

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

March 12, 2009

nationalgrid

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I. FORWARD

This document presents to the New Hampshire Public Utilities Commission (NHPUC or the Commission) EnergyNorth Natural Gas, Inc.¹ d/b/a National Grid NH (the Company) proposed Energy Efficiency (EE) plan for the twenty-month period May 1, 2009 through December 31, 2010. The Company's current programs, which were approved by Commission Order 24,636, expire on April 30, 2009. This proposed EE Plan provides updated program descriptions, benefit/cost analyses, program budgets and program goals for this 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 a Net Zero Energy home competition. 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 EE efforts for the eight months in 2009 is \$2,994,056 and is \$4,164,299 in calendar year 2010. Detailed budgets are set forth in Table I.

¹ 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.

Table-I: May 1, 2009 - December 31, 2010 Budget		
Item	2009 Budget	2010 Budget
Internal Administration	\$300,213	\$361,503
External Administration	\$334,588	\$412,337
Rebates/Services	\$1,725,845	\$2,623,379
Internal Implementation	\$24,255	\$36,382
Marketing	\$426,533	\$534,428
Evaluation	\$182,622	\$196,270
Total	\$2,994,056	\$4,164,299

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 and lost base revenues.

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 plans (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[™] 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

Table-II: Energy Efficiency Programs	
Residential Market	
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 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. Builder incentives totaling up to \$4,750. Zero Energy Homes contest and prizes for top three performing homes.
Residential Weatherization Program ENERGY STAR® Replacement Windows	<p>\$10.00 each for qualifying ENERGY STAR® labeled windows (U-factor of .35 or less). \$500 maximum.</p> <p>Incentive of 75% of installed cost of qualifying insulation and weatherization measures installed by participating contractors up to \$4,000.</p>
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 poverty level or below 60% of median income).
Energy Audit and Home Performance	<p>Tier One – Educational, technical, and audit assistance by phone. Tier Two – Home Energy Assessment and low-cost energy saving measures. Proposed air sealing 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>
Residential Building Practices and Demonstration Program	Participate in funding for demonstration projects that apply to new or underutilized technologies.
Commercial & Industrial Markets	
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.
Codes Training Outreach etc.	
Trade Ally Training and Codes & Standards	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. All contractors are permitted to compete for the customer's business on an equal basis. 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 and the GasNetworks™ website, 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.thinksmarthinkgreen.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 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.

Table-III: Residential High-Efficiency Heating, Water Heating and Controls Program		
Item	2009 Budget	2010 Budget
Internal Administration	\$24,585	\$36,695
External Administration	\$8,825	\$13,170
Rebates/Services	\$226,373	\$361,300
Internal Implementation	\$0	\$0
Marketing	\$142,921	\$190,680
Evaluation	\$16,630	\$24,555
Total	\$419,334	\$626,400
Goals		
High Efficiency Heating	404 participants	551 participants
High Efficiency Water Heating	131 participants	257 participants
Advanced Controls	212 participants	704 participants
Total	747 participants	1,512 participants

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 a downturn in the New Hampshire new construction market. In an effort to combat the downturn in the market, a contest may be implemented, offering a 'prize' for builders who build a Net Zero Energy home. The contest would be open to all builders in the gas territory who plan to complete a home by the end of the year. Additional marketing and modeling will also be offered to participating builders. Three builders who complete homes with a HERS score between 0-35 will be eligible to receive a prize with 1st prize going to the builder with the lowest HERS score. The budget allows up to five homes to participate. Ideally one of the three finalists would be a low-income offering.

Table-IV: New Home Construction with ENERGY STAR®		
Item	2009 Budget	2010 Budget
Internal Administration	\$12,753	\$15,529
External Administration	\$20,040	\$24,402
Rebates/Services	\$79,310	\$163,103
Internal Implementation	\$0	\$0
Marketing	\$32,472	\$36,213
Evaluation	\$6,609	\$13,592
Total	\$151,184	\$252,839
Goals		
New Home Construction	27 participants	35 participants
Net Zero Energy	0 participants	3 participants
Total	27 participants	38 participants

C. Residential Weatherization Program

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. Measures eligible for an incentive through the program include: 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, air infiltration testing and air infiltration sealing. 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. 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 Conservation Service program. Residential Conservation Service program energy auditors receive supplemental training for the purpose of seamlessly integrating the Weatherization program and the RCS audit.

An enhanced incentive is available to customers who undertake comprehensive weatherization such as whole house air sealing, and to customers who install insulation with a higher R-value per inch or with greater air infiltration reduction properties, such as dense pack cellulose and insulating foams. 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-V - Residential Weatherization Program		
Item	2009 Budget	2010 Budget
Internal Administration	\$4,940	\$6,587
External Administration	\$7,763	\$10,351
Rebates/Services	\$42,344	\$56,459
Internal Implementation	\$0	\$0
Marketing	\$30,981	\$41,308
Evaluation	\$3,529	\$4,705
Total	\$89,557	\$119,410
Goal	45 participants	60 participants

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^{*2} 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 and its product website: 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.

² 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.

Table-VI: ENERGY STAR® Replacement Windows		
Item	2009 Budget	2010 Budget
Internal Administration	\$4,026	\$0
External Administration	\$6,327	\$0
Rebates/Services	\$30,000	\$0
Internal Implementation	\$0	\$0
Marketing	\$19,778	\$0
Evaluation	\$2,876	\$0
Total	\$63,007	\$0
Goal	300 participants	0 participants

C. Residential Low Income Program

The Residential Low Income Program offers weatherization services to income eligible customers at 200% of the Federal poverty level or below, or customers eligible for fuel assistance benefits, whichever is higher.

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, 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. The Company will continue to explore opportunities to assist income eligible customers living in housing authorities. In addition, on a case-by-case basis, the Company proposes to offer weatherization services to organizations that provide critical services to the program's target audience, e.g. food banks, homeless shelters, and organizations whose mission is to work with low income citizens.

Table-VII: Residential Low Income Program		
Item	2009 Budget	2010 Budget
Internal Administration	\$72,659	\$108,988
External Administration	\$103,783	\$155,674
Rebates/Services	\$371,464	\$557,196
Internal Implementation	\$24,255	\$36,382
Marketing	\$12,096	\$18,144
Evaluation	\$6,229	\$9,344
Total	\$590,486	\$885,728
Goal	214 participants	274 participants

D. Residential Conservation Services

The Residential Conservation Services (RCS) program is designed to help customers 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.

There are two levels of service provided by the RCS 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 dialog 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 types of audits. The first, the walk through audit provides a home energy assessment and installs 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 type of 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 of \$650 would be provided at no cost to the customer.

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. 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 RCS program through advertising, including bill inserts, direct mail, the National Grid website www.thinksmarthinkgreen.com, and its product website www.energyfederation.org/nationalgrid, online Home Energy Analyzer and *e-efficiency news* electronic newsletters. Customers can also call the toll-free number to learn about more about the RCS program and all of the Company's residential energy efficiency programs.

Table-VIII: Residential Conservation Services		
Item	2009 Budget	2010 Budget
Internal Administration	\$8,898	\$15,347
External Administration	\$13,983	\$24,118
Rebates/Services	\$141,377	\$243,850
Internal Implementation	\$0	\$0
Marketing	\$38,845	\$67,002
Evaluation	\$6,355	\$10,962
Total	\$209,458	\$361,279
Goals		
Energy Audit & Home Performance	200 participants	400 participants
Air Sealing	100 participants	200 participants
Total	300 participants	600 participants

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 the 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 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).

Table-IX: Building Practices and Demonstration Program		
Item	2009 Budget	2010 Budget
Internal Administration	\$3,352	\$4,357
External Administration	\$5,267	\$6,847
Rebates/Services	\$28,727	\$37,346
Internal Implementation	\$0	\$0
Marketing	\$8,140	\$10,581
Evaluation	\$2,394	\$3,112
Total	\$47,880	\$62,243
Goal	15 participants	20 participants

IV. COMMERCIAL AND INDUSTRIAL PROGRAMS

A. The Commercial Energy Efficiency Program

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-X: Prescriptive Incentives for Installed Measures

Measure	Available Incentive
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 ² 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 example 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.

Multifamily Housing

The Multifamily Housing Program offers 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, 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.

Table-XI: Multifamily Housing		
Item	2009 Budget	2010 Budget
Internal Administration	\$32,000	\$32,000
External Administration	\$30,000	\$33,000
Rebates/Services	\$49,500	\$84,375
Internal Implementation	\$0	\$0
Marketing	\$20,000	\$30,000
Evaluation	\$14,000	\$10,000
Total	\$145,500	\$189,375
Goal	10 participants	15 participants

Economic Redevelopment

The Economic Redevelopment Program leverages energy efficiency funds to revitalize buildings in targeted areas 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.

Table-XII: Economic Redevelopment		
Item	2009 Budget	2010 Budget
Internal Administration	\$30,000	\$30,000
External Administration	\$7,100	\$8,000
Rebates/Services	\$303,750	\$270,000
Internal Implementation	\$0	\$0
Marketing	\$15,000	\$20,000
Evaluation	\$14,000	\$10,000
Total	\$369,850	\$338,000
Goal	4 participants	8 participants

Table-XIII: Commercial Energy Efficiency Program		
Item	2009 Budget	2010 Budget
Internal Administration	\$57,000	\$62,000
External Administration	\$85,000	\$85,000
Rebates/Services	\$328,000	\$566,000
Internal Implementation	\$0	\$0
Marketing	\$52,500	\$62,500
Evaluation	\$50,000	\$50,000
Total	\$572,500	\$825,500
Goal	120 participants	200 participants

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.

Table-XIV: Commercial High-Efficiency Heating Program

Item	2009 Budget	2010 Budget
Internal Administration	\$20,000	\$20,000
External Administration	\$25,000	\$30,000
Rebates/Services	\$50,000	\$100,000
Internal Implementation	\$0	\$0
Marketing	\$40,800	\$45,000
Evaluation	\$40,000	\$35,000
Total	\$175,800	\$230,000
Goal	50 Incentives	100 Incentives

Table-XV: Commercial High-Efficiency Heating Program Incentive Qualifications

Product	Rating	Incentive
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.

Table-XVI: Building Practices and Technology Demonstration		
Item	2009 Budget	2010 Budget
Internal Administration	\$25,000	\$25,000
External Administration	\$20,000	\$20,000
Rebates/Services	\$60,000	\$168,750
Internal Implementation	\$0	\$0
Marketing	\$10,000	\$10,000
Evaluation	\$20,000	\$25,000
Total	\$135,000	\$248,750
Goal	2 participants	3 participants

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-XVII: Business Energy Analyzer Program		
Item	2009 Budget	2010 Budget
Internal Administration	\$5,000	\$5,000
External Administration	\$1,500	\$1,775
Rebates/Services	\$15,000	\$15,000
Internal Implementation	\$0	\$0
Marketing	\$3,000	\$3,000
Evaluation	\$0	\$0
Total	\$24,500	\$24,775
Goal	50 level 1 users	50 level 1 users

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) 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 25 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.

VI. EVALUATION AND REPORTING

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 Program³.
- 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.

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.

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. 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 October 15, 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.

³ 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™.

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, 2010 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 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'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%.

Exhibit A: Projected Program Expenses
National Grid Gas Energy Efficiency Preliminary Budget
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
Residential									
Low Income	Low Income	\$ 72,659	\$ 103,783	\$ 371,464	\$ 24,255	\$ 12,096	\$ 6,229	\$ 590,486	214
Residential Weatherization	Residential Weatherization	\$ 4,940	\$ 7,763	\$ 42,344	\$ -	\$ 30,981	\$ 3,529	\$ 89,557	45
Residential Weatherization	ES Windows	\$ 4,026	\$ 6,327	\$ 30,000	\$ -	\$ 19,778	\$ 2,876	\$ 63,007	300
Residential Weatherization	Residential Conservation Services	\$ 8,898	\$ 13,983	\$ 141,377	\$ -	\$ 38,845	\$ 6,355	\$ 209,458	300
Residential High-Efficiency Heating, Water-Heating, Controls	Residential High-Efficiency Heating	\$ 18,893	\$ 6,781	\$ 157,833	\$ -	\$ 122,216	\$ 13,463	\$ 319,187	404
Residential High-Efficiency Heating, Water-Heating, Controls	Residential Water Heating	\$ 3,832	\$ 1,377	\$ 49,951	\$ -	\$ 13,560	\$ 1,839	\$ 70,559	131
Residential High-Efficiency Heating, Water-Heating, Controls	Advanced Residential Controls	\$ 1,860	\$ 667	\$ 18,589	\$ -	\$ 7,146	\$ 1,327	\$ 29,589	212
ES Homes	ES Homes	\$ 12,753	\$ 20,040	\$ 79,310	\$ -	\$ 32,472	\$ 6,609	\$ 151,184	27
Energy Audit/Home Performance	Res Energy Analysis: Internet Audit	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	0
Res Building Practices and Demo	Res Building Practices and Demo	\$ 3,352	\$ 5,267	\$ 28,727	\$ -	\$ 8,140	\$ 2,394	\$ 47,880	15
Residential Total	Residential Total	\$ 131,213	\$ 165,988	\$ 919,595	\$ 24,255	\$ 285,233	\$ 44,622	\$ 1,570,906	1,648
Commercial & Industrial									
Commercial Energy Efficiency	Com Energy Efficiency Program	\$ 57,000	\$ 85,000	\$ 328,000	\$ -	\$ 52,500	\$ 50,000	\$ 572,500	120
Commercial Energy Efficiency	Economic Redevelopment	\$ 30,000	\$ 7,100	\$ 303,750	\$ -	\$ 15,000	\$ 14,000	\$ 369,850	4
Commercial Energy Efficiency	Multifamily Housing Program	\$ 32,000	\$ 30,000	\$ 49,500	\$ -	\$ 20,000	\$ 14,000	\$ 145,500	10
Comm High Efficiency Heating	Com High Efficiency Heating	\$ 20,000	\$ 25,000	\$ 50,000	\$ -	\$ 40,800	\$ 40,000	\$ 175,800	50
Comm Building Practices and Demo	Com Building Practices and Demo	\$ 25,000	\$ 20,000	\$ 60,000	\$ -	\$ 10,000	\$ 20,000	\$ 135,000	2
Com Energy Analysis: Internet Audit	Com Energy Analysis: Internet Audit	\$ 5,000	\$ 1,500	\$ 15,000	\$ -	\$ 3,000	\$ -	\$ 24,500	50
Commercial & Industrial Total	Commercial & Industrial Total	\$ 169,000	\$ 168,600	\$ 806,250	\$ -	\$ 141,300	\$ 138,000	\$ 1,423,150	236
Grand Total		\$ 300,213	\$ 334,588	\$ 1,725,845	\$ 24,255	\$ 426,533	\$ 182,622	\$ 2,994,056	1,884

Exhibit A: Projected Program Expenses
National Grid Gas Energy Efficiency Preliminary Budget
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
Residential									
Low Income	Low Income	\$ 108,988	\$ 155,674	\$ 557,196	\$ 36,382	\$ 18,144	\$ 9,344	\$ 885,728	274
Residential Weatherization	Residential Weatherization	\$ 6,587	\$ 10,351	\$ 56,459	\$ -	\$ 41,308	\$ 4,705	\$ 119,410	60
Residential Weatherization	ES Windows	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	0
Residential Weatherization	Residential Conservation Services	\$ 15,347	\$ 24,118	\$ 243,850	\$ -	\$ 67,002	\$ 10,962	\$ 361,279	600
Residential High-Efficiency Heating, Water-Heating, Controls	Residential High-Efficiency Heating	\$ 28,200	\$ 10,120	\$ 254,000	\$ -	\$ 164,600	\$ 19,880	\$ 476,800	551
Residential High-Efficiency Heating, Water-Heating, Controls	Residential Water Heating	\$ 5,720	\$ 2,055	\$ 77,730	\$ -	\$ 17,180	\$ 2,715	\$ 105,400	257
Residential High-Efficiency Heating, Water-Heating, Controls	Advanced Residential Controls	\$ 2,775	\$ 995	\$ 29,570	\$ -	\$ 8,900	\$ 1,960	\$ 44,200	704
ES Homes	ES Homes	\$ 15,529	\$ 24,402	\$ 163,103	\$ -	\$ 36,213	\$ 13,592	\$ 252,839	38
Energy Audit/Home Performance	Res Energy Analysis: Internet Audit	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	0
Res Building Practices and Demo	Res Building Practices and Demo	\$ 4,357	\$ 6,847	\$ 37,346	\$ -	\$ 10,581	\$ 3,112	\$ 62,243	20
Residential Total	Residential Total	\$ 187,503	\$ 234,562	\$ 1,419,254	\$ 36,382	\$ 363,928	\$ 66,270	\$ 2,307,899	2,504
Commercial & Industrial									
Commercial Energy Efficiency	Com Energy Efficiency Program	\$ 62,000	\$ 85,000	\$ 566,000	\$ -	\$ 62,500	\$ 50,000	\$ 825,500	200
Commercial Energy Efficiency	Economic Redevelopment	\$ 30,000	\$ 8,000	\$ 270,000	\$ -	\$ 20,000	\$ 10,000	\$ 338,000	8
Commercial Energy Efficiency	Multifamily Housing Program	\$ 32,000	\$ 33,000	\$ 84,375	\$ -	\$ 30,000	\$ 10,000	\$ 189,375	15
Comm High Efficiency Heating	Com High Efficiency Heating	\$ 20,000	\$ 30,000	\$ 100,000	\$ -	\$ 45,000	\$ 35,000	\$ 230,000	100
Comm Building Practices and Demo	Com Building Practices and Demo	\$ 25,000	\$ 20,000	\$ 168,750	\$ -	\$ 10,000	\$ 25,000	\$ 248,750	3
Com Energy Analysis: Internet Audit	Com Energy Analysis: Internet Audit	\$ 5,000	\$ 1,775	\$ 15,000	\$ -	\$ 3,000	\$ -	\$ 24,775	50
Commercial & Industrial Total	Commercial & Industrial Total	\$ 174,000	\$ 177,775	\$ 1,204,125	\$ -	\$ 170,500	\$ 130,000	\$ 1,836,400	376
Grand Total		\$ 361,503	\$ 412,337	\$ 2,623,379	\$ 36,382	\$ 534,428	\$ 196,270	\$ 4,164,299	2,880

Exhibit B: Benefit Cost Analysis

National Grid 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					NPV of Benefits			TRC BCR	
		Administration	Rebates/ Services	Evaluation	Participant Cost	Incentive	Total Cost	Electric	Non-Electric		Total Benefits
Residential		\$ 1,405,411	\$ 2,298,028	\$ 108,986	\$ 929,793	\$ 409,728	\$ 5,151,946	\$ 342,674	\$ 8,841,548	\$ 9,184,222	1.78
	Low Income	\$ 522,801	\$ 912,634	\$ 15,304	\$ -	\$ -	\$ 1,450,739	\$ -	\$ 3,153,997	\$ 3,153,997	2.17
	Residential Weatherization	\$ 295,517	\$ 505,393	\$ 27,976	\$ 81,502	\$ -	\$ 910,387	\$ 96,848	\$ 893,526	\$ 990,174	1.09
	Residential High-Efficiency Heating, Water-Heating, Controls Program	\$ 409,958	\$ 577,281	\$ 40,479	\$ 828,746	\$ -	\$ 1,856,464	\$ 153,624	\$ 4,455,528	\$ 4,609,151	2.48
	ES Homes	\$ 139,219	\$ 237,722	\$ 19,810	\$ 19,545	\$ -	\$ 416,296	\$ 92,202	\$ 338,697	\$ 430,899	1.04
	Energy Audit/Home Performance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	NA
	Res Building Practices and Demc	\$ 37,917	\$ 64,999	\$ 5,416	\$ -	\$ -	\$ 108,333	\$ -	\$ -	\$ -	NA
Commercial & Industrial		\$ 986,153	\$ 1,975,742	\$ 264,261	\$ 3,697,118	\$ 598,171	\$ 7,521,445	\$ -	\$ 21,574,366	\$ 21,574,366	2.87
	Commercial Energy Efficiency	\$ 680,674	\$ 1,575,153	\$ 145,987	\$ 3,229,020	\$ -	\$ 5,630,834	\$ -	\$ 17,328,914	\$ 17,328,914	3.08
	Comm High Efficiency Heating	\$ 178,068	\$ 147,124	\$ 73,993	\$ 293,071	\$ -	\$ 692,255	\$ -	\$ 2,557,046	\$ 2,557,046	3.69
	Comm Building Practices and Demc	\$ 108,418	\$ 223,896	\$ 44,281	\$ 175,027	\$ -	\$ 551,622	\$ -	\$ 1,688,406	\$ 1,688,406	3.06
	Com Energy Analysis: Internet Audi	\$ 18,994	\$ 29,569	\$ -	\$ -	\$ -	\$ 48,562	\$ -	\$ -	\$ -	NA
Grand Total		\$ 2,391,564	\$ 4,273,770	\$ 373,247	\$ 4,626,911	\$ 1,007,899	\$ 12,673,391	\$ 342,674	\$ 30,415,914	\$ 30,758,588	2.43

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

Sector	BCR Activity	Program Year 2009						Total Benefits	Sector Benefit/Cost	Sector Benefit/Cost less Incentive	Participants	Annual MMBTU Savings	Lifetime MMBTU Savings
		Administration	Rebates/ Services	Evaluation	Participant Cost	Incentive	Total Cost						
Residential		\$ 606,689	\$ 919,595	\$ 44,622	\$ 377,704	\$ 155,889	\$ 2,104,499	\$ 3,858,330	1.83	1.98	1,648	20,387	385,623
	Low Income	\$ 212,793	\$ 371,464	\$ 6,229	\$ -	\$ -	\$ 590,486	\$ 1,371,652			214	7,242	144,835
	Residential Weatherization	\$ 135,541	\$ 213,721	\$ 12,760	\$ 50,325	\$ -	\$ 412,347	\$ 565,740			645	2,346	50,370
	Residential High-Efficiency Heating, Water-Heating, Controls Program	\$ 176,331	\$ 226,373	\$ 16,630	\$ 319,122	\$ -	\$ 738,456	\$ 1,744,704			747	10,171	174,711
	ES Homes	\$ 65,265	\$ 79,310	\$ 6,609	\$ 8,258	\$ -	\$ 159,442	\$ 176,234			27	628	15,707
	Energy Audit/Home Performance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -			0	0	0
	Res Building Practices and Demc	\$ 16,759	\$ 28,727	\$ 2,394	\$ -	\$ -	\$ 47,880	\$ -			15	0	0
Commercial & Industrial		\$ 478,900	\$ 806,250	\$ 138,000	\$ 1,384,590	\$ 224,619	\$ 3,032,359	\$ 7,821,274	2.58	2.79	236	56,862	877,824
	Commercial Energy Efficiency	\$ 328,600	\$ 681,250	\$ 78,000	\$ 1,213,750	\$ -	\$ 2,301,600	\$ 6,305,393			134	46,889	703,332
	Comm High Efficiency Heating	\$ 85,800	\$ 50,000	\$ 40,000	\$ 99,600	\$ -	\$ 275,400	\$ 671,409			50	4,980	99,600
	Comm Building Practices and Demc	\$ 55,000	\$ 60,000	\$ 20,000	\$ 71,240	\$ -	\$ 206,240	\$ 844,472			2	4,993	74,892
	Com Energy Analysis: Internet Audi	\$ 9,500	\$ 15,000	\$ -	\$ -	\$ -	\$ 24,500	\$ -			50	0	0
Grand Total		\$ 1,085,589	\$ 1,725,845	\$ 182,622	\$ 1,762,294	\$ 380,508	\$ 5,136,858	\$ 11,679,604	2.27	2.46	1,884	77,249	1,263,447

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

Sector	BCR Activity	Program Year 2010						Total Benefits	Sector Benefit/Cost	Sector Benefit/Cost less Incentive	Participants	Annual MMBTU Savings	Lifetime MMBTU Savings
		Administration	Rebates/ Services	Evaluation	Participant Cost	Incentive	Total Cost						
Residential		\$ 822,375	\$ 1,419,254	\$ 66,270	\$ 568,438	\$ 230,107	\$ 3,106,444	\$ 5,325,893	1.71	1.85	2,504	29,975	534,766
	Low Income	\$ 319,188	\$ 557,196	\$ 9,344	\$ -	\$ -	\$ 885,728	\$ 1,782,345			274	9,272	185,443
	Residential Weatherization	\$ 164,713	\$ 300,309	\$ 15,667	\$ 32,100	\$ -	\$ 512,789	\$ 424,434			660	2,208	44,160
	Residential High-Efficiency Heating, Water-Heating, Controls Program	\$ 240,545	\$ 361,300	\$ 24,553	\$ 524,716	\$ -	\$ 1,151,116	\$ 2,864,448			1,512	17,610	283,057
	ES Homes	\$ 76,144	\$ 163,103	\$ 13,592	\$ 11,622	\$ -	\$ 264,461	\$ 254,665			38	884	22,106
	Energy Audit/Home Performance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -			0	0	0
	Res Building Practices and Demc	\$ 21,785	\$ 37,346	\$ 3,112	\$ -	\$ -	\$ 62,243	\$ -			20	0	0
Commercial & Industrial		\$ 522,275	\$ 1,204,125	\$ 130,000	\$ 2,381,010	\$ 338,993	\$ 4,576,403	\$ 13,753,092	3.01	3.25	376	98,627	1,529,202
	Commercial Energy Efficiency	\$ 362,500	\$ 920,375	\$ 70,000	\$ 2,074,950	\$ -	\$ 3,427,825	\$ 11,023,521			223	81,178	1,217,664
	Comm High Efficiency Heating	\$ 95,000	\$ 100,000	\$ 35,000	\$ 199,200	\$ -	\$ 429,200	\$ 1,212,574			100	9,960	199,200
	Comm Building Practices and Demc	\$ 55,000	\$ 168,750	\$ 25,000	\$ 106,860	\$ -	\$ 355,610	\$ 1,016,997			3	7,489	112,338
	Com Energy Analysis: Internet Audi	\$ 9,775	\$ 15,000	\$ -	\$ -	\$ -	\$ 24,775	\$ -			50	0	0
Grand Total		\$ 1,344,650	\$ 2,623,379	\$ 196,270	\$ 2,949,448	\$ 569,100	\$ 7,682,847	\$ 19,078,984	2.48	2.68	2,880	128,601	2,063,968

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, http://www.eere.energy.gov/buildings/appliance_standards/residential/furnace_boiler_draft_analysis.html .	11.4 MMBTUs	91% AFUE data from Appliances and Commercial Equipment standards. http://www.eere.energy.gov/buildings/appliance_standards/residential/furnace_boiler_draft_analysis.html .
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

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.	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 Homes program.
Energy Star Homes	Multi-Family	25		\$964		15.0 MMBtus	
Residential Weatherization Program	Insulation and 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	\$2,140	Average rebate in 2008 through August was \$428 when the program paid 20% of the incremental cost. $\$428/.2=\2140	36.8 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.
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	\$2,987	Estimated cost based on previous years (\$2440) 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."

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 Btuh 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)						
High-Efficiency Heating and Water-Heating	Infrared Heaters (Low intensity)	17	Measure life based on GDS Gas Potential Study for Utah (2004); NYSERDA 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.; NYSERDA 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 NYSERDA's Con Edison Gas Efficiency Program" reported in August 2005. Savings 408 MMBTUs per million Btuh of input capacity. Base efficiency from ASHRAE 90.1-2001 (Assumes standard gas unit heater 80% comb eff.); NYSERDA Deemed Savings Database; Program Name: Smart Equipment Choices; Measure Name: A.INFR-UNIT-HEATER.____CI.____N

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 Steam Boiler 82% AFUE (up to 300 MBH)	25	Efficiency Vermont Technical Reference Manual User; NYSERDA Deemed Savings Database; Program Name: Smart Equipment Choices; Measure Name: H.STEAM-BOILER-GAS.<300000.CI.___N	\$3,552	DEER; NYSERDA 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%; NYSERDA 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%
High-Efficiency Heating and Water-Heating	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%
High-Efficiency Heating and Water-Heating	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%
High-Efficiency Heating and Water-Heating	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%

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 (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%
High-Efficiency Heating and Water-Heating	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%
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.	120.0	Average savings per participant for MA projects completed between May 2007-Oct 2008 increased to account for expected higher savings per participant due to targeting centrally heated buildings for controls
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.	300.0	Based on average savings per participant for MA projects completed between May 2007-Oct 2008 adjusted for the addition of new steam measures
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	2,422.2	Average savings per participant for MA projects completed between May 2007-Oct 2008
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	2,496.4	Average savings per participant for MA projects completed between May 2007-Oct 2008

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	2.58
2. Threshold Benefit/Cost Ratio	1.00
3. Target lifetime MMBTU	877,824
4. Threshold MMBTU	570,586
5. Budget	\$3,032,359
6. CE Percentage	4.00%
7. Lifetime kWh Percentage	4.00%
8. Target C/I Incentive	\$242,589
9. Cap	\$363,883

Residential Incentive

10. Target Benefit/Cost Ratio	1.83
11. Threshold Benefit/Cost Ratio	1.00
12. Target lifetime MMBTU	385,623
13. Threshold MMBTU	250,655
14. Budget	\$2,104,499
15. CE Percentage	4.00%
16. Lifetime kWh Percentage	4.00%
17. Target Residential Incentive	\$168,360
18. Cap	\$252,540
19. TOTAL TARGET INCENTIVE	\$410,949

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

	<u>Planned</u>
Commercial & Industrial:	
1. Benefits (Value) From Eligible Programs	\$7,821,274
2. Implementation Expenses	\$1,285,150
3. Customer Contribution	\$1,384,590
4. Evaluation Expense	\$138,000
5. Total Costs Excluding Shareholder Incentive	\$2,807,740
6. Benefit/Cost Ratio - C&I Sector	2.79
7. Implementation Plus Evaluation Expense - C&I Sector	\$1,423,150
Residential:	
8. Benefits (Value) From Eligible Programs	\$3,858,330
9. Implementation Expenses	\$1,526,284
10. Customer Contribution	\$377,704
11. Evaluation Expense	\$44,622
12. Total Costs Excluding Shareholder Incentive	\$1,948,610
13. Benefit/Cost Ratio - Residential Sector	1.98
14. Implementation Plus Evaluation Expense - Residential Sector	\$1,570,906

Line No. Notes:

1 - 4 and 8-11. See Exhibit B.

5. Sum of lines 2-4.

6. Line 1 divided by line 5. 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 recalculated the planned BCR excluding the shareholder incentive and will compare the actual BCR excluding the shareholder incentive to the planned BCR excluding shareholder incentives when determining the earned incentive.

7. Sum of lines 2 and 4. These are the C&I sector funds on which the Company may calculate its earned shareholder incentive.

12. Sum of lines 9 - 11.

13. Line 8 divided by line 12. 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 recalculated the planned benefit/cost ratio excluding the shareholder incentive and will compare the actual benefit/cost ratio excluding the shareholder incentive to the planned benefit/cost ratio excluding shareholder incentives when determining the earned shareholder incentive.

14. Sum of lines 9 and 11. 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	3.01
2. Threshold Benefit/Cost Ratio	1.00
3. Target lifetime MMBTU	1,529,202
4. Threshold MMBTU	993,981
5. Budget	\$4,576,403
6. CE Percentage	4.00%
7. Lifetime kWh Percentage	4.00%
8. Target C/I Incentive	\$366,112
9. Cap	\$549,168

Residential Incentive

10. Target Benefit/Cost Ratio	1.71
11. Threshold Benefit/Cost Ratio	1.00
12. Target lifetime MMBTU	534,766
13. Threshold MMBTU	347,598
14. Budget	\$3,106,444
15. CE Percentage	4.00%
16. Lifetime kWh Percentage	4.00%
17. Target Residential Incentive	\$248,516
18. Cap	\$372,773
19. TOTAL TARGET INCENTIVE	\$614,628

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 4 of 4

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

Commercial & Industrial:	<u>Planned</u>
1. Benefits (Value) From Eligible Programs	\$13,753,092
2. Implementation Expenses	\$1,726,400
3. Customer Contribution	\$2,381,010
4. Evaluation Expense	\$130,000
5. Total Costs Excluding Shareholder Incentive	\$4,237,410
6. Benefit/Cost Ratio - C&I Sector	3.25
7. Implementation Plus Evaluation Expense - C&I Sector	\$1,856,400
 Residential:	
8. Benefits (Value) From Eligible Programs	\$5,325,893
9. Implementation Expenses	\$2,241,629
10. Customer Contribution	\$568,438
11. Evaluation Expense	\$66,270
12. Total Costs Excluding Shareholder Incentive	\$2,876,337
13. Benefit/Cost Ratio - Residential Sector	1.85
14. Implementation Plus Evaluation Expense - Residential Sector	\$2,307,899

Line No. Notes:

1 - 4 and 8-11. See Exhibit B.

5. Sum of lines 2-4.

6. Line 1 divided by line 5. 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 recalculated the planned BCR excluding the shareholder incentive and will compare the actual BCR excluding the shareholder incentive to the planned BCR excluding shareholder incentives when determining the earned incentive.

7. Sum of lines 2 and 4. These are the C&I sector funds on which the Company may calculate its earned shareholder incentive.

12. Sum of lines 9 - 11.

13. Line 8 divided by line 12. 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 recalculated the planned benefit/cost ratio excluding the shareholder incentive and will compare the actual benefit/cost ratio excluding the shareholder incentive to the planned benefit/cost ratio excluding shareholder incentives when determining the earned shareholder incentive.

14. Sum of lines 9 and 11. These are the Residential sector funds on which the Company may calculate its earned shareholder incentive.