiency Heating	\$ 157,833	\$ 6,781	\$ 18,893	\$ 100,215	\$ 22,001	\$ 13,463	\$ -	\$ 319,187	404
Residential Water Heating	\$ 49,951	\$ 1,377	\$ 3,832	\$ 8,560	\$ 5,000	\$ 1,839	\$ -	\$ 70,559	131
Advanced Residential Controls	\$ 18,589	\$ 667	\$ 1,860	\$ 4,147	\$ 3,000	\$ 1,327	\$ -	\$ 29,589	212
ES Homes	\$ 10,800	\$ 1,980	\$ 1,260	\$ 2,700	\$ 360	\$ 1,415	\$ -	\$ 18,515	20
Res Energy Analysis: Internet Audit	\$ 8,404	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 8,404	660
Res Building Practices and Demo	\$ 14,999	\$ 2,750	\$ 1,750	\$ 3,750	\$ 500	\$ 2,394	\$ -	\$ 26,144	15
<b>Residential Total</b>	<b>\$ 1,035,536</b>	<b>\$ 129,407</b>	<b>\$ 108,946</b>	<b>\$ 208,388</b>	<b>\$ 61,098</b>	<b>\$ 35,851</b>	<b>\$ -</b>	<b>\$ 1,579,226</b>	<b>2,922</b>
<b>Commercial &amp; Industrial</b>									
Com Energy Efficiency Program	\$ 481,640	\$ 28,095	\$ 45,000	\$ 25,000	\$ 10,000	\$ 28,549	\$ -	\$ 618,284	109
Economic Redevelopment	\$ 124,296	\$ 12,620	\$ 30,000	\$ 8,000	\$ 5,000	\$ 5,564	\$ -	\$ 185,480	4
Multifamily Housing Program	\$ 26,490	\$ 14,960	\$ 17,000	\$ 8,000	\$ 5,000	\$ 2,210	\$ -	\$ 73,660	10
Com High Efficiency Heating	\$ 124,296	\$ 15,620	\$ 20,000	\$ 10,000	\$ 10,000	\$ 5,564	\$ -	\$ 185,480	90
Com Building Practices and Demo	\$ 58,290	\$ 15,000	\$ 31,656	\$ 5,000	\$ -	\$ 13,710	\$ -	\$ 123,656	2
Com Energy Analysis: Internet Audit	\$ -	\$ 5,000	\$ 10,000	\$ 5,000	\$ -	\$ -	\$ -	\$ 20,000	40
Building Operator Certification	\$ 12,000	\$ 5,000	\$ 10,000	\$ 3,000	\$ -	\$ -	\$ -	\$ 30,000	20
<b>Commercial &amp; Industrial Total</b>	<b>\$ 827,012</b>	<b>\$ 96,295</b>	<b>\$ 163,656</b>	<b>\$ 64,000</b>	<b>\$ 30,000</b>	<b>\$ 55,597</b>	<b>\$ -</b>	<b>\$ 1,236,560</b>	<b>275</b>
<b>Grand Total</b>	<b>\$ 1,862,548</b>	<b>\$ 225,702</b>	<b>\$ 272,602</b>	<b>\$ 272,388</b>	<b>\$ 91,098</b>	<b>\$ 91,448</b>	<b>\$ -</b>	<b>\$ 2,815,786</b>	<b>3,197</b>

## Exhibit A: Projected Program Expenses

National Grid NH Gas Energy Efficiency Preliminary Budget with Gas Cost Categories

New Hampshire Program Year TWO (January 1, 2010 - December 31, 2010)

Program	Services	Vendor Admin/Support	Company Admin	Communication	Trade Ally Training	Evaluation & Reporting	Other	Total Program Budget	Participant Goal
<b>Residential</b>									
Low Income	\$ 397,977	\$ 124,376	\$ 90,847	\$ 8,890	\$ 4,070	\$ 9,838	\$ -	\$ 635,997	\$ 260
Residential Weatherization	\$ 901,484	\$ 61,372	\$ 34,464	\$ 88,436	\$ 42,929	\$ 3,380	\$ -	\$ 1,132,065	\$ 1,100
ES Windows	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Energy Audit and Home Performance	\$ 57,020	\$ 5,955	\$ 3,789	\$ 15,460	\$ 1,083	\$ 5,893	\$ -	\$ 89,200	\$ 900
Residential High-Efficiency Heating	\$ 254,000	\$ 10,120	\$ 28,200	\$ 142,600	\$ 22,000	\$ 19,880	\$ -	\$ 476,800	\$ 551
Residential Water Heating	\$ 77,730	\$ 2,055	\$ 5,720	\$ 12,180	\$ 5,000	\$ 2,715	\$ -	\$ 105,400	\$ 257
Advanced Residential Controls	\$ 29,570	\$ 995	\$ 2,775	\$ 5,900	\$ 3,000	\$ 1,960	\$ -	\$ 44,200	\$ 704
ES Homes	\$ 14,400	\$ 2,640	\$ 1,680	\$ 3,600	\$ 480	\$ 2,044	\$ -	\$ 24,844	\$ 30
Res Energy Analysis: Internet Audit	\$ 16,007	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16,007	\$ 1,053
Res Building Practices and Demo	\$ 30,000	\$ 5,500	\$ 3,500	\$ 7,500	\$ 1,000	\$ 3,112	\$ -	\$ 50,612	\$ 20
<b>Residential Total</b>	<b>\$ 1,778,189</b>	<b>\$ 213,013</b>	<b>\$ 170,975</b>	<b>\$ 284,565</b>	<b>\$ 79,561</b>	<b>\$ 48,822</b>	<b>\$ -</b>	<b>\$ 2,575,126</b>	<b>\$ 4,875</b>
<b>Commercial &amp; Industrial</b>									
Com Energy Efficiency Program	\$ 930,061	\$ 71,415	\$ 98,000	\$ 35,000	\$ 25,000	\$ 46,169	\$ -	\$ 1,205,645	227
Economic Redevelopment	\$ 261,334	\$ 17,000	\$ 45,000	\$ 10,010	\$ 7,500	\$ 20,851	\$ -	\$ 361,695	10
Multifamily Housing Program	\$ 83,342	\$ 23,895	\$ 30,000	\$ 15,000	\$ 10,000	\$ 5,018	\$ -	\$ 167,255	20
Com High Efficiency Heating	\$ 260,844	\$ 20,000	\$ 30,000	\$ 15,000	\$ 15,000	\$ 20,851	\$ -	\$ 361,695	160
Com Building Practices and Demo	\$ 150,000	\$ 22,500	\$ 40,000	\$ 15,000	\$ -	\$ 22,500	\$ -	\$ 250,000	3
Com Energy Analysis: Internet Audit	\$ -	\$ 7,500	\$ 12,500	\$ 5,000	\$ -	\$ -	\$ -	\$ 25,000	60
Building Operator Certification	\$ 20,000	\$ 6,000	\$ 11,000	\$ 3,000	\$ -	\$ -	\$ -	\$ 40,000	60
<b>Commercial &amp; Industrial Total</b>	<b>\$ 1,705,581</b>	<b>\$ 168,310</b>	<b>\$ 266,500</b>	<b>\$ 98,010</b>	<b>\$ 57,500</b>	<b>\$ 115,389</b>	<b>\$ -</b>	<b>\$ 2,411,290</b>	<b>540</b>
<b>Grand Total</b>	<b>\$ 3,483,770</b>	<b>\$ 381,323</b>	<b>\$ 437,475</b>	<b>\$ 382,575</b>	<b>\$ 137,061</b>	<b>\$ 164,211</b>	<b>\$ -</b>	<b>\$ 4,986,415</b>	<b>5,415</b>

## Exhibit A: Projected Program Expenses

National Grid NH Gas Energy Efficiency Preliminary Budget with Electric Cost Categories

New Hampshire Program Year ONE (May 1, 2009 - December 31, 2009)

BCR Activity	Program	Internal Admin	External Admin	Rebates/ Services	Internal Impl	Marketing	Evaluation	Budget Total	Participant Goal
<b>Residential</b>									
Low Income	Low Income	\$ 57,744	\$ 79,060	\$ 252,536	\$ -	\$ 8,223	\$ 6,976	\$ 404,540	180
Residential Weatherization	Residential Weatherization	\$ 17,571	\$ 27,307	\$ 462,090	\$ -	\$ 82,480	\$ 5,408	\$ 594,856	550
Residential Weatherization	ES Windows	\$ 4,026	\$ 6,327	\$ 30,000	\$ -	\$ 19,778	\$ 0	\$ 60,132	300
Energy Audit and Home Performance	Energy Audit and Home Performance	\$ 2,009	\$ 3,158	\$ 30,333	\$ -	\$ 8,772	\$ 3,028	\$ 47,300	450
Residential High-Efficiency Heating, Water-Heating, Controls Program	Residential High-Efficiency Heating	\$ 18,893	\$ 6,781	\$ 157,833	\$ -	\$ 122,216	\$ 13,463	\$ 319,187	404
Residential High-Efficiency Heating, Water-Heating, Controls Program	Residential Water Heating	\$ 3,832	\$ 1,377	\$ 49,951	\$ -	\$ 13,560	\$ 1,839	\$ 70,559	131
Residential High-Efficiency Heating, Water-Heating, Controls Program	Advanced Residential Controls	\$ 1,860	\$ 667	\$ 18,589	\$ -	\$ 7,146	\$ 1,327	\$ 29,589	212
New Home Construction with Energy Star	ES Homes	\$ 1,260	\$ 1,980	\$ 10,800	\$ -	\$ 3,060	\$ 1,415	\$ 18,515	20
Residential Weatherization	Res Energy Analysis: Internet Audit	\$ -	\$ -	\$ 8,404	\$ -	\$ -	\$ -	\$ 8,404	660
Res Building Practices and Demo	Res Building Practices and Demo	\$ 1,750	\$ 2,750	\$ 14,999	\$ -	\$ 4,250	\$ 2,394	\$ 26,144	15
<b>Residential Total</b>	<b>Residential Total</b>	<b>\$ 108,946</b>	<b>\$ 129,407</b>	<b>\$ 1,035,536</b>	<b>\$ -</b>	<b>\$ 269,486</b>	<b>\$ 35,851</b>	<b>\$ 1,579,226</b>	<b>2,922</b>
<b>Commercial &amp; Industrial</b>									
Commercial Energy Efficiency	Com Energy Efficiency Program	\$ 45,000	\$ 28,095	\$ 481,640	\$ -	\$ 35,000	\$ 28,549	\$ 618,284	109
Commercial Energy Efficiency	Economic Redevelopment	\$ 30,000	\$ 12,620	\$ 124,296	\$ -	\$ 13,000	\$ 5,564	\$ 185,480	4
Commercial Energy Efficiency	Multifamily Housing Program	\$ 17,000	\$ 14,960	\$ 26,490	\$ -	\$ 13,000	\$ 2,210	\$ 73,660	10
Comm High Efficiency Heating	Com High Efficiency Heating	\$ 20,000	\$ 15,620	\$ 124,296	\$ -	\$ 20,000	\$ 5,564	\$ 185,480	90
Comm Building Practices and Demo	Com Building Practices and Demo	\$ 31,656	\$ 15,000	\$ 58,290	\$ -	\$ 5,000	\$ 13,710	\$ 123,656	2
Com Energy Analysis: Internet Audit	Com Energy Analysis: Internet Audit	\$ 10,000	\$ 5,000	\$ -	\$ -	\$ 5,000	\$ -	\$ 20,000	40
Building Operator Certification	Building Operator Certification	\$ 10,000	\$ 5,000	\$ 12,000	\$ -	\$ 3,000	\$ -	\$ 30,000	20
<b>Commercial &amp; Industrial Total</b>	<b>Commercial &amp; Industrial Total</b>	<b>\$ 163,656</b>	<b>\$ 96,295</b>	<b>\$ 827,012</b>	<b>\$ -</b>	<b>\$ 94,000</b>	<b>\$ 55,597</b>	<b>\$ 1,236,560</b>	<b>275</b>
<b>Grand Total</b>		<b>\$ 272,602</b>	<b>\$ 225,702</b>	<b>\$ 1,862,548</b>	<b>\$ -</b>	<b>\$ 363,486</b>	<b>\$ 91,448</b>	<b>\$ 2,815,786</b>	<b>3,197</b>

## Exhibit A: Projected Program Expenses

National Grid NH Gas Energy Efficiency Preliminary Budget with Electric Cost Categories

New Hampshire Program Year TWO (January 1, 2010 - December 31, 2010)

BCR Activity	Program	Internal Admin	External Admin	Rebates/ Services	Internal Impl	Marketing	Evaluation	Budget Total	Participant Goal
<b>Residential</b>									
<b>Low Income</b>	Low Income	\$ 90,847	\$ 124,376	\$ 397,977	\$ -	\$ 12,959	\$ 9,838	\$ 635,997	260
Residential Weatherization	Residential Weatherization	\$ 34,464	\$ 61,372	\$ 901,484	\$ -	\$ 131,365	\$ 3,380	\$ 1,132,065	1,100
Residential Weatherization	ES Windows	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	0
Energy Audit and Home Performance	Energy Audit and Home Performance	\$ 3,789	\$ 5,955	\$ 57,020	\$ -	\$ 16,543	\$ 5,893	\$ 89,200	900
Residential High-Efficiency Heating, Water-Heating, Controls Program	Residential High-Efficiency Heating	\$ 28,200	\$ 10,120	\$ 254,000	\$ -	\$ 164,600	\$ 19,880	\$ 476,800	551
Residential High-Efficiency Heating, Water-Heating, Controls Program	Residential Water Heating	\$ 5,720	\$ 2,055	\$ 77,730	\$ -	\$ 17,180	\$ 2,715	\$ 105,400	257
Residential High-Efficiency Heating, Water-Heating, Controls Program	Advanced Residential Controls	\$ 2,775	\$ 995	\$ 29,570	\$ -	\$ 8,900	\$ 1,960	\$ 44,200	704
New Home Construction with Energy Star	ES Homes	\$ 1,680	\$ 2,640	\$ 14,400	\$ -	\$ 4,080	\$ 2,044	\$ 24,844	30
Residential Weatherization	Res Energy Analysis: Internet Audit	\$ -	\$ -	\$ 16,007	\$ -	\$ -	\$ -	\$ 16,007	1,053
Res Building Practices and Demo	Res Building Practices and Demo	\$ 3,500	\$ 5,500	\$ 30,000	\$ -	\$ 8,500	\$ 3,112	\$ 50,612	20
<b>Residential Total</b>	<b>Residential Total</b>	<b>\$ 170,975</b>	<b>\$ 213,013</b>	<b>\$ 1,778,189</b>	<b>\$ -</b>	<b>\$ 364,127</b>	<b>\$ 48,822</b>	<b>\$ 2,575,126</b>	<b>4,875</b>
<b>Commercial &amp; Industrial</b>									
Commercial Energy Efficiency	Com Energy Efficiency Program	\$ 98,000	\$ 71,415	\$ 930,061	\$ -	\$ 60,000	\$ 46,169	\$ 1,205,645	227
Commercial Energy Efficiency	Economic Redevelopment	\$ 45,000	\$ 17,000	\$ 251,334	\$ -	\$ 17,510	\$ 20,851	\$ 361,695	10
Commercial Energy Efficiency	Multifamily Housing Program	\$ 30,000	\$ 23,895	\$ 83,342	\$ -	\$ 25,000	\$ 5,018	\$ 167,255	20
Comm High Efficiency Heating	Com High Efficiency Heating	\$ 30,000	\$ 20,000	\$ 250,844	\$ -	\$ 30,000	\$ 20,851	\$ 361,695	160
Comm Building Practices and Demo	Com Building Practices and Demo	\$ 40,000	\$ 22,500	\$ 150,000	\$ -	\$ 15,000	\$ 22,500	\$ 250,000	3
Com Energy Analysis: Internet Audit	Com Energy Analysis: Internet Audit	\$ 12,500	\$ 7,500	\$ -	\$ -	\$ 5,000	\$ -	\$ 25,000	60
Building Operator Certification	Building Operator Certification	\$ 11,000	\$ 6,000	\$ 20,000	\$ -	\$ 3,000	\$ -	\$ 40,000	60
<b>Commercial &amp; Industrial Total</b>	<b>Commercial &amp; Industrial Total</b>	<b>\$ 266,500</b>	<b>\$ 168,310</b>	<b>\$ 1,705,581</b>	<b>\$ -</b>	<b>\$ 155,510</b>	<b>\$ 115,389</b>	<b>\$ 2,411,290</b>	<b>540</b>
<b>Grand Total</b>		<b>\$ 437,475</b>	<b>\$ 381,323</b>	<b>\$ 3,483,770</b>	<b>\$ -</b>	<b>\$ 519,637</b>	<b>\$ 164,211</b>	<b>\$ 4,986,415</b>	<b>5,415</b>

## Exhibit B: Benefit Cost Analysis

National Grid NH Gas Energy Efficiency Preliminary Benefit Cost Analysis New Hampshire Program Year ONE and TWO (May 1, 2009 - December 31, 2010)

Sector	BCR Activity	NPV of COSTS					
		Administration	Rebates/ Services	Evaluation	Participant Cost	Incentive	Total Cost
<b>Residential</b>		\$ 1,234,437	\$ 2,762,580	\$ 83,269	\$ 1,926,943	\$ 326,423	\$ 6,333,652
	Low Income	\$ 366,648	\$ 639,066	\$ 16,531	\$ -	\$ -	\$ 1,022,245
	Residential Weatherization	\$ 378,156	\$ 1,391,597	\$ 8,691	\$ 1,021,543	\$ -	\$ 2,799,986
	Residential High-Efficiency Heating, Water-Heating, Controls Program	\$ 409,958	\$ 577,282	\$ 40,479	\$ 828,746	\$ -	\$ 1,856,465
	New Home Construction with Energy Star	\$ 14,459	\$ 24,786	\$ 3,400	\$ 76,654	\$ -	\$ 119,298
	Energy Audit and Home Performance	\$ 39,470	\$ 85,713	\$ 8,751	\$ -	\$ -	\$ 133,934
	Res Building Practices and Demo	\$ 25,747	\$ 44,137	\$ 5,416	\$ -	\$ -	\$ 75,300
<b>Commercial &amp; Industrial</b>		\$ 927,292	\$ 2,483,537	\$ 167,667	\$ 4,178,317	\$ 286,280	\$ 8,043,093
	Commercial Energy Efficiency	\$ 585,341	\$ 1,870,499	\$ 106,289	\$ 3,510,257	\$ -	\$ 6,072,385
	Comm High Efficiency Heating	\$ 133,319	\$ 377,638	\$ 25,816	\$ 488,833	\$ -	\$ 1,025,605
	Comm Building Practices and Demo	\$ 126,927	\$ 203,976	\$ 35,563	\$ 179,228	\$ -	\$ 545,693
	Com Energy Analysis: Internet Audit	\$ 44,281	\$ -	\$ -	\$ -	\$ -	\$ 44,281
	Building Operator Certification	\$ 37,425	\$ 31,425	\$ -	\$ -	\$ -	\$ 68,850
<b>Grand Total</b>		\$ 2,161,729	\$ 5,246,118	\$ 250,936	\$ 6,105,260	\$ 612,703	\$ 14,376,745

Sector	BCR Activity	NPV of Benefits			
		Electric	Non-Electric	Total Benefits	TRC BCR
<b>Residential</b>		\$ 250,472	\$ 13,564,159	\$ 13,814,631	2.18
	Low Income	\$ -	\$ 2,675,401	\$ 2,675,401	2.62
	Residential Weatherization	\$ 96,848	\$ 6,185,442	\$ 6,282,290	2.24
	Residential High-Efficiency Heating, Water-Heating, Controls Program	\$ 153,624	\$ 4,455,528	\$ 4,609,151	2.48
	New Home Construction with Energy Star	\$ -	\$ 247,789	\$ 247,789	2.08
	Energy Audit and Home Performance	\$ -	\$ -	\$ -	NA
	Res Building Practices and Demo	\$ -	\$ -	\$ -	NA
<b>Commercial &amp; Industrial</b>		\$ -	\$ 16,618,306	\$ 16,618,306	2.07
	Commercial Energy Efficiency	\$ -	\$ 10,872,177	\$ 10,872,177	1.79
	Comm High Efficiency Heating	\$ -	\$ 4,549,265	\$ 4,549,265	4.44
	Comm Building Practices and Demo	\$ -	\$ 1,196,863	\$ 1,196,863	2.19
	Com Energy Analysis: Internet Audit	\$ -	\$ -	\$ -	NA
	Building Operator Certification	\$ -	\$ -	\$ -	NA
<b>Grand Total</b>		\$ 250,472	\$ 30,182,465	\$ 30,432,937	2.12

## Exhibit B: Benefit Cost Analysis

National Grid NH Gas Energy Efficiency Benefit Cost Analysis New Hampshire Program Year ONE (May 1, 2009 - December 31, 2009)

		Program Year 2009					
Sector	BCR Activity	Administration	Rebates/ Services	Evaluation	Participant Cost	Incentive	Total Cost
		\$ 507,839	\$ 1,035,536	\$ 35,851	\$ 714,822	\$ 126,338	\$ 2,420,386
<b>Residential</b>		\$ 145,028	\$ 252,536	\$ 6,976	\$ -	\$ -	\$ 404,540
	Low Income	\$ 157,489	\$ 500,494	\$ 5,408	\$ 364,500	\$ -	\$ 1,027,892
	Residential Weatherization	\$ 176,332	\$ 226,373	\$ 16,630	\$ 319,122	\$ -	\$ 738,457
	Residential High-Efficiency Heating, Water-Heating, Controls Program	\$ 6,300	\$ 10,800	\$ 1,415	\$ 31,200	\$ -	\$ 49,715
	New Home Construction with Energy Star	\$ 13,939	\$ 30,333	\$ 3,028	\$ -	\$ -	\$ 47,300
	Energy Audit and Home Performance	\$ 8,751	\$ 14,999	\$ 2,394	\$ -	\$ -	\$ 26,144
	Res Building Practices and Demo						
		\$ 353,951	\$ 827,012	\$ 55,597	\$ 1,367,677	\$ 98,925	\$ 2,703,162
<b>Commercial &amp; Industrial</b>		\$ 208,675	\$ 632,426	\$ 36,323	\$ 1,115,447	\$ -	\$ 1,992,871
	Commercial Energy Efficiency	\$ 55,620	\$ 124,296	\$ 5,564	\$ 179,280	\$ -	\$ 364,760
	Comm High Efficiency Heating	\$ 51,656	\$ 58,290	\$ 13,710	\$ 72,950	\$ -	\$ 196,606
	Comm Building Practices and Demo	\$ 20,000	\$ -	\$ -	\$ -	\$ -	\$ 20,000
	Com Energy Analysis: Internet Audit	\$ 18,000	\$ 12,000	\$ -	\$ -	\$ -	\$ 30,000
	Building Operator Certification						
		\$ 861,790	\$ 1,862,548	\$ 91,448	\$ 2,082,499	\$ 225,263	\$ 5,123,548
<b>Grand Total</b>							

Sector	BCR Activity	Total Benefits	Sector Benefit/Cost	Participants	Annual MMBTU Savings	Lifetime MMBTU Savings
		\$ 5,170,171	2.14	2,922	27,540	527,748
<b>Residential</b>		\$ 1,084,948		180	5,728	114,562
	Low Income	\$ 2,242,416		1,510	11,198	227,413
	Residential Weatherization	\$ 1,744,704		747	10,171	174,711
	Residential High-Efficiency Heating, Water-Heating, Controls Program	\$ 98,103		20	443	11,063
	New Home Construction with Energy Star	\$ -		450	0	0
	Energy Audit and Home Performance	\$ -		15	0	0
	Res Building Practices and Demo					
		\$ 5,580,244	2.06	275	38,998	632,832
<b>Commercial &amp; Industrial</b>		\$ 3,481,100		123	25,887	388,298
	Commercial Energy Efficiency	\$ 1,623,201		90	9,572	191,446
	Comm High Efficiency Heating	\$ 475,943		2	3,539	53,089
	Comm Building Practices and Demo	\$ -		40	0	0
	Com Energy Analysis: Internet Audit	\$ -		20	0	0
	Building Operator Certification					
		\$ 10,750,415	2.10	3,197	66,538	1,160,581
<b>Grand Total</b>						

## Exhibit B: Benefit Cost Analysis

### National Grid NH Gas Energy Efficiency Benefit Cost Analysis New Hampshire Program Year TWO (January 1, 2010 - December 31, 2010)

		Program Year 2010					
Sector	BCR Activity	Administration	Rebates/ Services	Evaluation	Participant Cost	Incentive	Total Cost
Residential		\$ 748,115	\$ 1,778,189	\$ 48,822	\$ 1,248,016	\$ 206,010	\$ 4,029,152
	Low Income	\$ 228,182	\$ 397,977	\$ 9,838	\$ -	\$ -	\$ 635,997
	Residential Weatherization	\$ 227,201	\$ 917,491	\$ 3,380	\$ 676,500	\$ -	\$ 1,824,572
	Residential High-Efficiency Heating, Water-Heating, Controls Program	\$ 240,545	\$ 361,300	\$ 24,555	\$ 524,716	\$ -	\$ 1,151,116
	New Home Construction with Energy Star	\$ 8,400	\$ 14,400	\$ 2,044	\$ 46,800	\$ -	\$ 71,644
	Energy Audit and Home Performance	\$ 26,287	\$ 57,020	\$ 5,893	\$ -	\$ -	\$ 89,200
	Res Building Practices and Demo	\$ 17,500	\$ 30,000	\$ 3,112	\$ -	\$ -	\$ 50,612
Commercial & Industrial		\$ 590,320	\$ 1,705,581	\$ 115,389	\$ 2,893,873	\$ 192,903	\$ 5,498,066
	Commercial Energy Efficiency	\$ 387,820	\$ 1,274,737	\$ 72,038	\$ 2,465,728	\$ -	\$ 4,200,323
	Comm High Efficiency Heating	\$ 80,000	\$ 260,844	\$ 20,851	\$ 318,720	\$ -	\$ 680,415
	Comm Building Practices and Demo	\$ 77,500	\$ 150,000	\$ 22,500	\$ 109,425	\$ -	\$ 359,425
	Com Energy Analysis: Internet Audit	\$ 25,000	\$ -	\$ -	\$ -	\$ -	\$ 25,000
	Building Operator Certification	\$ 20,000	\$ 20,000	\$ -	\$ -	\$ -	\$ 40,000
Grand Total		\$ 1,338,435	\$ 3,483,770	\$ 164,211	\$ 4,141,890	\$ 398,913	\$ 9,527,218

Sector	BCR Activity	Total Benefits	Sector Benefit/Cost	Participants	Annual MMBTU Savings	Lifetime MMBTU Savings
<b>Residential</b>		\$ 8,644,460	2.15	4,875	47,564	885,455
	Low Income	\$ 1,590,453		260	8,274	165,478
	Residential Weatherization	\$ 4,039,873		2,153	21,016	420,327
	Residential High-Efficiency Heating, Water-Heating, Controls Program	\$ 2,864,448		1,512	17,610	283,057
	New Home Construction with Energy Star	\$ 149,686		30	664	16,594
	Energy Audit and Home Performance	\$ -		900	0	0
	Res Building Practices and Demo	\$ -		20	0	0
<b>Commercial &amp; Industrial</b>		\$ 11,038,062	2.01	540	76,754	1,236,404
	Commercial Energy Efficiency	\$ 7,391,077		257	54,428	816,422
	Comm High Efficiency Heating	\$ 2,926,064		160	17,017	340,348
	Comm Building Practices and Demo	\$ 720,920		3	5,309	79,633
	Com Energy Analysis: Internet Audit	\$ -		60	0	0
	Building Operator Certification	\$ -		60	0	0
<b>Grand Total</b>		\$ 19,682,522	2.07	5,415	124,319	2,121,859



**Exhibit C**  
**2009 Master Database of Input Assumptions**

**RESIDENTIAL PROGRAM INPUT ASSUMPTIONS**

Gas Energy Efficiency Programs - National Grid							
Program	Measure Name	Measure Life	Source of Measure Life	Incremental Cost	Source of Incremental Cost	Annual Savings Per Participant or Per Unit of Installation	Source of Annual Savings
Residential High-Efficiency Heating	High Efficiency Gas Furnace (AFUE >= 92%)	18	The New England State Program Working Group Residential and Commercial/Industrial Measure Life Report for the ISO forward capacity market, June 2007. Pg A-2	\$654	NYSERDA Deemed Savings Database; Program Name: Loan Fund Program; Measure Name: H.FURNACE-GAS/PROPANE.<100000.____N	21.1 MMBTUs	NYSERDA Deemed Savings Database; Program Name: Loan Fund Program; Measure Name: H.FURNACE-GAS/PROPANE.<100000.____N
Residential High-Efficiency Heating	High Efficiency Gas Furnace (AFUE >= 92%) with ECM	18	The New England State Program Working Group Residential and Commercial/Industrial Measure Life Report for the ISO forward capacity market, June 2007. Pg A-2	\$679	NYSERDA Deemed Savings Database; Program Name: Loan Fund Program; Measure Name: H.FURNACE-GASw/ECM.<100000.RES.____N	19.6 MMBTUs and 396 kWh	NYSERDA Deemed Savings Database; Program Name: Loan Fund Program; Measure Name: H.FURNACE-GASw/ECM.<100000.RES.____N
Residential High-Efficiency Heating	Boilers, forced hot water 85%+ AFUE	20	EnergyStar	\$984	NYSERDA Deemed Savings Database; Program Name: Loan Fund Program; Measure Name: H.BOILER-WATER.<100000.____N	8.9 MMBTUs	NYSERDA Deemed Savings Database; Program Name: Loan Fund Program; Measure Name: H.BOILER-WATER.<100000.____N
Residential High-Efficiency Heating	Boilers, forced hot water 90%+ AFUE	20	EnergyStar	\$1,355	Appliances and Commercial Equipment Standards, <a href="http://www.eere.energy.gov/buildings/appliance_standards/residential/furnace_boiler_draft_analysis.html">http://www.eere.energy.gov/buildings/appliance_standards/residential/furnace_boiler_draft_analysis.html</a> .	11.4 MMBTUs	91% AFUE data from Appliances and Commercial Equipment standards. <a href="http://www.eere.energy.gov/buildings/appliance_standards/residential/furnace_boiler_draft_analysis.html">http://www.eere.energy.gov/buildings/appliance_standards/residential/furnace_boiler_draft_analysis.html</a> .
Residential High-Efficiency Heating	High Efficiency Gas Steam Boiler	20	EnergyStar	\$2,186	NYSERDA Deemed Savings Database, Program Name: Loan Fund Program Measure Name: H.BOILER-STEAM-GAS.<100000.____N	12.9 MMBTUs	NYSERDA Deemed Savings Database, Program Name: Loan Fund Program; Measure Name: H.BOILER-STEAM-GAS.<100000.____N
Residential High-Efficiency Heating	Micro CHP	15	GDS August 25, 2006 report to KeySpan titled "GDS Analysis of Micro CHP Systems for KeySpan Energy Delivery"	\$6,500	GDS August 25, 2006 report to KeySpan titled "GDS Analysis of Micro CHP Systems for KeySpan Energy Delivery"	71.6 mmbtu plus 5,502 kWh per year	GDS August 25, 2006 report to KeySpan titled "GDS Analysis of Micro CHP Systems for KeySpan Energy Delivery"
Residential High-Efficiency Water Heating	Indirect Water Heater	20	Gas Networks March 25, 2004 report titled "Benefit/Cost Screening Results for Regional Natural Gas Energy Efficiency Programs" Pg 15	\$300	Teleconference with GasNetworks on 3/2/2004; documentation not available	7.9 MMBTUs	Annual energy savings are from a RemRATE model run Analysis prepared by Bruce Bennett of GDS. See MS Word documentation prepared by GDS, dated 2-13-2004. This document is not currently available.
Residential High-Efficiency Water Heating	Tankless Natural Gas Water Heater	20	ENERGY STAR® Residential Water Heaters: Final Criteria Analysis 4/1/08 Pg 10	\$1,120	ENERGY STAR® Residential Water Heaters: Final Criteria Analysis 4/1/08 Pg 10. Average of the price premium.	7.8 MMBTUs	ENERGY STAR® Residential Water Heaters: Final Criteria Analysis 4/1/08 Pg 10

**Exhibit C**  
**2009 Master Database of Input Assumptions**

**RESIDENTIAL PROGRAM INPUT ASSUMPTIONS**

**Gas Energy Efficiency Programs - National Grid**

Program	Measure Name	Measure Life	Source of Measure Life	Incremental Cost	Source of Incremental Cost	Annual Savings Per Participant or Per Unit of Installation	Source of Annual Savings
Residential High-Efficiency Water Heating	Stand Alone Water Heaters EF>.62	13	ENERGY STAR® Residential Water Heaters: Final Criteria Analysis 4/1/08 Pg 10	\$70	ENERGY STAR® Residential Water Heaters: Final Criteria Analysis 4/1/08 Pg 10	1.9 MMBtus	ENERGY STAR® Residential Water Heaters: Final Criteria Analysis 4/1/08 Pg 10
Energy Star Homes	Single-Family	25	The New England State Program Working Group Residential and Commercial/Industrial Measure Life Report for the ISO forward capacity market, June 2007. Pg A-2	\$2,352	Combining data from: Nexus Market Research, Inc., Dorothy Conant, Consultant "Evaluation of the Massachusetts New Homes with ENERGY STAR, Findings and Analysis", April 24, 2008 pg 24 and ICF Program Data on the average size of homes. The average Total Resource Cost is approximately \$2,100 per unit.	24.5 MMBtus	Combining data from: Nexus Market Research, Inc., Dorothy Conant, Consultant "Evaluation of the Massachusetts New Homes with ENERGY STAR, Findings and Analysis", April 24, 2008 pg 24 and ICF Program Data on the average size of homes and the savings per 1000/Sq ft per the methodology described in Energy / Demand Savings Calculation and Reporting Methodology for the Massachusetts Energy Star Homes® Program. This estimate was reduced by 30% to account for the gas savings from homes built in the territory where National Grid is both the gas and electric provider. Savings for these homes are claimed in National Grid's electric ES
Energy Star Homes	Multi-Family	25		\$964		15.0 MMBtus	
Residential Weatherization Program	Insulation & Air Sealing	20	The New England State Program Working Group Residential and Commercial/Industrial Measure Life Report for the ISO forward capacity market, June 2007. Pg A-2	\$2,465	Average rebate in 2008 through August was \$428 when the program paid 20% of the incremental cost. \$428/.2=\$2140 plus the \$650 cost of Air Sealing approximately 50% of units.	19 MMBtus	Based on RemRATE Analysis for small, medium and large homes in New Hampshire, and using degree days in Concord, New Hampshire. The REM/rate analysis was completed on March 12, 2004 by GDS. Single family unit savings 36.8 mmbtu/unit. Multi-Family units (5+) assumed to be 1/3 the size and on average save 12.3 mmbtu.
ENERGY STAR Windows	Energy Star Windows	25	The New England State Program Working Group Residential and Commercial/Industrial Measure Life Report for the ISO forward capacity market, June 2007. Pg A-3	\$19	Quantec LLC, Residential Market Assessment for ENERGY STAR Windows in the Northeast, January 2006 pg 28.	.23 MMBtu per 12.5 square ft. window	Quantec LLC, Residential Market Assessment for ENERGY STAR Windows in the Northeast, January 2006 pg 28.
Advanced Residential Controls	Programmable thermostats	10	The New England State Program Working Group Residential and Commercial/Industrial Measure Life Report for the ISO forward capacity market, June 2007. Pg A-2	\$92	Energy Star Cost Calculator, Energy Star Website, www.energystar.gov. Based on Industry data for 2008.	7.5 MMBtus	RLW Analytics-Validating the Impacts of Programmable Thermostats, dated January 2007 pg 2.

**RESIDENTIAL PROGRAM INPUT ASSUMPTIONS**

Gas Energy Efficiency Programs - National Grid							
Program	Measure Name	Measure Life	Source of Measure Life	Incremental Cost	Source of Incremental Cost	Annual Savings Per Participant or Per Unit of Installation	Source of Annual Savings
Advanced Residential Controls	Boiler reset controls	15	ACEEE Emerging Technologies Report: Advanced Boiler Controls-2006	\$758	Average cost of Boiler Reset Controls rebated through the program.	7.9 MMBTUs	ACEEE Emerging Technologies Report: Advanced Boiler Controls-September 2006
Residential Low Income	Weatherization	20	The New England State Program Working Group Residential and Commercial/Industrial Measure Life Report for the ISO forward capacity market, June 2007. Pg A-3	\$2,668	Estimated cost based on previous year (\$2320) adjusted to account for higher material costs in 2009.	GDS developed estimates of annual therm savings for each of the 55 measures provided by the program. For each measure, therm savings were estimated for single-family and multi-family housing units. Weighted average annual therm savings are 338.4 therms per participant (430.5 therms per year saved for single-family units; 231.6 therms saved per year for multi-family units). See Table 6-7 in the July 23, 2004 Report	GDS July 23, 2004 report to KeySpan titled "Update of the Cost Effectiveness of the KeySpan Energy Delivery Residential Low Income Program in Massachusetts, FINAL REPORT."
Energy Audit and Home Performance	Energy Audit	15	The New England State Program Working Group Residential and Commercial/Industrial Measure Life Report for the ISO forward capacity market, June 2007. Pg A-2	\$130	Cost of First Audit plus cost of \$30 of instant savings measures and 2 screw in energy efficient light bulbs at the time of audit.		

Commercial & Industrial INPUT ASSUMPTIONS

Gas Energy Efficiency Programs - National Grid							
Program	Measure Name	Measure Life	Source of Measure Life	Incremental Cost	Source of Incremental Cost	Annual Savings Per Participant or Per Unit of Installation	Source of Annual Savings
High-Efficiency Heating and Water-Heating	High Efficiency Gas Furnace (AFUE >= 92%)	18	The New England State Program Working Group Residential and Commercial/Industrial Measure Life Report for the ISO forward capacity market, June 2007. Pg A-2	\$654	NYSERDA Deemed Savings Database; Program Name: Loan Fund Program; Measure Name: H.FURNACE-GAS/PROPANE.<100000.____N	21.1 MMBTUs	NYSERDA Deemed Savings Database; Program Name: Loan Fund Program; Measure Name: H.FURNACE-GAS/PROPANE.<100000.____N
High-Efficiency Heating and Water-Heating	High Efficiency Gas Furnace (AFUE >= 92%) w/ ECM	18	The New England State Program Working Group Residential and Commercial/Industrial Measure Life Report for the ISO forward capacity market, June 2007. Pg A-2	\$679	NYSERDA Deemed Savings Database; Program Name: Loan Fund Program; Measure Name: H.FURNACE-GASw/ECM.<100000.RES.____N	19.6 MMBTUs and 396 kWh	NYSERDA Deemed Savings Database; Program Name: Loan Fund Program; Measure Name: H.FURNACE-GASw/ECM.<100000.RES.____N
High-Efficiency Heating and Water-Heating	Condensing Unit Heater 90% (151 to 400 MBH)	18	Natural Gas Efficiency and Conservation Measure Resource Assessment (ETO, 2003); NYSERDA Deemed Savings Database; Program Name: Smart Equipment Choices; Measure Name: A.UNIT-HEATER-COND.<300000.CI.____N	\$2,400	Assuming 200,000 Btuh; \$12,000 per million Btuh; Baseline (\$13,000 per million Btuh) and retrofit (\$25,000 per million Btuh) unit costs from "Analysis of Standard Options for Unit Heaters and Duct Furnaces" (PG&E, 2004).; NYSERDA Deemed Savings Database; Program Name: Smart Equipment Choices; Measure Name: A.UNIT-HEATER-COND.<300000.CI.____N	40.92	Assuming input of 200,000 Btuh: Nexant's "Gas Energy Efficiency Measure Analysis to Support NYSERDA's Con Edison Gas Efficiency Program" reported in August 2005; Savings of 204.6 Mmbtu's per million Btu/hr of heater input capacity. Savings based on efficiency improvement of the retrofit equipment compared to the baseline equipment. Baseline efficiency from ASHRAE 90.1-2001. (Assumes power vent and IID). Replacement efficiency based on PG&E Unit Heater Study. 80% comb. eff to 90%.; NYSERDA Deemed Savings Database; Program Name: Keep Cool; Measure Name: A.UNIT-HEATER-COND.<300000.CI.____N
High-Efficiency Heating and Water-Heating	Direct Fired Heater (up to 1500 MBH)						
High-Efficiency Heating and Water-Heating	Direct Fired Heater (up to 3000 MBH)						
High-Efficiency Heating and Water-Heating	Direct Fired Heater (over 3000 MBH)						

## 2009 Master Database of Input Assumptions

## Commercial &amp; Industrial INPUT ASSUMPTIONS

Gas Energy Efficiency Programs - National Grid							
Program	Measure Name	Measure Life	Source of Measure Life	Incremental Cost	Source of Incremental Cost	Annual Savings Per Participant or Per Unit of Installation	Source of Annual Savings
High-Efficiency Heating and Water-Heating	Infrared Heaters (Low intensity)	17	Measure life based on GDS Gas Potential Study for Utah (2004); NYSEDA Deemed Savings Database; Program Name: Smart Equipment Choices; Measure Name: A.INFR-UNIT-HEATER._CI._.N	\$632	Incremental unit cost based on GDS Gas Potential Study for Utah (2004). Cost is \$6,320 per million Btuh.; NYSEDA Deemed Savings Database; Program Name: Smart Equipment Choices; Measure Name: A.INFR-UNIT-HEATER._CI._.N	40.8	Assuming 100,000 Btuh.; Nexant's "Gas Energy Efficiency Measure Analysis to Support NYSEDA's Con Edison Gas Efficiency Program" reported in August 2005. Savings 408 MMBTUs per million Btu/hr of input capacity. Base efficiency from ASHRAE 90.1-2001 (Assumes standard gas unit heater 80% comb eff.); NYSEDA Deemed Savings Database; Program Name: Smart Equipment Choices; Measure Name: A.INFR-UNIT-HEATER._CI._.N
High-Efficiency Heating and Water-Heating	High Efficiency Gas Steam Boiler 82% AFUE (up to 300 MBH)	25	Efficiency Vermont Technical Reference Manual User; NYSEDA Deemed Savings Database; Program Name: Smart Equipment Choices; Measure Name: H.STEAM-BOILER-GAS.<300000.CI._.N	\$3,552	DEER; NYSEDA Deemed Savings Database; Program Name: Smart Equipment Choices; Measure Name: H.STEAM-BOILER-GAS.<300000.CI._.N	36.5	Retrofit efficiency based on the program requirement. Annual full load equivalent hours. 2470, estimated by Nexant, based on monthly heating degree hours for all the counties in NY weighted by populations. 75% AFUE to 80%; NYSEDA Deemed Savings Database; Program Name: Smart Equipment Choices; Measure Name: H.STEAM-BOILER-GAS.<300000.CI._.N
High-Efficiency Heating and Water-Heating	Hydronic Boilers, forced hot water 85%+ AFUE (up to 300 MBH)	25	Efficiency Vermont Technical Reference Manual User ;TRM User Manual No. 2005-37 pg 161	\$1,590	Based on 'Burnham Hydronics Trade Price Book #186', Dunkirk 2008 Price Book, Lochinvar trade price 2008 and Onyx -"Metro NY All Equip" database	16.8	Evaluation Study of Keyspan's Commercial and Industrial High Efficiency Heating Equipment Program - ODC Pg 40 Oct 2007; Gas savings = ((AFUEq-AFUEb)/AFUEq) x CAPY in therms/hour x EFLH; Assumed capacity of 190 MBH, 1500 EFLH, baseline of 80%
High-Efficiency Heating and Water-Heating	Hydronic Boilers, forced hot water 85%+ AFUE (301-499 MBH)	25	Efficiency Vermont Technical Reference Manual User ;TRM User Manual No. 2005-37 pg 161	\$3,970	Based on 'Burnham Hydronics Trade Price Book #186', Dunkirk 2008 Price Book, Lochinvar trade price 2008 and Onyx -"Metro NY All Equip" database	35.3	Evaluation Study of Keyspan's Commercial and Industrial High Efficiency Heating Equipment Program - ODC Pg 40 Oct 2007; Gas savings = ((AFUEq-AFUEb)/AFUEq) x CAPY in therms/hour x EFLH; Assumed capacity of 400 MBH, 1500 EFLH, baseline of 80%

**Commercial & Industrial INPUT ASSUMPTIONS**

**Gas Energy Efficiency Programs - National Grid**

<b>Program</b>	<b>Measure Name</b>	<b>Measure Life</b>	<b>Source of Measure Life</b>	<b>Incremental Cost</b>	<b>Source of Incremental Cost</b>	<b>Annual Savings Per Participant or Per Unit of Installation</b>	<b>Source of Annual Savings</b>
<b>High-Efficiency Heating and Water-Heating</b>	Hydronic Boilers, forced hot water 85%+ AFUE (500-999 MBH)	25	Efficiency Vermont Technical Reference Manual User ;TRM User Manual No. 2005-37 pg 161	\$3,530	Based on 'Burnham Hydronics Trade Price Book #186', Dunkirk 2008 Price Book, Lochinvar trade price 2008 and Onyx -"Metro NY All Equip" database	66.2	Evaluation Study of Keyspan's Commercial and Industrial High Efficiency Heating Equipment Program - ODC Pg 40 Oct 2007; Gas savings = ((AFUEq-AFUEb)/AFUEq) x CAPY in therms/hour x EFLH; Assumed capacity of 750 MBH, 1500 EFLH, baseline of 80%
<b>High-Efficiency Heating and Water-Heating</b>	Hydronic Boilers, forced hot water 85%+ AFUE (1000-1700 MBH)	25	Efficiency Vermont Technical Reference Manual User ;TRM User Manual No. 2005-37 pg 161	\$5,740	Based on 'Burnham Hydronics Trade Price Book #186', Dunkirk 2008 Price Book, Lochinvar trade price 2008 and Onyx -"Metro NY All Equip" database	119.1	Evaluation Study of Keyspan's Commercial and Industrial High Efficiency Heating Equipment Program - ODC Pg 40 Oct 2007; Gas savings = ((AFUEq-AFUEb)/AFUEq) x CAPY in therms/hour x EFLH; Assumed capacity of 1350 MBH, 1500 EFLH, baseline of 80%
<b>High-Efficiency Heating and Water-Heating</b>	Hydronic Boilers, forced hot water 85%+ AFUE (>1700 MBH)	25	Efficiency Vermont Technical Reference Manual User ;TRM User Manual No. 2005-37 pg 161	\$8,200	Based on 'Burnham Hydronics Trade Price Book #186', Dunkirk 2008 Price Book, Lochinvar trade price 2008 and Onyx -"Metro NY All Equip" database	150.0	Evaluation Study of Keyspan's Commercial and Industrial High Efficiency Heating Equipment Program - ODC Pg 40 Oct 2007; Gas savings = ((AFUEq-AFUEb)/AFUEq) x CAPY in therms/hour x EFLH; Assumed capacity of 1700 MBH, 1500 EFLH, baseline of 80%
<b>High-Efficiency Heating and Water-Heating</b>	Condensing Boilers, forced hot water 92%+ AFUE (up to 300 MBH)	25	Efficiency Vermont Technical Reference Manual User ;TRM User Manual No. 2005-37 pg 161	\$2,675	Based on 'Burnham Hydronics Trade Price Book #186', Dunkirk 2008 Price Book, Lochinvar trade price 2008 and Onyx -"Metro NY All Equip" database	32.3	Evaluation Study of Keyspan's Commercial and Industrial High Efficiency Heating Equipment Program - ODC Pg 40 Oct 2007; Gas savings = ((AFUEq-AFUEb)/AFUEq) x CAPY in therms/hour x EFLH; Assumed capacity of 165 MBH, 1500 EFLH, baseline of 80%
<b>High-Efficiency Heating and Water-Heating</b>	Condensing Boilers, forced hot water 92%+ AFUE (301-499 MBH)	25	Efficiency Vermont Technical Reference Manual User ;TRM User Manual No. 2005-37 pg 161	\$3,970	Based on 'Burnham Hydronics Trade Price Book #186', Dunkirk 2008 Price Book, Lochinvar trade price 2008 and Onyx -"Metro NY All Equip" database	78.3	Evaluation Study of Keyspan's Commercial and Industrial High Efficiency Heating Equipment Program - ODC Pg 40 Oct 2007; Gas savings = ((AFUEq-AFUEb)/AFUEq) x CAPY in therms/hour x EFLH; Assumed capacity of 400 MBH, 1500 EFLH, baseline of 80%

Commercial & Industrial INPUT ASSUMPTIONS

Gas Energy Efficiency Programs - National Grid							
Program	Measure Name	Measure Life	Source of Measure Life	Incremental Cost	Source of Incremental Cost	Annual Savings Per Participant or Per Unit of Installation	Source of Annual Savings
High-Efficiency Heating and Water-Heating	Condensing Boilers, forced hot water 92%+ AFUE (500-999 MBH)	25	Efficiency Vermont Technical Reference Manual User ;TRM User Manual No. 2005-37 pg 161	\$6,645	Based on 'Burnham Hydronics Trade Price Book #186', Dunkirk 2008 Price Book, Lochinvar trade price 2008 and Onyx -"Metro NY All Equip" database	146.7	Evaluation Study of Keyspan's Commercial and Industrial High Efficiency Heating Equipment Program - ODC Pg 40 Oct 2007; Gas savings = ((AFUEq- AFUEb)/AFUEq) x CAPY in therms/hour x EFLH; Assumed capacity of 750 MBH, 1500 EFLH, baseline of 80%
High-Efficiency Heating and Water-Heating	Condensing Boilers, forced hot water 92%+ AFUE (1000-1700 MBH)	25	Efficiency Vermont Technical Reference Manual User ;TRM User Manual No. 2005-37 pg 161	\$13,290	Based on 'Burnham Hydronics Trade Price Book #186', Dunkirk 2008 Price Book, Lochinvar trade price 2008 and Onyx -"Metro NY All Equip" database	264.1	Evaluation Study of Keyspan's Commercial and Industrial High Efficiency Heating Equipment Program - ODC Pg 40 Oct 2007; Gas savings = ((AFUEq- AFUEb)/AFUEq) x CAPY in therms/hour x EFLH; Assumed capacity of 1350 MBH, 1500 EFLH, baseline of 80%
High-Efficiency Heating and Water-Heating	Condensing Boilers, forced hot water 92%+ AFUE (>1701 MBH)	25	Efficiency Vermont Technical Reference Manual User ;TRM User Manual No. 2005-37 pg 161	\$17,820	Based on 'Burnham Hydronics Trade Price Book #186', Dunkirk 2008 Price Book, Lochinvar trade price 2008 and Onyx -"Metro NY All Equip" database	332.6	Evaluation Study of Keyspan's Commercial and Industrial High Efficiency Heating Equipment Program - ODC Pg 40 Oct 2007; Gas savings = ((AFUEq- AFUEb)/AFUEq) x CAPY in therms/hour x EFLH; Assumed capacity of 1700 MBH, 1500 EFLH, baseline of 80%
High-Efficiency Heating and Water-Heating	Indirect Water Heater (up to 50 gallons)	20	Gas Networks March 25, 2004 report titled "Benefit/Cost Screening Results for Regional Natural Gas Energy Efficiency Programs"	\$300	Teleconference with GasNetworks on 3/2/2004; Documentation not available	7.9	Annual energy savings are from a RemRATE model run Analysis prepared by Bruce Bennett of GDS. See MS Word documentation prepared by GDS, dated 2-13-2004. This document is not currently available.
High-Efficiency Heating and Water-Heating	Indirect Water Heater (>50 gallons)	20	Gas Networks March 25, 2004 report titled "Benefit/Cost Screening Results for Regional Natural Gas Energy Efficiency Programs"	\$300	Teleconference with GasNetworks on 3/2/2004; Documentation not available	7.9	Annual energy savings are from a RemRATE model run Analysis prepared by Bruce Bennett of GDS. See MS Word documentation prepared by GDS, dated 2-13-2004. This document is not currently available.

**Commercial & Industrial INPUT ASSUMPTIONS**

**Gas Energy Efficiency Programs - National Grid**

Program	Measure Name	Measure Life	Source of Measure Life	Incremental Cost	Source of Incremental Cost	Annual Savings Per Participant or Per Unit of Installation	Source of Annual Savings
High-Efficiency Heating, Water-Heating, Controls Program	Tankless Natural Gas Water Heater (EF >=.82)	20	Energy Star, High Efficiency Water Heaters Provide Hot Water for Less pg 2	\$500	GDS Associates analysis for KeySpan Energy Delivery on tankless natural gas water heaters, December 22, 2004 (Excel worksheet documentation)	7.4	GDS Associates analysis for KeySpan Energy Delivery on tankless natural gas water heaters, December 22, 2004 (Excel worksheet documentation)
Commercial Energy Efficiency Program	Multifamily Housing Program	15	Staff estimate as the program consists primarily of controls and envelope measures which typically have lifetimes of 15-20 years.	\$4,220	The projected rebate per participant is \$1,266. The rebate is projected to cover 30% of the incremental cost. Thus the incremental cost is projected to be \$4,220.	446.3	Average savings per participant for NH projects completed between Jan -Mar 2009.
Commercial Energy Efficiency Program	Commercial Energy Efficiency Program	15	Staff estimate as the program consists primarily of controls and envelope measures which typically have lifetimes of 15-20 years.	\$11,283	The projected rebate per participant is \$3,385. The rebate is projected to cover 30% of the incremental cost. Thus the incremental cost is projected to be \$11,283.	177.1	Average savings per participant for NH projects completed between Jan -Mar 2009.
Commercial Energy Efficiency Program	Economic Redevelopment Program	15	Staff estimate as the program consists primarily of controls and envelope measures which typically have lifetimes of 15-20 years.	\$117,600	Based on the measures included in Economic Redevelopment projects from May 2007 through October 2008, \$117,600 is an anticipated average project cost for these projects	530.7	Average savings per participant for NH projects completed between Jan -Mar 2009.
Commercial Building Practices and Demonstration Program	Commercial Building Practices and Demonstration Program	15	Staff estimate	\$65,620	Based on the measures included in Commercial Building Practices and Demonstration projects from May 2007 through October 2008, \$65,620 is an anticipated average project cost for these projects	1,769.6	Average savings per participant for NH projects completed between Jan -Mar 2009.
Commercial High Efficiency Heating Equipment Program	High Efficiency Heating Equipment Program	20	Simple average of individual equipment lives which typically have lifetimes of 18-25 years.	\$3,984	Simple average of individual equipment rebates offered.	106.4	Average savings per participant for NH projects completed between Jan -Mar 2009.



## Exhibit D - Shareholder Incentive Page 1 of 4

### National Grid Gas Energy Efficiency

Target Shareholder Incentive Year ONE- May 1, 2009 - December 31, 2009

#### Commercial/Industrial Incentive

1. Target Benefit/Cost Ratio	2.06
2. Threshold Benefit/Cost Ratio	1.00
3. Target lifetime MMBTU	632,832
4. Threshold MMBTU	411,341
5. Budget	\$1,236,560
6. CE Percentage	4.00%
7. Lifetime kWh Percentage	4.00%
<b>8. Target C/I Incentive</b>	<b>\$98,925</b>
<b>9. Cap</b>	<b>\$148,387</b>

#### Residential Incentive

10. Target Benefit/Cost Ratio	2.14
11. Threshold Benefit/Cost Ratio	1.00
12. Target lifetime MMBTU	527,748
13. Threshold MMBTU	343,036
14. Budget	\$1,579,226
15. CF Percentage	4.00%
16. Lifetime kWh Percentage	4.00%
<b>17. Target Residential Incentive</b>	<b>\$126,338</b>
<b>18. Cap</b>	<b>\$189,507</b>
<b>19. TOTAL TARGET INCENTIVE</b>	<b>\$225,263</b>

#### Line No. Notes:

- 1, 3, 5, 10, 12, and 14. See Exhibit B
- 2, 6, 7, 11, 15, and 16. Report to the New Hampshire Public Utilities Commission on Ratepayer-Funded Energy Efficiency Issues in New Hampshire, Docket No. DR 96-150, page 21.
4. 65% of line 3.
8. 8% of line 5.
9. 12% of line 5.
13. 65% of line 12.
17. 8% of line 14.
18. 12% of line 14.
19. Line 8 plus line 17.

## Exhibit D - Shareholder Incentive Page 2 of 4

### National Grid Gas Energy Efficiency Target Benefit-Cost Ratio by Sector Year ONE- May 1, 2009 - December 31, 2009

<b>Commercial &amp; Industrial:</b>		<b><u>Planned</u></b>
1. Benefits (Value) From Eligible Programs		\$5,580,244
2. Implementation Expenses		\$1,180,963
3. Customer Contribution		\$1,367,677
4. Evaluation Expense		\$55,597
5. Shareholder Incentive		\$98,925
6. Total Costs Including Shareholder Incentive		<b>\$2,703,162</b>
7. Benefit/Cost Ratio - C&I Sector		<b>2.06</b>
8. Implementation Plus Evaluation Expense - C&I Sector		<b>\$1,236,560</b>
<b>Residential:</b>		
9. Benefits (Value) From Eligible Programs		\$5,170,171
10. Implementation Expenses		\$1,543,375
11. Customer Contribution		\$714,822
12. Evaluation Expense		\$35,851
13. Shareholder Incentive		\$126,338
14. Total Costs Including Shareholder Incentive		<b>\$2,420,386</b>
15. Benefit/Cost Ratio - Residential Sector		<b>2.14</b>
16. Implementation Plus Evaluation Expense - Residential Sector		<b>\$1,579,226</b>

#### **Line No. Notes:**

1 - 5 and 9-13. See Exhibit B.

5. Sum of lines 2-5.

6. Line 1 divided by line 6. The shareholder incentive mechanism described by the New Hampshire Energy Efficiency Working Group and approved by the Commission in Order No. 23,574 includes a circular calculation. A portion of the earned shareholder incentive is related to the benefit/cost ratio (BCR). However, the shareholder incentive is supposed to be included as an EE cost in determining the BCR. For the purpose of calculating the shareholder incentive, the Company has calculated the planned BCR including the shareholder incentive for one iteration and will compare the actual BCR including the shareholder incentive to the planned BCR including shareholder incentives when determining the earned incentive.

7. Sum of lines 2 and 5. These are the C&I sector funds on which the Company may calculate its earned shareholder incentive.

14. Sum of lines 10 - 13.

15. Line 9 divided by line 14. The shareholder incentive mechanism described by the New Hampshire Energy Efficiency Working Group and approved by the Commission in Order No. 23,574 includes a circular calculation. A portion of the earned shareholder incentive is related to the benefit/cost ratio. However, the shareholder incentive is supposed to be included as an EE cost in determining the benefit/cost ratio. For the purpose of calculating the shareholder incentive, the Company has calculated the planned benefit/cost ratio including the shareholder incentive for one iteration and will compare the actual benefit/cost ratio including the shareholder incentive to the planned benefit/cost ratio including shareholder incentives when determining the earned shareholder incentive.

16. Sum of lines 10 and 13. These are the Residential sector funds on which the Company may calculate its earned shareholder incentive.

## **Exhibit D - Shareholder Incentive Page 3 of 4**

### **National Grid Gas Energy Efficiency**

**Target Shareholder Incentive Year TWO- January 1, 2010 - December 31, 2010**

#### **Commercial/Industrial Incentive**

1. Target Benefit/Cost Ratio	2.01
2. Threshold Benefit/Cost Ratio	1.00
3. Target lifetime MMBTU	1,236,404
4. Threshold MMBTU	803,663
5. Budget	\$2,411,290
6. CE Percentage	4.00%
7. Lifetime kWh Percentage	4.00%
<b>8. Target C/I Incentive</b>	<b>\$192,903</b>
<b>9. Cap</b>	<b>\$289,355</b>

#### **Residential Incentive**

10. Target Benefit/Cost Ratio	2.15
11. Threshold Benefit/Cost Ratio	1.00
12. Target lifetime MMBTU	885,455
13. Threshold MMBTU	575,546
14. Budget	\$2,575,126
15. CE Percentage	4.00%
16. Lifetime kWh Percentage	4.00%
<b>17. Target Residential Incentive</b>	<b>\$206,010</b>
<b>18. Cap</b>	<b>\$309,015</b>
<b>19. TOTAL TARGET INCENTIVE</b>	<b>\$398,913</b>

#### **Line No. Notes:**

- 1, 3, 5, 10, 12, and 14. See Exhibit B
- 2, 6, 7, 11, 15, and 16. Report to the New Hampshire Public Utilities Commission on Ratepayer-Funded Energy Efficiency Issues in New Hampshire, Docket No. DR 96-150, page 21.
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- 8. 8% of line 5.
- 9. 12% of line 5.
- 13. 65% of line 12.
- 17. 8% of line 14.
- 18. 12% of line 14.
- 19. Line 8 plus line 17.

## Exhibit D - Shareholder Incentive Page 4 of 4

### National Grid Gas Energy Efficiency Target Benefit-Cost Ratio by Sector Year TWO- January 1, 2010 - December 31, 2010

#### Commercial & Industrial:

#### Planned

1. Benefits (Value) From Eligible Programs	\$11,038,062
2. Implementation Expenses	\$2,295,901
3. Customer Contribution	\$2,893,873
4. Evaluation Expense	\$115,389
5. Shareholder Incentive	\$192,903
6. Total Costs Including Shareholder Incentive	\$5,498,066
7. Benefit/Cost Ratio - C&I Sector	2.01
8. Implementation Plus Evaluation Expense - C&I Sector	\$2,411,290

#### Residential:

9. Benefits (Value) From Eligible Programs	\$8,644,460
10. Implementation Expenses	\$2,526,304
11. Customer Contribution	\$1,248,016
12. Evaluation Expense	\$48,822
13. Shareholder Incentive	\$206,010
14. Total Costs Including Shareholder Incentive	\$4,029,152
15. Benefit/Cost Ratio - Residential Sector	2.15
16. Implementation Plus Evaluation Expense - Residential Sector	\$2,575,126

#### Line No. Notes:

1 - 5 and 9-13. See Exhibit B.

5. Sum of lines 2-5.

6. Line 1 divided by line 6. The shareholder incentive mechanism described by the New Hampshire Energy Efficiency Working Group and approved by the Commission in Order No. 23,574 includes a circular calculation. A portion of the earned shareholder incentive is related to the benefit/cost ratio (BCR). However, the shareholder incentive is supposed to be included as an EE cost in determining the BCR. For the purpose of calculating the shareholder incentive, the Company has calculated the planned BCR including the shareholder incentive for one iteration and will compare the actual BCR including the shareholder incentive to the planned BCR including shareholder incentives when determining the earned incentive.

7. Sum of lines 2 and 5. These are the C&I sector funds on which the Company may calculate its earned shareholder incentive.

14. Sum of lines 10 - 13.

15. Line 9 divided by line 14. The shareholder incentive mechanism described by the New Hampshire Energy Efficiency Working Group and approved by the Commission in Order No. 23,574 includes a circular calculation. A portion of the earned shareholder incentive is related to the benefit/cost ratio. However, the shareholder incentive is supposed to be included as an EE cost in determining the benefit/cost ratio. For the purpose of calculating the shareholder incentive, the Company has calculated the planned benefit/cost ratio including the shareholder incentive for one iteration and will compare the actual benefit/cost ratio including the shareholder incentive to the planned benefit/cost ratio including shareholder incentives when determining the earned shareholder incentive.

16. Sum of lines 10 and 13. These are the Residential sector funds on which the Company may calculate its earned shareholder incentive.