# KeySpan Energy Delivery
# New England

## Demand-Side Management and Market Transformation Plan, 2002 to 2007

## Report on Program Details
## to the
## Department of Telecommunications and Energy

**April 11, 2003**

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# I. Forward

The following document is a report to the Massachusetts Department of Telecommunications and Energy ("DTE") of KeySpan Energy Delivery New England's (the "Company") plans for the period beginning May 1, 2003 through April 30, 2004[1]. This is Program Year Two of the second Demand-Side Management/Market Transformation five-year plan ("DSM/MT Plan" or "Plan"). The proposed annual budget for the Company's DSM/MT efforts is $12,000,000 per year. Exhibit-1 displays the breakdown of proposed budgetary components for program year two, to begin May 1, 2003 and conclude on April 30, 2004.

[1] The regulated gas companies that operate under the name of KeySpan Energy Delivery New England are Boston Gas Company, Colonial Gas Company and Essex Gas Company in Massachusetts and Energy North Natural Gas, Inc. in New Hampshire. This report is limited to the Company's program in Masschusetts.

## II. History of DSM/MT at the Company

On April 30, 2002, the original Boston Gas five-year market transformation plan expired. On March 15, 2002, the Company filed its second five-year plan for the period commencing May 1, 2002 and ending April 30, 2007. On June 30, 2002, this plan was approved by the DTE[2].

Since 1997, the Company has been recognized nationally as a leader in market transformation and energy efficiency. Some of the Company's major accomplishments in energy efficiency include:

- Becoming the first Massachusetts utility, gas or electric, to base its performance on the success in moving the marketplace to higher efficiency levels through its energy efficiency programs.
- Launching over 20 new energy efficiency initiatives.
- Investing over $42,000,000 in DSM/MT efforts.
- Serving over 100,000+ Massachusetts natural gas customers, including:
  - 92,000+ Residential, non-Low Income
  - 3,500+ Commercial
  - 6,500+ Low Income
- Undertaking baseline measurements of the residential, commercial and industrial ("C&I") heating markets and the residential new construction market and developing, for the first time nationally, indicators of market change for market transformation programs. These methods were featured in a session at the 9th Annual National Energy Services Conference in 1999.
- Becoming the first utility to offer a high efficiency heating equipment program in Massachusetts which has since been used as a model for a national program sponsored by the Consortium for Energy Efficiency ("CEE").
- Being instrumental in founding GasNetworks™ (www.gasnetworks.com), a collaborative of Massachusetts natural gas utilities. GasNetworks™ has played a significant role in sponsoring regional natural gas energy efficiency initiatives.
- Becoming the first New England utility, gas or electric, to join and support the Efficient Windows Collaborative, helping to promote energy efficient window products.
- Being actively involved in regional market transformation efforts including active participation in many regional and national energy efficiency organizations including:
  - GasNetworks™ to develop regional gas DSM/MT initiatives.
  - The Northeast Energy Efficiency Partnerships ("NEEP") to develop joint gas and electric initiatives.

[2] KeySpan Energy Delivery New England, D.T.E. 02-31

- CEE to develop national gas energy efficiency initiatives.
- Association of Energy Services Professionals ("AESP") to develop skills of energy efficiency professionals.
- The Massachusetts Board of Building Regulations and Standards ("BBRS") to develop energy code training.
- The Joint Management Committee ("JMC") to develop the ENERGY STAR® Homes initiative.
- A regional collaborative developing a C&I operations and maintenance ("O&M") practices training program.

## III. Objective of Market Transformation

The objective of the Company's market transformation effort is to encourage the most efficient use of energy, especially natural gas, wherever practical. To achieve this objective, the Company will plan, develop, implement and evaluate targeted initiatives to overcome market barriers, modify energy decision-making processes, increase the availability of energy efficient products, and reduce the first cost of energy efficiency. In addition, the Company will concentrate its efforts on market segments where not only are the gas efficiency barriers significant, but where investment yields other public benefits. Examples of efforts that yield other public benefits are the Company's Residential Low Income program and the Economic Redevelopment program.

## IV. Overview of DSM/MT Programs

This report discusses plans for the upcoming year, including modifications to the programs and budgets. These proposed changes are based on the experience gained by the Company in the first year of the second five year plan, as well as during the previous five year DSM/MT plan, May 1, 1997 to April 30, 2002, and discussions with the Non-Utility Parties[3]. Regional initiatives and collaborative groups also have influenced this proposal for Program Year Two. Many of the programs described are a continuation of programs in operation. In addition, the report discusses the progress of several new program initiatives the Company added in its second five year DSM/MT plan. Overall, the Company has developed programs that address a wide variety of energy efficiency opportunities for natural gas customers.

[3] The Non-Utility Parties include the Massachusetts Division of Energy Resources, the Northeast Energy Efficiency Council, Action, Inc., the Massachusetts Community Action Association, and the Massachusetts Energy Directors Association. The Office of the Attorney General, although not a signatory to the 2002 settlement, is regulary informed of all progams and invited to participate in all discussions between the Company and the Non-Utiltiy Parties.

Table-i summarizes the proposed DSM/MT program offerings of the Company.

| Table-i Proposed DSM/MT Programs | |
|---|---|
| **Residential Market** | |
| High-Efficiency Heating Equipment Program | $400 rebates for high-efficiency boilers (85% AFUE), $200 rebates for steam boilers (82% AFUE). $100 rebates for high efficiency furnaces (92% AFUE). |
| High Efficiency Water Heating Program | $100 rebate for high-efficiency water heaters, stand-alone or indirect-fired models connected to a new gas heating system (minimum EF of .61).[4] |
| ENERGY STAR® Clock Thermostat Program | $25 rebate each for up to two ENERGY STAR® labeled programmable setback thermostats. |
| ENERGY STAR® Homes Program | Free building plans review and certification for new ENERGY STAR® residential construction ($75 fee refunded upon certification). |
| ENERGY STAR® Windows Program | $0.50 per square foot rebate, up to $500, for qualifying ENERGY STAR® labeled windows (U-factor of .35 or less). |
| Residential Weatherization Program | Rebate of 20% of installed cost of qualifying insulation and weatherization measures installed by participating contractors up to $750. |
| 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). |
| Residential Conservation Services Program | State mandated program to provide recommendations and technical assistance for installation of energy saving measures. |
| Energy Analysis: Internet Audit Program | Free online energy analysis service that makes energy efficiency customized recommendations based on a customer's energy consumption profile. |
| **Multifamily and Commercial & Industrial Markets** | |
| C&I High Efficiency Heating Equipment Program | Rebates up to $6,000 for high efficiency furnaces (92% AFUE), boilers (85% thermal efficiency) or steam boilers (82% thermal efficiency). |
| Multifamily Housing Program | Rebate of $0.75 per first year estimated therm savings, up to 50% of project's 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. |
| Commercial Energy Efficiency Program | Co-funding for Energy Auditing or Engineering Services; Prescriptive and custom incentives for more sophisticated systems and controls up to $100,000. |
| Building Practices & Demonstration Program | Participate in funding for demonstration projects that apply to new or underutilized technologies. |
| Multifamily and C&I Load Management Pilot Program | Establishment of load management procedures, processes, or technologies as they apply to the natural gas industry. |
| Economic Redevelopment | Matching grants up to $100,000 for energy saving measures in commercial properties in designated Economic Redevelopment areas. |
| **Codes Training Outreach etc.** | |
| Trade Ally Training and Codes & Standards | Provide information and training on energy efficiency issues to plumbing & heating contractors, realtors, appraisers, and others. |
| Building Operator Certification | Energy management training sessions targeted to individuals responsible for the maintenance and operation of equipment and systems in commercial buildings, industrial plants, and public facilities. |

[4] Due to Energy Code revisions scheduled for January 1, 2004, this program may be phased out.

During the Year Five plan, the Company will build upon this portfolio of programs by:

- Continuing to manage existing programs cost-effectively.
- Identifying and developing new, cost-effective programs.
- Integrating discrete initiatives to more comprehensively address energy markets and barriers to energy efficiency.

The DSM/MT 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.

# V. Residential Programs

## V.-A Residential High Efficiency Heating Program

The Company's Residential High Efficiency Heating program is jointly operated with GasNetworks™ and is available to the Company's residential heating customer base. Program goals include:

- Increasing market sector awareness of high efficiency gas heating equipment.
- Providing training to trade allies such as plumbing and heating contractors.
- Increasing customer knowledge of where to obtain high efficiency heating products.
- Monitoring customer perception of the performance and reliability of high efficiency gas heating equipment and the savings achieved.

The program will be promoted through a variety of means including multiple direct mail campaigns, bill inserts, trade ally events, sponsorships and contractor job site visits. Program brochures, builder packets and rebate applications will be the primary marketing material utilized. The program will also be promoted via the Company's Web site and the GasNetworks™ Web site; where consumers and contractors will have the opportunity to download program rebate applications, as well as learn about program announcements, updates, or changes.

Overall, a strong emphasis will be placed on working with builders and the contractors who install gas-heating equipment. Target markets for the program include both new construction and retrofit projects. The retrofit market is seen as the primary driver of high efficiency forced hot water and steam heating system opportunities, whereas the new construction market is seen as the primary driver for high efficiency furnaces.

The incentive for Program Year Two will be a rebate available to residential heating customers' (builders and/or homeowners) worth up to $500, depending on the type of heating equipment installed. This rebate encourages customers to choose a high efficiency model by offsetting a portion of the higher initial purchase cost of a high efficiency model versus a standard efficiency model. See Table-ii for a listing of eligible equipment under the program and their associated rebate level. The goal for Program Year Two will be 8,000 rebates.

| Table-ii Residential High Efficiency Heating Program: Rebate Table | | | |
|---|---|---|---|
| Product | Rating | Current Rebate | Proposed Rebate |
| Furnaces (forced hot air) | AFUE* 90% or greater | $200 Rebate | $100 Rebate<br>Minimum Rating increase to AFUE* 90% or greater |
| Boilers (forced hot water) | AFUE* 85% or greater | $500 Rebate | $400 Rebate |
| Boilers (steam with electronic ignition) | AFUE* 82% or greater | $400 Rebate | $200 Rebate |
| * AFUE = Annual Fuel Utilization Efficiency | | | |

The Company has been successful in increasing the penetration of high efficiency furnaces in prior years of operating the Residential High Efficiency Heating program. In fact, approximately 70% of all rebates processed under the program in past years have been for high efficiency furnaces. In addition, Massachusetts distributor data analyzed from the Gas Appliance Manufacturing Association ("GAMA") has shown that high efficiency furnace shipments have increased from 47% market share in 1998 to approximately 62% in 2000. An analysis of years 2001 and 2002 is currently planned to measure the distribution change since year 2000. As a result of this success and in an effort to allocate more resources to the forced hot water and steam market, the Company and GasNetworks™ have reduced the current rebate level for high efficiency furnaces from $300 to $200. Additionally, for high efficiency forced hot water boilers, the Company proposes a decrease from $500 to $400 because of positive market effects. The Company proposes to GasNetworks™ that the rebate level for high efficiency forced hot air furnaces be reduced to $100, and steam boilers be reduced to $200. Also, we will conduct studies jointly with GasNetworks™ to determine the impact of raising the level of efficiency to qualify for a high efficiency forced hot air furnace from 90% to 92% with potential implementation of that standard for the next heating season.

The Company and GasNetworks™ are currently evaluating emerging technologies to improve the overall system efficiency of HVAC systems. One technology in particular, multi-speed furnace motors, has been evaluated in a research project led by Dr. Harvey M. Sachs. The research project looked at furnace motors and fan systems on residential furnaces and heat pumps, and measuring the energy consumption, efficiency gains, and overall savings potential of the technology. Measuring energy use by furnace fans appears to indicate, according to Dr. Sachs, a substantial opportunity for improving fan energy efficiency in residential air handler

motors and fans. As a result of the study, the Company and GasNetworks™ will promote this technology as part of the overall high efficiency heating program enhancement. Additionally, GasNetworks™ is reaching out to regional electric utilities to assess their interest in participating in this initiative.

Table-iii depicts the Residential High Efficiency Heating program budget and rebate goal.

| **Table-iii** | **Residential High Efficiency Heating Program** |
|---|---|
| **Item** | **Budget** |
| Rebates | $1,920,000 |
| Vendor Admin | $155,658 |
| Company Admin | $47,000 |
| Communication | $8,000 |
| Evaluation & Reporting | $ 10,000 |
| **Total** | $ 2,140,658 |
| | |
| **Goal** | **4,000 HE Furnace Rebates**<br>**2,400 FHW Boiler Rebates**<br>**1,600 Steam Boiler Rebates** |

### V.-B Residential High Efficiency Water Heating Program

The Company's Residential High Efficiency Water Heating program is jointly operated with GasNetworks™ and is available to the Company's residential water heating customers. Similar to the Company's Residential High Efficiency Heating program, program goals include:

- Increasing the demand for residential high efficiency natural gas water heaters.
- Increasing customer and trade ally awareness of the benefits of high efficiency natural gas water heaters.
- Providing training to trade allies such as plumbing and heating contractors.
- Increasing customer knowledge of where to obtain high efficiency water-heating products.
- Monitoring customer perception of the performance and reliability of high efficiency gas water heating equipment and the savings achieved.

In Year Two, program marketing will consist of direct mail campaigns and outreach to contractors and builders, bill inserts to residential customers at seasonal intervals, attendance at trade ally training events, radio, and promotion via the Company and the GasNetworks™, Web sites. While direct customer marketing will generate a portion of the leads for this program, a significant emphasis will be placed on meeting with heating and plumbing contractors at trade shows, training sessions, and job sites to encourage contractors to influence consumer purchasing behavior toward this type of product.

The program incentive is a $100 rebate to residential water heating customers who install high efficiency natural gas water heaters with a minimum Energy Factor ("EF") rating of .61 or indirect fired water heaters connected to a high efficiency boiler. The minimum EF was selected after researching the current natural gas water heating equipment market. The existing minimum federal standard is an EF rating of .54 for a 40-gallon natural gas water heater. However, the DOE has approved an increase on the required minimum EF to approximately .59 for a 40-gallon natural gas water heater. This new standard will officially take effect in January 2004.

Because of the change in the federal minimum EF standard, the Company, in conjunction with GasNetworks™, is conducting a market evaluation study for water heaters to determine next steps in program evolution. The study is currently going on and final results should be available by summer of 2003. If the study determines that due to the increase in minimum energy standards for water heaters, the program does not meet cost effectiveness tests it will be discontinued and a program may be designed for indirect fired water heaters only.

Table-iv depicts the Residential High Efficiency Water Heating program budget and rebate goal.

| **Table-iv** | **Residential High Efficiency Water Heating Program** |
|---|---|
| **Item** | **Budget** |
| Rebates | $70,000 |
| Vendor Admin | $15,000 |
| Company Admin | $ 15,000 |
| Communication | $ 8,000 |
| Evaluation & Research | $ 5,000 |
| **Total** | **$113,000** |
| | |
| **Goal** | **700 Rebates** |

### V.-C ENERGY STAR® Clock Thermostat Program

The ENERGY STAR® Clock Thermostat program will provide a rebate for the purchase and installation of up to two ENERGY STAR® labeled programmable thermostats per household. Approximately 150 thermostat models currently meet ENERGY STAR® guidelines. To be ENERGY STAR® labeled, programmable thermostats must have the following features:

- Separate weekday and weekend programs, each with up to four customized temperature settings: two for occupied and in-use periods and two for energy saving periods when the house is unoccupied or at night.
- An advanced recovery feature that can be programmed to reach desired temperature at a specific time in a way to minimize system "on" time and auxiliary heat use.
- Ability to maintain room temperature within 2 degrees (F) of the desired temperature.
- A hold feature that allows users to temporarily override automatic settings without deleting programs. (For example, programming can be adjusted to maximize savings during a vacation or extended absence.)

The Company plans to promote the program via bill inserts, Company newsletters, the Company's Web site and radio, as well as through Residential Conservation Services ("RCS") program auditors[5]. In addition, the Company has established an outreach program with retailers such as The Home Depot® and Lowe's®. This includes the training of the retailer's sales personnel regarding the rebate program and distributing program rebate forms at their stores within the Company's Massachusetts service territory.

Under this program, residential heating customers are eligible currently for a $50 mail-in rebate on the purchase and installation of up to two ENERGY STAR® qualified or equivalent programmable clock thermostats, upon proof of purchase. Eligible thermostats may be installed by heating contractors, energy auditors or homeowners. Instant rebates offered by contractors provide the Company assistance in promoting the thermostats and energy efficiency. In addition to mail-in rebates, instant rebates in the form of point-of-sale discounts are available through heating contractors and energy auditors.

In Program Year One, the Company evaluated research studies performed by other utilities and third-party sources on the cost effectiveness of clock thermostats. Debate surfaced in the previous program year on user habits of programmable thermostats and the impact it has on potential energy savings. The evaluation of the research studies supported that programmable clock thermostats are a significant source of energy savings.

[5] See V.-H; Residential Conservation Services Program

During Program Year Two, the Company plans to perform its own analysis of past program participation to determine the success of transforming the market. At the same time, the Company will reduce the programmable thermostat rebate to $25.

Along with other gas and electric utilities and their administrative vendor, the Company has initiated a thermostat-recycling program. When an energy auditor replaces a mercury-containing thermostat during an RCS Home Energy Assessment, the auditor will remove the old thermostat from the home. The mercury in these thermostats will be properly recycled. If the customer insists upon retaining possession of the mercury-containing thermostat, he/she will be required to sign a statement that he/she understands the importance of proper disposal of the mercury. Customers who have their thermostat installed by any other means will be informed of the importance of the safe disposal of mercury by means of an alert on the rebate application form. Through this initiative, the Company along with its administrative vendor hopes to reduce the amount of mercury in the waste-stream and environment.

Table-v depicts the ENERGY STAR® Clock Thermostat program budget and rebate goal.

**Table-v ENERGY STAR® Clock Thermostat Program**

| Item | Budget |
|---|---|
| Incentives | $62,500 |
| Vendor Admin | $35,000 |
| Company Admin | $57,000 |
| Communication | $15,000 |
| Evaluation & Research | $5,000 |
| **Total** | **$190,125** |
| | |
| **Goal** | **2,500 Rebates** |

### V.-D ENERGY STAR® Homes Program

The ENERGY STAR® Homes Program will offer incentives to consumers and contractors to assist in the building of homes that meet the national ENERGY STAR® Homes program energy efficiency standards. These will be available to residential single family and multifamily dwellings, townhouses and condominium developments. The objective of the program is to transform the residential new construction market towards making energy efficient homes the market standard. 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 some of the best building practices and technologies, including: increased insulation levels, high efficiency heating and air conditioning equipment, superior duct systems, and high performance windows.

Participants in the program will 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. Each home is performance tested by a third party energy conservation specialist to verify the quality of installed energy features. This involves conducting a blower-door test to measure overall building air leakage, and a ventilation test to verify airflow rates. Additionally, each home receives a complete plan evaluation, computer energy model, site inspections during construction, ongoing builder consultation and on-site training. All segments of the housing market are targeted in this program, including starter homes to upscale homes, single-family homes to large multi-family structures and multiple-lot subdivisions, and low-income housing such as Habitat for Humanity homes and HUD Section 8 apartment complexes.

The program is jointly managed through a consortium of Massachusetts and Rhode Island utilities, identified as the Joint Management Committee ("JMC"). Participating utilities in JMC share the cost of marketing activities as well as research efforts. In addition, the natural gas and electric utility provider in the specific territory of an ENERGY STAR® home being developed will share cost of rebating that homeowner and/or builder for the cost of the home becoming ENERGY STAR® certified.

Conservation Services Group, Inc. ("CSG") is the administrative vendor for the ENERGY STAR® homes program. CSG is responsible for the review and certification of each participating house to ensure it meets the ENERGY STAR® criteria.

In Program Year One, the Company, in conjunction with the JMC, developed and implemented the 2002 Energy Codes Pilot Initiative. The initiative was designed to:

- Increase residential new construction energy code compliance rates
- Demonstrate the value of home energy ratings (HERS) as a code compliance vehicle to builders and community officials
- Expand the experience base of home energy rating providers

The initiative was implemented in two municipalities, including Arlington, Massachusetts, which is located within the Company's service territory. To accomplish the goals of the pilot initiative, the pilot service was comprised of:

- An experienced energy specialist, knowledgeable in building science, was made available to each building department (14 hours per week) to provide supplemental residential energy code inspection services. In Arlington, this service was provided from September 2002 until December 2002.
- One formal training workshop on building science, energy code compliance issues, and the ENERGY STAR Homes program was conducted. This was held on October 10, 2002 in Arlington

For both municipalities, the pilot was very successful. One of the primary reasons for the pilot's success was supportive City Government and Building Department. For Program Year Two, the Company, along with the JMC, will conduct the 2003 Energy Codes Pilot with improvements based on their experience with the 2002 pilot.

Also, in Program Year One, the Company, in conjunction with the JMC, launched the Market Progress Evaluation of the program. The evaluation is currently in progress and shall continue into Program Year Two. The current study is based on a variety of evaluation activities, including:

- A survey of new home buyers in Massachusetts, including buyers of both ENERGY STAR® and non- ENERGY STAR® homes. (Home buyer survey)
- Focus groups conducted with ENERGY STAR® and non- ENERGY STAR® builders and subcontractors in Massachusetts (focus groups)
- Mystery shopping—some in person and some by telephone—with researchers posing as home buyers looking for energy-efficient homes in Massachusetts (mystery shopping)

- Depth interviews with ENERGY STAR® and non- ENERGY STAR® builders, HVAC contractors, heating and plumbing contractors and insulation contractors in Massachusetts (builder and contractor interviews)
- Depth interviews with multifamily decision makers in Massachusetts (multifamily interviews)
- Projections of penetrations of ENERGY STAR® homes in Massachusetts using the Delphi technique—an expert panel (Delphi Analysis)
- Estimates of the incremental costs for building an Energy Star home compared to the baseline non-Energy Star home in Massachusetts (Incremental costs)

Marketing activities for year two will consist of outreach to new homebuyers, with additional emphasis being placed on contact with builders and developers. Multiple seminars and training sessions specifically for builders, homebuyers, and realtors will be delivered throughout the year. A builder's brochure was redesigned to simplify the process for builders and contractors to participate in this program, and will be mailed to builders throughout the Company's service territory.

To achieve the Company's goals for Year Two, additional emphasis will be placed on direct outreach to builders and developers.

Table-vi depicts the ENERGY STAR® Homes program budget and participant goal.

**Table-vi ENERGY STAR® Homes Program**

| Item | Budget |
|---|---|
| Certifications | $100,000 |
| Vendor Admin | $94,000 |
| Company Admin | $31,000 |
| Communication | $15,000 |
| Evaluation & Research | $18,000 |
| **Total** | **$258,000** |
| | |
| **Goal** | **500 Participants** |

### V.-E ENERGY STAR® Windows Program

The ENERGY STAR® Windows program will provide a rebate for the installation of high efficiency windows in either new construction or existing residential structures. To receive a rebate, a participant must be a residential heating customer, the window(s) installed must carry the ENERGY STAR® label, and the window(s) installed must have a U-factor of .35 or less[6]. When applying for a rebate, the customer must send a rebate application that includes a dated sales receipt, or invoice for the purchase price, for the window(s) installed and a copy of the National Fenestration Rating Council ("NFRC") label(s) from the window(s) installed. To ensure that eligible equipment is installed properly, the first two installations per new contractor are inspected, and the Company will randomly inspect installations thereafter.

The Company will continue to promote the program using various methods, including Company newsletters, the Company Web site, bill inserts and radio. The Company has established an outreach program with retailers, The Home Depot® and Lowe's®, that includes training of their sales personnel regarding the Company's rebate program and supplying their stores within the Company's Massachusetts service territory with program rebate applications.

The customer incentive for purchasing and installing high efficiency windows is one dollar per square foot of window space up to a maximum of $500. Performance data from past years of program operation have shown that the majority of window rebates fall in the $200 or less range. In Program Year Two, a new initiative may be developed to encourage builders to increase the use of ENERGY STAR® Windows in new residential construction. This initiative could take one or both of the following forms:

- Providing an incentive to home-builders for using ENERGY STAR® Windows
- Partnering with ENERGY STAR® Windows manufacturers, such as Harvey Industries and Pella, to educate building and remodeling professionals to use ENERGY STAR® Windows in their jobs

During Program Year Two, the Company will reduce the rebate level for this program to $0.50 per square foot of window area due to positive market effects in previous program years. Also for Program Year Two, the Company will consider modification to the delivery of the

[6] U-Factor = Measurement of thermal conductivity. A lower U-factor indicates a higher level of window insulation.

program from customer-driven to contractor-driven. Currently, any residential heating customer who purchases ENERGY STAR® Windows can receive a rebate. The potential for sub-standard installations by do-it-yourself homeowners may have a negative impact on the energy savings that should be realized by installing ENERGY STAR® Windows. Several options for altering this delivery mechanism will be explored, including:

- Developing an approved contractor list, similar to the Company's Residential Weatherization Program [7]
- Participating in the NEEP initiative that will focus on educating retailers and contractors

Table-vii depicts the ENERGY STAR® Windows program budget and rebate goal.

**Table-vii ENERGY STAR® Windows Program**

| Item | Budget |
|---|---|
| Rebates | $230,000 |
| Vendor Admin | $40,000 |
| Company Admin | $69000 |
| Communication | $40,000 |
| Evaluation & Research | $15,000 |
| **Total** | **$394,000** |
| | |
| **Goal** | **1,750 Rebates** |

[7] See V.-F Residential Weatherization Program

### V.-F Residential Weatherization Program

The Residential Weatherization program will provide a rebate covering up to 20% of the cost of installing weatherization measures in a residential heating customer's home built prior to the enactment of the current Massachusetts Energy Code (January 1, 1995). The maximum rebate available to a customer under this program is $750.

Measures eligible for a rebate under the program include: attic insulation, wall insulation, basement/crawl space insulation, rim joist insulation, duct insulation, heating system pipe insulation, attic ventilation (in conjunction with attic insulation only), ductwork leakage testing, ductwork leakage sealing, air infiltration testing and air infiltration sealing. To be eligible for a rebate, a Company pre-qualified contractor must complete all installed measures. Do-it-yourself work will not be allowed under the program. Contractors wishing to become a pre-qualified contractor eligible to offer this program to the Company's heating customers must provide proof of the following:

**(1)** Registration as a Home Improvement Contractor (HIC) within the Commonwealth of Massachusetts. Registration MUST be in good standing.
**(2)** Proof of insurance at the Company's corporate contractor partner specified minimum levels.

In addition, the Company will perform a background check on each contractor through the Massachusetts Attorney General's office to verify a contractor's good standing, and to identify if there have been complaints or issues with a particular contractor.

Work completed under the program must meet all applicable state and local code requirements. It is anticipated that all measures installed will meet ENERGY STAR® guidelines, where applicable, and it is the responsibility of the installing contractor to complete and submit all rebate applications with proper supporting documentation of work performed. For quality control purposes, newly approved contractors will have their first three jobs inspected, and approximately twenty percent of their jobs inspected thereafter. The inspection process will consist of a visual review of all work reported to be performed at a job site. Where applicable, the Company may utilize infrared scanning or related techniques to inspect a job site.

The program is marketed to residential heating customers, home improvement contractors and weatherization contractors in Massachusetts through home shows, direct mail promotions, newspaper advertising, bill inserts, the corporate Web site and radio. Potential

participants will also be informed of their eligibility to participate in the program through the Residential Conservation Services program[8].

Contractor education was conducted this year and the Company will continue to hold a training event at a minimum of once per year to increase awareness of new technologies and installation practices. Feedback will be gathered from participating contractors on technologies and practices they are interested in learning about.

Specific research commenced during Program Year One and will continue in Program Year Two. This research includes:

- Survey on past program participants during the Company's previous DSM/MT program plan
- Follow-up to a market opportunity study of weatherization services in the Company's Massachusetts service territory conducted by the Company in August of 2001
- An update to the program's estimated lifetime therm savings model
- Potentially a bill-impact study of past program participants
- Evaluating the value, benefits and barriers of associating contractors with this program

Table-viii depicts the Residential Weatherization program budget and rebate goal.

| **Table-viii Residential Weatherization Program** | |
|---|---|
| **Item** | **Budget** |
| Rebates | $225,000, |
| Vendor Admin | $16,000 |
| Company Admin | $58,000 |
| Communication | 15,000 |
| Evaluation & Reporting | $15,000 |
| **Total** | **$329,000** |
| | |
| **Goal** | **600 Rebates** |

[8] See V.-H; Residential Conservation Services Program

### V.-G Residential Low Income Program

The Residential Low-Income program offers up to $4,500.00 of weatherization measures to the Company's eligible customers. When possible, the program is leveraged with the Federal Department of Energy ("DOE") weatherization funds. The scope of measures provided under 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, not including asbestos removal or electrical work, can also be performed. In addition, homes with ineligible heating units can receive air sealing and general heat waste measures, and single family homes can receive up to $400 for three hours of performed air sealing and general heat waste measures (all other multi-unit residences have a maximum of $500 for the entire building).

In Program Year One, the Company extended its vendor administration contract with Action Energy, Inc. ("Action"). Massachusetts Community Action Program ("CAP") agencies are responsible for ensuring that customers meet the eligibility requirements for program participation and for providing the actual weatherization services to customers[9]. CAP agencies will work with installation contractors to ensure that proper program guidelines are adhered to. CAP agencies provide Action with documentation of all work performed. The Company holds quarterly meetings with Action and all CAP agencies to provide program updates, address questions or concerns, and to ensure that they understand the Company's expected deliverables. Also in Program Year One, the Company officially kicked off its Low Income Weatherization **Intranet** website, www.weatherize.org. This website serves as a central information source for all of the CAP agencies and Company personnel associated with the fuel assistance program. The Intranet website has the capability to search data and determine whether a particular client is eligible for assistance. The site can also be used to communicate with various CAP agencies and provide timely information and updates. The site will be updated as needed.

Customers can qualify for this program in one of two ways, by being eligible for the Commonwealth of Massachusetts' Fuel Assistance, Welfare or Social Security Income Disability programs, or by providing evidence of household income that is less than 60% of the median income. This represents a change from the Program Year One eligibility threshold at 200% of the

[9] Except on Cape Cod, Arlington and Somerville. Services are provided by Housing Assistance on Cape Cod and Menotomy Weatherization in Arlington and Somerville.

poverty level. However, in Program Year One, the Company performed an evaluation that determined adjusting the eligibility threshold to 60% of median income would better serve a greater number of disadvantaged customers.

In addition to serving tenants and owners of single and multi-family homes, the Company remains committed to its effort to weatherize publicly funded housing units. This year funding was provided to the Haverhill Housing Project, where approximately 95% of the tenants had household incomes below 175% of the federal poverty level. The project grant went towards:

- 57 New Gas Furnaces at 90% AFUE were installed
- Lined chimney and vented dryers for safety
- Total job cost: $196,032.80.

In Program Year Two, the Company intends to make a limited exception to the 60% of median income guideline to assist in a project to weatherize low income homes in Dorchester and in Gloucester. Action and the Action for Boston and Community Development ("ABCD") received a Challenge Grant from the Weatherization, Rehab and Asset Preservation ("WRAP") Partnership, sponsored by the Ford Foundation. Action and ABCD are in the final design stage of the 3 year implementation plan to accomplish one of the key goals of the WRAP Partnership, develop new delivery systems that combine energy efficiency and home renovation programs. The plan will be implemented in Gloucester and the Codman Square neighborhood of Dorchester, setting the threshold income guidelines to 80% of median income, the level the Department of Housing and Urban Development ("HUD") utilizes to define low income households and to be consistent with NStar and National Grid. The goals of the plan are the weatherization of twenty-five (25) homes per neighborhood for the duration of the implementation period. The plan intends to rehabilitate fifty (50) homes per year for a total of one hundred fifty (150) homes over the 3-year period. The plan estimates approximately 20% of the participants will have a household income above the customer eligibility threshold for the program, 60% of median income, not exceeding 80% of median income. On a pilot basis, Action plans to adjust the eligibility threshold to 80% of median income households for disadvantaged customers in the two-(2) service territories included in this plan, as well as, leverage the DOE Weatherization Assistance Program ("WAP") funds and U.S. Department of Health and Human Services ("HHS") Heating Emergency Assistance and Retrofit Task WAP ("HEARTWAP") funds for these homes. In addition, the plan will utilize HHS Residential

Energy Assistance Challenge ("REACH") funds to assist with other social or personal barriers that interfere with clients paying their energy bills. In all other respects, the program will be implemented without change.

The Company will continue to market the program via Company newsletters, trade shows and the corporate Website. During Program Year One, the Company redesigned the program literature. The new program brochure was designed to have a more human touch. The brochure outlines the measures that customers could potentially receive and instructs interested customers to contact their local CAP agency for more information. Upon completion of the new program brochure, the Company conducted a direct mail campaign to all eligible customers. The Company's outreach efforts for Program Year One included starting a relationship with the Coalition of Aging ("COA") by participating in COA workshops and seminars. The Company will continue to grow this relationship in Program Year Two. The Company is in the process of organizing a task force of volunteers from the CAP agencies to work on ongoing outreach efforts. Also for Program Year One, the Company has developed a customer satisfaction letter that is generated upon completion of a job. The letter asks the customer to rate their overall experience with the program and allows them to provide any program recommendations to the program.

Table-ix depicts the Residential Low-Income program budget and participant goal.

**Table-ix Residential Low Income Program**

| Item | Rebate |
|---|---|
| Installed Measures | $1,930,000 |
| Vendor Admin | $600,000 |
| Company Admin | $50,000 |
| Communication | $35,000 |
| Software Support | $80,000 |
| Evaluation & Reporting | $5,000 |
| **Total** | **$2,700,000** |
| | |
| **Participant Goal** | **1,050** |

### V.-H Residential Conservation Services Program

The Residential Conservation Services ("RCS") program is designed to help customers get the most value out of the energy use in their dwelling. The program provides a free assessment of a customer's energy usage and recommends specific ways a customer can improve their energy efficiency. The RCS program is administered by all investor-owned utilities in the Commonwealth of Massachusetts, and the Massachusetts Division of Energy Resources ("DOER") coordinates all of its activities. All Massachusetts residential heating and non-heating customers are eligible to participate in the RCS program.

In 2002, the RCS Network, a coalition of all gas and electric LDC's, selected the name "Massachusetts HomeEnergy Service" for marketing purposes. The Company will market the RCS program through Home Shows, Company newsletters, bill inserts, direct mailings and the Corporate Website. Customers interested in learning more about the program may use the Company's toll-free phone number where they can also learn about all of the Company's energy efficiency programs. In addition, the RCS program has a separate statewide toll-free number that all Massachusetts utility customers can call for service. The statewide toll-free number is 1-866-527-SAVE (7283). Calls are redirected to the appropriate vendor based zip code and heating fuel type.

There are two levels of service under the RCS program. Tier One service offers referrals to educational Websites and information about DSM programs and captures requests for literature such as the DOE "Energy Savers" booklet. Assistance regarding installation of energy savings measures is also available. Ultimately, the combination of information collected by Tier One staff and customer requests may result in a referral to Tier Two services.

Tier Two services consist of a Home Energy Assessment and installation of high quality, low cost energy efficiency Instant Savings Measures ("ISMs") that have an average value of $25 to $35[10]. The customer is provided with a report of the results of the Home Energy Assessment, including recommendations for energy saving measures, the estimated cost of installation, (for contractor installed and do-it-yourself) and the energy savings that will result from implementation. The primary goal of the Home Energy Assessment is to give customers an opportunity to understand the impact energy efficiency measures and improvements will make in the home and motivate them to implement measures.

In December 2002, the Company successfully negotiated with DOER revised metrics that will be used to evaluate the success of the program in 2003.

[10] As noted above, In Program Year One, the Company evaluated research studies performed by other utilities and third-party sources on the cost effectiveness of clock thermostats. Debate surfaced in the previous program year on user habits of programmable thermostats and the impact it is has on potential energy savings. The evaluation of the research studies supported that programmable clock thermostats are a significant source of energy savings. The Company provided the report of its findings to the Massachusetts Division of Energy Resources ("DOER") to support the Company's position that the installations of programmable thermostats remain a major measure for Tier Two services under the RCS Program. In December 2002, the Company negotiated with the DOER to utilize the realization rate of 55.8% to determine the number of thermostats installed by RCS auditors in 2002 to remain major measures for calendar year 2002, with the difference to be processed under Program Year One for this program. In calendar year 2003, the installation of programmable thermostats will continue to be promoted through RCS, but not be included as a Tier Two ISM.

Table-x summarizes the performance metrics:

| Table-x RCS Performance Metric Chart | | | | |
|---|---|---|---|---|
| **Metric Identification** | **Metric Description** | **Threshold 75%** | **Design 100%** | **Exemplary 125%** |
| Productivity<br><br>Incentive value as percentage of RCS expenditures – 60% | Percentage of Home Energy Assessments (HEAs) that result in the installation of at least one major measure. The company must provide the incentive for the major measure. Major measures delivered through an HEA provided by the customer's other PA may count also count. The other PA's HEA is not added to denominator. | Submit a report to DOER no later than January 31, 2004 describing what the company did to improve the implementation of major RCS measures.[11] | 5% | 6.25% |
| One-Stop Shopping<br><br>Incentive value as percentage of RCS expenditures – 30% | Percentage of HEAs that deliver a measure offered by a customer's other PA by this company's vendor. At this time the company can deliver refrigerators to all qualifying customers and Energy Efficiency Incentives (EEI) to low use gas customers. To calculate the percentage at Design, the denominator is all the company's HEA, and the numerator is a count of either an EEI or a refrigerator. If a customer gets both an EEI and a refrigerator, that customer is only counted once. | Report: The report is documentation that the company achieved Design level and the appropriate information should the company claim exemplary performance. | 2% | The company delivers electric measures, other than refrigerators, that electric PAs offer as part of their RCS programs.[12]<br><br>If the company proactively attempts to integrate the delivery of these products through its RCS program and is unsuccessful, then the company needs to describe the problem and suggest possible corrective actions. |

[11] These measures include attic insulation, wall insulation, basement insulation, air sealing, insulation of distribution systems, heating systems, high efficiency domestic hot water systems, solar domestic hot water systems. The report should have five sections entitled: Marketing, Tier One, Tier Two, Installation Contractors, and Inspections. Within these sections the company should describe initiatives that they undertook that exceed the minimum program requirements that are described in the regulation, guidelines and Coalition Action Plan. The company needs to include a brief assessment of each initiative. The assessment would include an evaluation of its impact on increasing productivity, whether the company will incorporate the initiative into the program, and whether the company would modify the initiative in any way. The company needs to try at least one initiative. Initiatives may include but are not limited to establishing new relationships; instituting a fee structure for additional services; modifications of incentives; introduction of new technologies; and improving sales material.

[12] Examples of these electric measures may be lighting fixtures (not compact fluorescent bulbs), torchieres, and appliances.

| Table –x RCS Performance Metric Chart (Continued from Page 29) | | | | |
|---|---|---|---|---|
| **Metric Identification** | **Metric Description** | **Threshold 75%** | **Design 100%** | **Exemplary 125%** |
| Competitive Market Memos<br><br>Incentive value as percentage of RCS expenditures – 10% | | No Threshold | Joint RCS Network Memo: Within six months after receiving DOER's memorandum on competition, PAs will write a joint memo describing changes to the program that will lead to increased competition. | PAs will write a memo, either jointly or company-specific, describing a detailed action plan that has a timeline for implementing those changes. |

Table-xi depicts the Residential Conservation Services program budget. The Residential Conservation Services program runs on a calendar year basis.

| Table-xi Residential Conservation Services Program | |
|---|---|
| **Item** | **Budget** |
| Audits | $158,232 |
| ISM | $104,400 |
| Vendor Admin | $278,200 |
| Company Admin | $115,010 |
| Communication | $65,000 |
| Energy Efficiency Incentives | $64,000 |
| Evaluation & Reporting | $25,000 |
| **Total** | **$809,842** |

### V.-I Energy Analysis: Internet Audit Program

Company customers are eligible to receive a Home Energy Assessment (audit) through the RCS program which has traditionally experienced exceptional levels of participation. However, the potential exists to provide customers with a more progressive, hands-on alternative for home energy audits and to facilitate evaluation of energy use for customers whose busy lifestyles do not allow time for an in-home energy audit. The vehicle for this is an internet-based energy audit tool, which can provide customers with detailed, practical and customized recommendations for saving energy, all within the convenience of a Web browser.

In Program Year One, the Company launched the Nexus Energy Software Home Analyzer tool. After an evaluation of various providers, Nexus Energy Software was determined to be the most comprehensive, user-friendly and cost-effective application the Company could offer. The Nexus Energy Software system is highly intelligent in that it can estimate household energy characteristics, such as, appliance-specific loads, from a minimum of question responses. Participants in this program are defined as "New Users completing Basic Home Profile Questions" or the Level 1 profile. The internet audit service enrollment requires answers to a very short question set identifying the zip code, house size in rooms, number of occupants, use of central or room AC, and heating fuel. With this complete, Nexus Energy Software will generate a personalized "Top Ways to Save" report via the customer's preference of e-mail or mail.

In conjunction with Nexus Energy Software, the Company offers to its Massachusetts residential customers a multi-purpose on-line energy audit service. The Internet Audit Program started with a direct-mail piece sent to a large percentage of the Company's Massachusetts residential heating customers. The direct-mail piece described what the Internet Audit will provide, including personalized bill analysis, energy efficiency recommendations, analysis tools, utility incentives and program opportunities to lower natural gas, electric and other fuel costs. An e-mail solicitation was also sent to invite customers to participate in the program.

Each participant is invited to subscribe to a free quarterly e-newsletter which includes additional ways to save that are customized based on the information the customer provided during the on-line analysis, along with seasonal energy saving tips and in-depth discussions of one or more seasonally-appropriate DSM programs. For example, the theme for the October 2002 edition was preparing for the winter heating season and focused on the High Efficiency Heating Equipment and Weatherization rebates. The name the Company adopted for this e-

newsletter is ***e-fficiency news***, rather than Energygram™, which is the name Nexus Energy Software uses for a similar self-branded product.

In addition to the Internet Audits provided by Nexus Energy Software, the Company has acquired a screening tool that will enable the administrative vendor[13] to pre-screen, qualify and maintain customer contact for all of the Company's energy efficiency programs initiated through the call center. The purpose of this tool is to improve the efficiency in which the call center can quickly determine what type of service is best suited for each residential customer and then deliver that message to the customer in a compelling context that promotes customer action. With a minimum amount of information provided by the customer to the call center, the Nexus proprietary tool can quickly identify a list of the most-likely energy saving recommendations that will have the greatest comfort-level and economic impact on that particular dwelling. Customers also have the option of completing the audit service by mail or a CD-ROM. Each of these options provides a similar level of detail as the actual Internet audit, but it is more accommodating to the personal preferences of the customer, therefore, more likely for the customer to adopt energy savings measures. These customers will also receive their "Top Ways to Save" reports via their preference of e-mail or mail.

For Program Year Two, additional e-mail solicitations will be sent. The addresses will be compiled from e-mail correspondence to KeySpan, e-mail addresses collected at various outreach events such as home shows and energy fairs, and possibly an e-mail matching service that can match e-mail addresses to premise addresses. Marketing for this program will include Home Shows, bill inserts, the corporate website, and inclusion of the URL on all other residential energy efficiency literature.

Additional program modification for the upcoming program year may include:

- Refer-a-Friend
- A Spanish language version of the audit tool
- Another contest to solicit additional participants.

In Program Year One, the Company exceeded the 5,000 participant goal in less than six months. The volume of "New Users" is expected to stabilize in the next program year. Therefore, the participant goal will be reduced to 4,000 participants for Program Year Two. In addition, the budget was reduced to reflect the start up costs realized in Program Year One.

[13] See section VIII.-A: Administration

Table-xii depicts the Internet Audit program's budget and participant goal.

| Table-xii Energy Analysis: Internet Audit Program | |
|---|---|
| **Item** | **Budget** |
| Vendor Support | $153,500 |
| Company Admin | $48,000 |
| Communication | $15,000 |
| Evaluation & Reporting | $15,000 |
| **Total** | **$231,500** |
| | |
| **Goal** | **4,000 New User Participants Completing the Level 1 Profile** |

# VI. Multifamily and Commercial & Industrial Programs

## VI.-A Commercial High Efficiency Heating Program

The Commercial High Efficiency Heating program offers rebates to commercial, industrial, governmental, institutional, non-profit, and multifamily facilities that install high efficiency heating equipment.

The Commercial High Efficiency Heating program will continue to be promoted primarily to architects, engineers, equipment vendors, contractors, and other trade allies. Many of the trade allies overlap in the residential and smaller multifamily and commercial markets, and because of this, the program will often be promoted together with the Residential High Efficiency Heating program. Trade ally awareness is promoted though direct mail, trade publications, newspapers, trade shows/seminars, field calls, and site visits.

The program's rebate schedule will apply to a variety of product types in a broad range of equipment sizes that are appropriate for the commercial market segments. Similar to the Residential High Efficiency Heating program, there are high efficiency rebates for small commercial customers and/or for localized heating in larger facilities. There will also be rebates for natural gas fired, low intensity infrared heaters, high efficiency unit heaters, and direct fired make-up air systems that are appropriate for the larger commercial and industrial segments. Rebates will be offered for high efficiency water heating equipment in both the direct fired and indirect fired categories. Boiler rebates are available in a two-tiered matrix: Tier One for high efficiency non-condensing boilers and Tier Two for high efficiency fully condensing boilers.

A recent market assessment study on condensing boilers completed by CEE indicated that the higher initial capital cost of condensing boilers is one of the market transformation barriers for this technology. Therefore, to help overcome this barrier, the rebates have been set approximately 50% higher for fully condensing boilers than for high efficiency, non-condensing boilers.

The Commercial High Efficiency Heating Rebate Program efficiency ratings for smaller heating equipment (up to 300,000 btuh input) are measured using AFUE ratings. Efficiency ratings for larger heating equipment, which exceeds the size ranges for AFUE, will be measured using a thermal efficiency or steady state rating. Qualifying water heating equipment will meet

the .61 or greater Energy Factor rating in the case of residential sized equipment, or will exceed 90% thermal efficiency in the case of the commercial sized equipment.

Table-xiii depicts the Commercial High Efficiency Heating program rebate qualifications.

| Table-xiii Commercial High Efficiency Heating Program Rebate Qualification | | |
|---|---|---|
| **Product** | **Rating** | **Rebate** |
| Furnaces (up to 150 MBtuh)[9] | > 90% AFUE | $200 |
| 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 (over 3000 MBtuh) | | $2,000 |
| Infrared heaters (all sizes) | low intensity | $500 |
| Steam Boilers (up to 300 MBTU) | > 82% AFUE | $400 |
| Hydronic Boilers (under 175 MBtuh) | > 85% AFUE | $500 |
| Hydronic Boilers (176 to 300 MBTU) | > 85% AFUE | $700 |
| Hydronic Boilers (301 to 499 MBTU) | > 85% Thermal Efficiency | $1,000 |
| Hydronic Boilers (500 to 999 MBTU) | > 85% Thermal Efficiency | $2,000 |
| Hydronic Boilers (1000 to 1700 MBTU) | > 85% Thermal Efficiency | $3,000 |
| Hydronic Boilers (1701 MBTU and larger) | > 85% Thermal Efficiency | $4,000 |
| Condensing Boilers (under 175 Mbtuh) | > 88% AFUE | $600 |
| Condensing Boilers (176 to 300 Mbtuh) | > 88% 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 |
| Direct fired water heaters (up to 75 gallons) | > or = .61 Energy Factor | $100 |
| Direct fired water heaters (up to 100 MBtuh) | > 90% Thermal Efficiency | $250 |
| Direct fired water heaters (over 100 MBtuh) | > 90% Thermal Efficiency | $400 |
| Indirect fired water heaters (up to 50 gallon storage) | | $400 |
| Indirect fired water heaters (over 50 gallon storage) | | $250 |

The Company and GasNetworks will further review rebate levels for reduction potential on equipment for small commercial customers and/or for localized heating in larger facilities, such as furnaces (up to 150 Mbtuh), boilers (under 175 Mbtuh) and steam boilers (up to 300 MBTU). The potential rebate level changes will correlate to the proposed changes for the Residential High Efficiency Heating Equipment Program.

Table-xiv depicts the Commercial High Efficiency Heating program's budget and rebate goal.

**Table-xiv Commercial High Efficiency Heating Program**

| Item | Budget |
|---|---|
| Rebates | $475,000 |
| Vendor Admin | $35,000 |
| Company Admin | $65,000 |
| Communication | $10,000 |
| Evaluation & Reporting | $15,000 |
| **Total** | **$600,000** |
| | |
| **Goal** | **400 Rebates** |

### VI.-B Multifamily Housing Program

The Multifamily Housing program was launched in Program Year One as an investigation/pilot initiative that was available to multifamily facilities that have a need for energy efficiency improvements. The types of projects that qualified for funding through this program include redesign of space heating or water heating systems, steam system upgrades, building insulation, premium efficiency windows and doors, clock thermostats, heat recovery ventilation systems, digital energy management systems, or sophisticated burners and/or controls for boilers.

The program offered a rebate of $2.00 per first year estimated therm savings, up to 100% of the incremental cost of the project with a cap per customer/project of $150,000. The program goals were met with a rebate of only $1.00 to $2.00 per first year estimated therm savings and a max of 50% of project costs, capped at $150,000. Savings estimates were provided by independent engineers or via the engineering auditing services of the Commercial Energy Efficiency Program[14]. After reviewing program participation and savings projections for technologies it was determined that by aligning the rebates for this program with the Commercial Energy Efficiency program we can maximize the number of customers served. For Program Year Two, a rebate of $0.75 per first year estimated therm savings, up to 50% of the eligible installed project costs with a cap per customer/project of $100,000 will apply.

The Company originally intended to promote this program primarily to public housing authorities and other publicly funded and/or financed multifamily properties. A research study was conducted during Program Year One to identify the best targets and opportunities to promote this type of programs. Research identified options to promote the program equally in both public and privately funded multifamily properties. In Program Year Two the program will be promoted though direct mail as well as contact with multifamily facility or authority managers during site visits and meetings to present the Company's programs.

[14] See Section Commercial Energy Efficiency Program

Table-xv depicts the Multifamily Housing budget and goal in number of units. For Program Year Two, the Company plans to serve 100 participants of which 60 would install energy efficiency measures. This goal reflects a 60% install rate for energy efficiency measure installed by program participants.

| **Table-xv** | **Multifamily Housing Program** |
|---|---|
| **Item** | **Budget** |
| Rebates | $375,000 |
| Vendor Admin | $75,000 |
| Company Admin | $46,000 |
| Communication | $1,000 |
| Evaluation & Reporting | $15,000 |
| **Total** | **$512,000** |
| | |
| **Goal** | **100 Participants** |

### VI.-C Commercial Energy Efficiency Program

The Commercial Energy Efficiency Program is designed to provide support services and financial incentives to encourage the Company's commercial, industrial, governmental, and institutional customers to install energy efficient natural gas related features. Customers can participant in one or more of the offerings shown in Table-xvi. Virtually any energy efficient technology or energy efficient system design that exceeds the minimum requirements of the Massachusetts energy code, and which is not covered by another Company program offering, may be eligible for a rebate under this program. Participants to the program must be Company firm gas sales customers on a commercial tariff to be eligible. In addition, all services must be pre-approved by the Company and/or the administrative vendor prior to delivery or installation of product (s) or service(s).

| Table-xvi Commercial Energy Efficiency Program Services |
|---|
| • Co-funding for Energy Auditing or Engineering Services |
| • Prescriptive rebates for insulation, windows, or basic HVAC controls |
| • Custom incentives for more sophisticated systems and controls |

Customers may apply for program services or rebate incentives via a variety of trade ally channels including Company representatives, plumbing and heating contractors, engineering firms, energy service companies, or equipment vendors. After reviewing the customer's energy efficiency needs, the customer will be offered the appropriate program services. The following describes the three categories of services a customer may be eligible for.

***Energy Audit and Engineering Services***

Energy auditing services are for customers intending to proceed with energy efficiency improvements but who require assistance estimating savings and rebate levels. Most participants in this category will be small to medium customers, or large customers with relatively simple energy efficiency projects. Customers are not required to obtain an energy audit to proceed with prescriptive energy efficiency measures.

Engineering services will be used to evaluate more complex projects that involve technologies associated with mechanical and/or process equipment. These types of technologies may include boiler or chiller plant redesigns, heat recovery systems, digital energy management systems, or process efficiency improvement projects. The Company will also collaborate with electric utilities to promote electric savings opportunities as well as natural gas savings

opportunities. Services provided under the program will include technical analysis and engineering support for medium to large customers who need assistance evaluating and/or designing complex projects. The Company will cost share these services with the customer. An administrative vendor will be capable of providing Engineering services to the customer under contract with the Company at negotiated rates to be established via the competitive bid process. Alternatively, the customer may select the engineering firm of their choice and receive co-funding from the Company up to 50% of the reasonable fees related to the efficiency project, not to exceed a $10,000 Company contribution.

***Prescriptive Rebates***

Prescriptive Rebates are available for common energy efficiency measures including programmable thermostats, boiler reset controls, steam trap replacements, pipe and/or duct insulation, building shell (walls, roof, floor, crawlspace) insulation, and high efficiency windows. Prescriptive Rebates will be targeted primarily toward the small and medium sized multifamily, commercial, and industrial customers. The Company relies primarily upon contractors and trade allies to locate candidate facilities and to install the eligible prescriptive measures. This effort is supported by an extensive outreach and education effort to these trade allies, as well as promotions directed to the customers themselves. Energy audits will not be required for participation. However, pre-approval of the contractor's proposals and the available prescriptive rebate will be required. Customers will receive rebates for installed measures as indicated in Table-xvii.

**Table-xvii Eligible Prescriptive Measures**

| Measure | Rebate Available |
|---|---|
| Programmable thermostats | $25.00 each, up to five units |
| Digital boiler reset control | $150.00 single stage; $250.00 multi-stage, up to two units |
| Steam trap replacements | $25.00 / replaced trap, up to 100 traps |
| Pipe or duct insulation; duct sealing | Up to 20% of project cost |
| Building shell insulation (roof, walls, floor) | Up to 20% of project cost |
| Premium efficiency windows | $0.50 / sq.ft. of window rough opening area with a maximum of 1,000 sq. ft. |

***Custom Incentives***

Custom Incentives are 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% of the eligible installed project

costs. The Company will reduce the project and/or site maximum to $100,000 from $150,000. These changes and other limits that may be applied are part of an effort to maintain budget integrity.

Custom Incentives will be classified as either Level One or Level Two. Level One projects involve less complex technologies and/or highly cost effective technologies. For Program Year Two, the Company will reduce the incentives from $1.00 to $0.75 per first year of estimated therm savings. This reduction reflects the market's readiness to install these technologies and the lower incremental costs for installing such measures. Examples of Level One projects are redesigns of HVAC systems, energy recovery ventilation, most heat recovery applications, building automation/energy management systems, and advanced technology burners and/or burner controls.

Level Two projects are more complex and/or represent underutilized technologies. For Program Year Two, the Company will reduce the incentives from $2.00 to $1.50 per first year of estimated therm savings. Few applications are expected to reach this threshold. Applications qualifying for this incentive level are projects larger in size that qualify for the maximum contribution. Incentives may not be applied toward normal maintenance costs, or for equipment disabling or abandonment without an energy efficient replacement.

Table-xviii depicts the Commercial Energy Efficiency program's budget and rebate goal. For Program Year Two, the Company plans to serve 500 participants of which 300 would install energy efficiency measures. This goal reflects a 60% install rate for energy efficiency measure installed by program participants.

**Table-xviii Commercial Energy Efficiency Program**

| Item | Budget |
|---|---|
| Rebates | $1,725,000 |
| Vendor Admin | $355,000 |
| Company Admin | $179,500 |
| Communication | $28,500 |
| Evaluation & Reporting | $13,500 |
| **Total** | **$2,301,000** |
| | |
| **Goal** | **500 Participants** |

### VI.-D Building Practices and Demonstration Program

The purpose of the Building Practices and Demonstration Program is to establish successful applications of new or underutilized energy efficient procedures, processes, or technologies. Interested parties may file applications for financial and technical assistance directly to the Company. Applications 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 of the installation by potential users or other interested stakeholders, and publication of the results in case study format.

Marketing of the program will rely on working with industry vendors developing and/or offering new or underutilized natural gas energy efficiency technologies. Table-xix depicts the Building Practices and Demonstration program's budget and project commitment goal.

**Table-xix Building Practices and Demonstration Program**

| Item | Budget |
|---|---|
| Rebates | $220,000 |
| Vendor Admin | $0 |
| Company Admin | $50,000 |
| Communication | $15,000 |
| Evaluation & Reporting | $15,000 |
| **Total** | **$300,000** |
| | |
| **Goal** | **10 Project Commitments** |

### VI.-E Multifamily and C&I Load Management Pilot Program

The Multifamily and C&I Load Management program will be launched in Program Year Two as an investigation/pilot initiative. The concept for this initiative is in the research stage but the idea is for the program to focus on the establishment of applications of new or underutilized load management procedures, processes, or technologies as they apply to the natural gas industry. Efforts will be directed towards identifying and researching methods of load management during periods of high demand on the Company's system.

In developing the program concept, market research activities will performed including working with industry vendors to identify potential load management technologies for natural gas systems as well as working with key account customers. Research studies will be considered in collaboration with industry partners GasNetworks™, CEE, NEEP, AESP and other third-party consulting groups.

The goal for Program Year Two is to develop a definitive program concept and logic model through discussion with the NUP's, and based on the results of all market research activities, and to identify five project commitment sites. A requirement of any project commitment site will be the allowance of monitoring of technology installation and/or results, tours of the installation by potential users or other interested stakeholders, and publication of the results in case study format.

Table-xx depicts the Multifamily and C&I Load Management Pilot program's budget. The incentive level listed in Table-xx is an estimate of the required first-stage funding to launch the initial five project commitments.

**Table-xx Multifamily and C&I Load Management Pilot Program**

| Item | Budget |
|---|---|
| Incentives | $40,000 |
| Vendor Admin | $0 |
| Company Admin | $10,000 |
| Communication | $4,000 |
| Evaluation & Reporting | $20,000 |
| **Total** | **$74,000** |
| | |
| **Goal** | **5 Project Commitments** |

### VI.-F Economic Redevelopment Program

The Economic Redevelopment program provides incentives to foster the rehabilitation of buildings, storefronts and neighborhoods, while also helping to improve energy efficiency and reduce energy costs. Through the program, the Company works with Chambers of Commerce and other economic redevelopment organizations to facilitate the installation of eligible building shell and other measures that increase the energy efficiency of business districts and empowerment zones, K-12 public school systems, and public and subsidized housing. One of the program's objectives is to leverage energy efficiency funds with other private and public investments that are being made for community development purposes.

The program is eligible to all Company multifamily, commercial and industrial customers located in state designated economic development zones. Maximum funding per project is $100,000, reduced from $150,000, with a minimum of 50% matching funds required by the customer. The project maximum was reduced to align with the Commercial Energy Efficiency Program[15] project maximum.

Applications for funding must include a description of the redevelopment project, identification of additional funding sources, types of energy conserving measures to be installed, estimated energy savings and project schedule. Each application for funding is evaluated and an analysis is performed to identify cost-effective opportunities for reducing a customer's energy bill. The analysis performed leads to a report summary of recommendations and a detailed description of the alternatives evaluated, including; total installation costs, annual energy costs, annual savings, and simple payback periods.

The program will continue to be promoted by means of a direct mail piece that will be distributed to Chambers of Commerce within economic target zones, economic development organizations and architectural/engineering firms. In addition, the Company will continue to participate in tradeshow events, such as the annual Massachusetts Municipal Association show, to further promote the program.

Also, in Program Year One, the Company was engaged by a consultant to compile a case study on a past program participant, the Uphams Corner Market Renovation Project in Dorchester, Massachusetts. The case study is co-funded by the Company, the project financing

[15] See VI.-C Commercial Energy Efficiency Program

institution, the Massachusetts Housing and Financing Commission, and the developer, New Atlantic Development Corporation. Upon completion, the case study may be presented at various outreach events in Program Year Two. The case study findings may also be incorporated in new program literature to be developed in the next program year.

Table-xxi depicts the Economic Redevelopment program budget and project goal.

| **Table-xxi Economic Redevelopment Program** | |
|---|---|
| **Item** | **Budget** |
| Incentives | $780,000 |
| Vendor Admin | $10,000 |
| Company Admin | $50,000 |
| Communication | $15,000 |
| Evaluation & Reporting | $10,000 |
| **Total** | **$865,000** |
| | |
| **Goal** | **20 Projects** |

### VI.-G Revisions to Terms and Conditions for the Programs

For the Multifamily and Commercial & Industrial Programs, the incentives and rebates are subject to the Terms & Conditions for each program. For Program Year Two, the Company will revise the Terms & Conditions to address Distributed Generation projects. See Exhibit 3 for the sample Terms & Conditions. Item 6 address the condition for Distributed Generation projects.

# VII. Outreach and Communication

## VII.-A Energy Efficiency Communication and Education

Communication and education of customers and trade allies is critical to the success of the Company's DSM/MT 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. In addition, a common barrier is the lack of awareness by customers as to how its utility can help them 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. For Program Year One, the Company received over 26,000 calls inquiring of the Company's energy efficiency programs. Over 50% of the inquiries were a direct result of marketing the energy efficiency programs.

The energy management staff will also have opportunities to disseminate energy efficiency information on a personal level. Examples include exhibiting at home shows, trade shows, community events, landlord events, new homeowner workshops, energy information fairs, awareness events at major employers, etc. The corporate Website will also be utilized as a tool to promote energy efficiency. On a quarterly basis, call center representatives will be trained on the Company's Energy Efficiency Programs and how to direct customers to our DSM/MT programs.

The budget for Energy Efficiency Communication and Education is included within each program's budget.

### VII.-B Trade Ally Training and Codes & Standards

Energy efficiency awareness amongst the Company's trade allies is crucial to reducing barriers to energy efficiency and increasing acceptance of new technologies. Education activities to this segment will be a critical piece to the Companies promotion efforts.

The Company will support and undertake a wide range of training events in collaboration with GasNetworks™, the JMC, manufacturing training reps and other trade allies. Outreach will extend to contractors, engineers, builders, landlords, realtors, facility managers and housing authorities. For example, the company will support energy code training performed by the Massachusetts Board of Building Regulations and Standards. The objective of all training activities will be to increase trade ally awareness of the benefits of energy efficiency and provide them with the technical tools to properly select, size, install and maintain energy efficient products.

Training activities will be promoted via company newsletters and direct mail campaigns to contractors, in addition to meeting with trade allies at public events. 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.

Table-xxii depicts the Trade Ally Education and Codes & Standards budget and goals.

**Table-xxii Trade Ally Education and Codes & Standards**

| Item | Budget |
|---|---|
| Training Sessions | $125,000 |
| Company Admin | $40,000 |
| Communication | $10,000 |
| **Total** | **$175,000** |
| | |
| **Goal** | **18 Training Sessions**<br>**1,200 Participants** |

### VII.-C Building Operators Certification

The Company has joined with eight regional utilities to offer the Building Operator Certification (BOC) program. The BOC program is administered by Northeast Energy Efficiency Partnerships, Inc. ("NEEP") who 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.

The BOC program will offer eight to ten sessions during the program year throughout the New England region. Each session will enroll approximately 28 students. Each student is scheduled for approximately one day of classroom instruction per month over a 6 to 8 month training cycle. Six of the sessions held in 2002 were within or near the Company's service territory. One session was sponsored directly by the Company for the benefit of the Boston Housing Authority. A second session was co-sponsored with the Cape Light Compact with the sessions held at various locations within the Cape Cod service territory.

In 2002, the Company, along with the sponsoring utilities and NEEP, completed an evaluation of the regional BOC market transformation efforts, focusing on the BOC 100 Series implementation, impacts and marketing. The study combined elements of process evaluation, business plan evaluation and market assessment. The evaluation covered the process, market and impact issues of the program and made recommendations for program improvements and for a long-term evaluation. The key findings that effect the Company's support of this program are:

- For the average BOC student certified in 2000 and 2001, the evaluation concluded annual savings of 930 MMBtu of oil or gas.
- The current analysis suggests self-sustainability is not possible in the next one to three years.

Therefore, the Company, along with the sponsoring utilities, agreed to support the BOC program in 2003. In Program Year Two, the Company will again co-sponsor with Cape Light Compact a course held at various locations on the Cape. In addition, the Company may directly sponsor a course to a target customer, similar to the course completed by the Boston Housing Authority.

Table-xxiii depicts the BOC program budget and participant goal.

| Table-xxiii **Building Operator Certification Program** | |
|---|---|
| **Item** | **Budget** |
| Incentives | $20,000 |
| Vendor Admin | $0 |
| Company Admin | $1,500 |
| Communication | $1,000 |
| **Total** | **$22,500** |
| | |
| **Goal** | **35 Participant Students** |

# VIII. Administration and Evaluation

## VIII.-A Administration

To effectively administer the proposed energy efficiency programs, the Company retains the services of qualified energy services vendors to assist in administrative or technical aspects. For the new DSM/MT Plan, the Company, in Program Year One, issued a Request for Proposal ("RFP") for administration of all programs not including the Residential Low Income Program and the ENERGY STAR® Homes Program. The RFP was issued to over six vendors. Upon review of the vendor proposals for quality, price and experience, the Company conducted interviews with four vendors. As a result of the vendor interviews, the Company elected to continue their vendor relationship with Honeywell DMC Services, Inc. ("DMC"). The following table identifies the vendors used for significant program administration. Energy services vendors also may be selected throughout the five-year plan on an as needed basis for specific projects.

**Table-xxiv DSM/MT Program Vendors**

| Program | Vendors | Abbreviation |
|---|---|---|
| Most DSM/MT Programs | Honeywell DMC Services, Inc. | DMC |
| Residential Low Income Program | Action Energy, Inc. | Action |
| ENERGY STAR® Homes Program | Conservation Services Group | CSG |

The Company has developed accounting systems and tracking methods to identify costs attributable to each of its DSM/MT programs. These systems will clearly separate DSM/MT plan costs from other business activities. The Company's DSM/MT activities will be independent of any competitive service offerings, and program offerings will be open for participation by all qualified trade allies and marketers.

The budget for program administration is included within each program's budget.

## VIII.-B Evaluation and Reporting

The Company has compiled information on residential, commercial and industrial markets in its Massachusetts service territory by means of market research conducted during its previous five-year DSM/MT plan. In particular, the Company has a database of information on the residential and commercial gas heating markets, the gas water heating market, and the residential new construction market. The Company also has a database of research on high efficiency technologies ranging from heating equipment to building practices.

During the next five year DSM/MT plan, the Company plans to build on its current library of research and analysis studies to not only evaluate the impact and cost effectiveness of its proposed DSM/MT programs, but to help identify opportunities for new and/or underutilized energy efficiency technologies and initiatives. Table-xxv depicts the type of research efforts that will be performed and/or considered.

**Table-xxv DSM/MT Research Efforts**

| Type | Description |
|---|---|
| **Reporting** | Periodic process evaluations, impact evaluations, and progress reports on all DSM/MT programs. |
| **Market Assessment Studies** | Detailed description of the overall operation of a market, the distribution channels, an identification of key market actors and the value chain. |
| **Development or Refinement of Program Logic Models** | Clarification as to the goals of a DSM/MT program, how those goals will be accomplished, and identification as to how the market landscape should have changed by the program implementation. |
| **Baseline Research** | Identify and measure crucial market attributes prior to program continuation or launch. |
| **Segmentation Studies** | Analysis on customer needs and preferences by different types of customers. |
| **Indicator Identification and Tracking** | Identification and measurement of key indicators of market transformation. |
| **Targeted Special Studies** | Measure life/persistence, arrearages, educational impacts, non-energy benefits or other DSM/MT program issues that need to be examined. |

The Company developed a five-year research evaluation plan with GDS Associates, Inc., a market research provider, where a timeline of activities and studies was recommended. The finalized research plan was delivered to the DTE August 1, 2002.

The budget for evaluation and research is included within each program's budget. Wherever possible, the Company will look to offset the cost of evaluation and reporting by performing research in collaboration with industry partners GasNetworks™, NEEP, AESP, JMC, CEE and other utilities and utility parties.

## IX. Shareholder Incentives

For the five-year DSM/MT Plan, the Company based its Shareholder Incentive in accordance with the guidelines set in D.T.E. 98-100. The guidelines in D.T.E. 98-100 provide for a Shareholder Incentive based on a distribution company's performance against three performance levels; threshold performance, design performance and exemplary performance.

The formula for calculating the after-tax Shareholder Incentive for each program is described in the Department's order, D.T.E. 98-100, "Investigation by the Department of Telecommunications and Energy on its own motion to establish methods and procedures to evaluate and approve Energy Efficiency Programs, pursuant to G.L. c.25 § 19 and c.25A, § 11G."

As described in the order, the calculation of Shareholder Incentives shall be:

"A Distribution Company that achieves its design performance level shall calculate its after-tax Shareholder Incentive as the product of (1) the average yield of the three-month United States Treasury bill (as defined below), and (2) total program implementation costs as included in a distribution Company's Energy Efficiency Plan. The average yield of the three-month United States Treasury bill shall be calculated as the arithmetic average of the yields of the three-month United States Treasury bills issued during the most recent twelve-month period, or as the arithmetic average of the three-month United States Treasury bill's twelve-month high and twelve-month low.

A Distribution Company shall calculate its after-tax Shareholder Incentive as the product of (1) the percentage of the design performance level achieved, and (2) the design performance Shareholder Incentive level, provided that a Distribution Company shall earn no Shareholder Incentive if its actual performance is below its threshold performance level, and shall earn no more than its exemplary performance level Shareholder Incentive, even if its actual performance exceeds its exemplary performance level."

Based on this information, the after-tax Shareholder Incentives will be calculated as the product of (1) the average yield of the three-month United States Treasury bill, (2) total program implementation costs, and (3) the percentage of the design performance level achieved. Exhibit-2 displays the structure for Program Year One's Shareholder Incentive. According to information from the Federal Reserve Board of Governors, the average yield of the three-month United States Treasury bill issued during the twelve-month period from March 1, 2001 to March 30, 2002 was 2.75. The Company's effective corporate tax rate is 39.225%.

Based on the current economic conditions, the current average yield of the three-month United States Treasury bill is 1.14%, as of release dated March 24, 2003. At this low yield, the

Company's Program Year One after-tax Shareholder Incentive would be reduced to approximately $136,800. On March 20, 2003, the Company started discussions with the Non-Utility Parties on a proposal to revise the calculation of the Shareholder Incentive. The Company proposes to amend its settlement to deviate from the Department Guidelines by utilizing a fixed percentage of 4.25% to calculate the Program Year One after-tax Shareholder Incentive. For Program Year Two, the company proposes to utilize a fixed percentage of 5.00% to calculate the after-tax Shareholder Incentive. These incentive levels are consistent with the incentive level recently authorized by the Department for Massachusetts Electric Company, in docket 00-65 A and the level of incentives recently requested by Fithchburg Electric Company. The Company will continue the discussions with the Non-Utility Parties after the submittal of this report to the DTE. The Company will report on the outcome of those discussions and present a proposed amendment to its settlement for review and approval in the status report and request to recover incentives in its next scheduled filing on or before August 1, 2003.

## Exhibit-1 DSM/MT Program Activity Budget

## Exhibit-1: DSM/MT Program Activity Budget: FY 2003 to 2004

| Program | Services | Vendor Admin/Support | Company Admin | Communication | Evaluation & Reporting | Other | Budget | Program Goals |
|---|---|---|---|---|---|---|---|---|
| ***Residential*** | | | | | | | | |
| Low Income[1, 2] | $1,930,000 | $600,000 | $50,000 | $35,000 | $5,000 | $80,000 | $2,700,000 | 1,050 Participants |
| Residential High Efficiency Heating | $1,920,000 | $155,658 | $47,000 | $8,000 | $10,000 | $0 | $2,140,658 | 8,000 Rebates |
| *Residential Conservation Services[3] | $158,232 | $278,200 | $115,010 | $65,000 | $25,000 | $168,400 | $809,842 | Per DOER Agreement |
| Energy Star Windows | $230,000 | $40,000 | $69,000 | $40,000 | $15,000 | $0 | $394,000 | 1,750 Rebates |
| Residential Weatherization | $225,000 | $16,000 | $58,000 | $15,000 | $15,000 | $0 | $329,000 | 600 Rebates |
| Energy Analysis: Internet Audit Guide | $0 | $153,500 | $48,000 | $15,000 | $15,000 | $0 | $231,500 | 4,000 New Users |
| Energy Star Thermostats | $62,500 | $35,000 | $57,000 | $15,000 | $5,000 | $0 | $174,500 | 2,500 Participants |
| Residential High Efficiency Water Heating | $70,000 | $15,000 | $15,000 | $8,000 | $5,000 | $0 | $113,000 | 700 Rebates |
| Energy Star Homes | $100,000 | $94,000 | $31,000 | $15,000 | $18,000 | $0 | $258,000 | 500 Participants |
| ***Multifamily and C&I*** | | | | | | | | |
| Commercial Energy Efficiency Program | $1,725,000 | $355,000 | $179,000 | $28,500 | $13,500 | $0 | $2,301,000 | 500 Participants |
| Economic Redevelopment | $780,000 | $10,000 | $50,000 | $15,000 | $10,000 | $0 | $865,000 | 20 Projects |
| Commercial High Efficiency Heating | $475,000 | $35,000 | $65,000 | $10,000 | $15,000 | $0 | $600,000 | 400 Rebates |
| Multifamily Housing Program | $375,000 | $75,000 | $46,000 | $1,000 | $15,000 | $0 | $512,000 | 100 Participants |
| Building Practices and Demonstrations | $220,000 | $0 | $50,000 | $15,000 | $15,000 | $0 | $300,000 | 10 Projects |
| Trade Ally Education and Codes & Standards | $125,000 | $0 | $40,000 | $10,000 | $0 | $0 | $175,000 | 1,200 Participants |
| MF/CI Load Management Pilot | $40,000 | $0 | $10,000 | $4,000 | $20,000 | $0 | $74,000 | 5 Project Commitments |
| Building Operator Certification | $20,000 | $0 | $1,500 | $1,000 | $0 | $0 | $22,500 | 35 Participant Students |
| **Total** | **$8,455,732** | **$1,862,358** | **$931,510** | **$300,500** | **$201,500** | **$248,400** | **$12,000,000** | |

*Residential Conservation Services program budget is for January 1, 2003 through December 31, 2004.

[1]Low Income Program: $80,000 "Other" refers to program Extranet database support.

[2]Low Income Program: $289,500 of $600,000 "'Vendor Admin/Support" represents Local Program Support.

[3]Residential Conservation Services program: $168,400 "Other" refers to $104,400 Instant Savings Measures (ISMs) and $64,000 in Energy Efficiency Initiatives provided to the customer.

## Exhibit-2 Program Year One Shareholder Incentive Example

## Exhibit-2: DSM/MT Program Year One: Shareholder Incentive Example Using Current Formula

| Program | Budget | 100% of Goal Design Performance | 75% of Goal Threshold Performance | Estimated After-Tax Design Incentive | Estimated Pre-Tax Design Incentive |
|---|---|---|---|---|---|
| ***Residential*** | | | | | |
| Low Income | $2,700,000 | 1,050 Participants | 788 Participants | $74,250 | $122,172 |
| Residential High Efficiency Heating | $1,922,000 | 7,000 Rebates | 5,250 Rebates | $52,855 | $86,968 |
| Residential Conservation Services | $809,841 | Per DOER Agreement | Per DOER Agreement | $22,271 | $36,644 |
| Energy Star Windows | $515,659 | 1,250 Rebates | 938 Rebates | $14,181 | $23,333 |
| Residential Weatherization | $335,000 | 500 Rebates | 375 Rebates | $9,213 | $15,158 |
| Energy Analysis: Internet Audit Guide | $235,000 | 5,000 Web Site Hits | 3,750 Web Site Hits | $6,463 | $10,633 |
| Energy Star Thermostats | $219,500 | 2,500 Participants | 1,875 Participants | $6,036 | $9,932 |
| Residential High Efficiency Water Heating | $215,000 | 1,400 Rebates | 1,050 Rebates | $5,913 | $9,729 |
| Energy Star Homes | $198,500 | 300 Participants | 225 Participants | $5,459 | $8,982 |
| ***Multifamily and C&I*** | | | | | |
| Commercial Energy Efficiency Program | $2,301,000 | 500 Participants | 375 Participants | $63,278 | $104,118 |
| Economic Redevelopment | $865,000 | 20 Projects | 15 Projects | $23,788 | $39,140 |
| Commercial High Efficiency Heating | $600,000 | 400 Rebates | 300 Rebates | $16,500 | $27,149 |
| Multifamily Housing Program | $512,000 | 100 Participants | 75 Participants | $14,080 | $23,167 |
| Building Practices and Demonstrations | $300,000 | 10 Projects | 8 Projects | $8,250 | $13,575 |
| Trade Ally Education and Codes & Standards | $175,000 | 1,200 Participants | 900 Participants | $4,813 | $7,919 |
| MF/CI Load Management Pilot | $74,000 | 5 Project Commitments | 4 Project Commitments | $2,035 | $3,348 |
| Building Operator Certification | $22,500 | 25 Participant Students | 19 Participant Students | $619 | $1,018 |
| **Total** | **$12,000,000** | | | **$330,000** | **$542,986** |

**Notes:**

No Incentives will be earned for evaluation and reporting
Company incentives are additive from each individual program.
If the Company achieves less that 75% of goal (Threshold Performance Level), it will receive no incentive for that program.
If the Company achieves 75% of goal, it will receive 75% of the incentive for that program.
If the Company achieves 100% of goal (Design Performance Level), it will receive 100% of the incentive for that program.
If the Company achieves 125% of goal (Exemplary Performance Level), it will receive 125% of the incentive for that program.
Between 75% and 125% of goal, the incentive will be based on a linear interpolation between the Threshold and Exemplary Performance levels.

**Assumptions:**

Average Yield of the three-month U.S. T-Bill = 2.75%
Effective Corporate Tax Rate = 39.225%
Program Implementation Costs = As budgeted above
After Tax Shareholder Incentive = Avg. Yield of three month U.S. T-Bill x Program Implementation Costs
Pre-Tax Shareholder Incentive = After Tax Shareholder Incentive / (1 - Effective Corporate Tax Rate)

## Exhibit-3 Program Year Two Shareholder Incentive Example

## Exhibit-3: DSM/MT Program Year Two: Shareholder Incentive Example Using Proposed Formula

| Program | Budget | 100% of Goal Design Performance | 75% of Goal Threshold Performance | Estimated After-Tax Design Incentive | Estimated Pre-Tax Design Incentive |
|---|---|---|---|---|---|
| ***Residential*** | | | | | |
| Low Income | $2,700,000 | 1,050 Participants | 788 Participants | $135,000 | $222,131 |
| Residential High Efficiency Heating | $2,125,033 | 8,000 Rebates | 6,000 Rebates | $106,252 | $174,828 |
| Residential Conservation Services | $809,842 | Per DOER Agreement | Per DOER Agreement | $40,492 | $66,626 |
| Energy Star Windows | $394,000 | 1,750 Rebates | 1,313 Rebates | $19,700 | $32,415 |
| Residential Weatherization | $329,000 | 600 Rebates | 450 Rebates | $16,450 | $27,067 |
| Energy Analysis: Internet Audit Guide | $231,500 | 4,000 New Users | 3,000 New Users | $11,575 | $19,046 |
| Energy Star Thermostats | $190,125 | 2,500 Participants | 1,875 Participants | $9,506 | $15,642 |
| Residential High Efficiency Water Heating | $113,000 | 700 Rebates | 525 Rebates | $5,650 | $9,297 |
| Energy Star Homes | $258,000 | 500 Participants | 375 Participants | $12,900 | $21,226 |
| ***Multifamily and C&I*** | | | | | |
| Commercial Energy Efficiency Program | $2,301,000 | 500 Participants | 375 Participants | $115,050 | $189,305 |
| Economic Redevelopment | $865,000 | 20 Projects | 15 Projects | $43,250 | $71,164 |
| Commercial High Efficiency Heating | $600,000 | 400 Rebates | 300 Rebates | $30,000 | $49,362 |
| Multifamily Housing Program | $512,000 | 100 Participants | 75 Participants | $25,600 | $42,123 |
| Building Practices and Demonstrations | $300,000 | 10 Projects | 8 Projects | $15,000 | $24,681 |
| Trade Ally Education and Codes & Standards | $175,000 | 1,200 Participants | 900 Participants | $8,750 | $14,397 |
| MF/CI Load Management Pilot | $74,000 | 5 Project Commitments | 4 Project Commitments | $3,700 | $6,088 |
| Building Operator Certification | $22,500 | 35 Participant Students | 26 Participant Students | $1,125 | $1,851 |
| **Total** | **$12,000,000** | | | **$600,000** | **$987,248** |

**Notes:**

No Incentives will be earned for evaluation and reporting
Company incentives are additive from each individual program.
If the Company achieves less that 75% of goal (Threshold Performance Level), it will receive no incentive for that program.
If the Company achieves 75% of goal, it will receive 75% of the incentive for that program.
If the Company achieves 100% of goal (Design Performance Level), it will receive 100% of the incentive for that program.
If the Company achieves 125% of goal (Exemplary Performance Level), it will receive 125% of the incentive for that program.
Between 75% and 125% of goal, the incentive will be based on a linear interpolation between the Threshold and Exemplary Performance levels.

**Assumptions:**

Proposed After-Tax Fixed Percentage = 5.00%
Effective Corporate Tax Rate = 39.225%
Program Implementation Costs = As budgeted above
After Tax Shareholder Incentive = Proposed After-Tax Fixed Percentage x Program Implementation Costs
Pre-Tax Shareholder Incentive = After Tax Shareholder Incentive / (1 - Effective Corporate Tax Rate)

## Exhibit-4 Multifamily, Commercial & Industrial Energy Efficiency Programs Terms and Conditions

# Exhibit – 4
# KeySpan Energy Delivery
# Multifamily, Commercial & Industrial Energy Efficiency Programs
# Terms & Conditions

1. **Programs** – KeySpan's Energy Efficiency Programs ("the Programs") include Energy Savings Plan, Multifamily Housing Program, Building Practices and Demonstration Program and Economic Redevelopment Program.

2. **Program Rebates** - Subject to these Terms & Conditions, the Programs will pay rebates to eligible New England Customers for the installation of Energy Efficiency Improvements ("EEI's") described in the information for each Energy Efficiency Program.

3. **Customer Eligibility** - KeySpan customers in Massachusetts are eligible if: (a) they are firm tariff gas customers on commercial rate codes G41, G42, G43, G44, G51, G52, G53, G54, G61, G62, G63, G83, G84 ; and (b) they are directly responsible for the payment of the KeySpan energy bills in the facility in which they do business.

4. **Pre-Approval Process** - All EEI's eligible for rebates must be approved, in writing, by KeySpan and/or KeySpan's representative for the Program in advance. Customers wishing to participate must submit a proposal including estimated costs and savings to the Program. Customers will be notified in writing via a commitment letter of the approved EEI's, if any, and the approved rebate amounts.

5. **Post-Installation Work Verification -** The Program reserves the right to not pay any rebate until it has performed a verification of the specified installation. If the Program determines that the EEI's were not installed in a manner that is consistent with Program guidelines and applicable state and local code requirements, the Program may require that the installation be modified before making any rebate payments. The cost of such modifications is the responsibility of the Customer.

6. **Energy Efficiency Improvements -** (a) The Program will only pay rebates for the pre-approved EEI's specified on the front of the Application. There will be no rebate payments for substitute EEI's unless the substitute is approved by the Program in writing and in advance of installation. (b) All EEI installations must be installed in conformance with state and local code requirements and by properly licensed contractors.

7. **Distributed Generation** - Customers installing distributed generation equipment must comply with any interconnection requirements that their local electric distribution company (LDC) may require. Failure to obtain LDC interconnection approval prior to equipment commissioning could result in disconnection from the LDC's distribution system. It is for this reason that KeySpan requires a copy of the interconnection agreement with the LDC before any rebates will be given. Be aware that obtaining LDC approval for interconnection can be a lengthy process. It is therefore recommended that customers contact the LDC as soon as possible to inquire about complying with any interconnection requirements.

8. **Rebate Amounts -** (a) The Program will provide rebates for approved EEI's equal to the lesser of 50% of the cost of the EEI's or the applicable therm savings amount. (b) The Program will limit rebate amounts to a maximum of $100,000 per project per account. (c) The Program reserves the right to reduce its rebate amounts without notice in addition to negotiating a lower rebate amount on a per unit basis in case of multiple installations at the same site.

9. **Proof-of-Cost of Installation -** The Customer must submit copies of all itemized invoices documenting the installation (including all materials, labor and equipment invoices), which reflect the actual cost of purchasing and installing the EEI's. In addition, the Program may request any other reasonable documentation or verification of the date of installation or the cost to the Customer of purchasing and installing the EEI's. The documentation shall be provided with the submission of this application.

10. **Payment -** The Program expects to make rebate payments to eligible customers within 45 days of satisfactory work verification.

11. **Installation Service Cost -** The Program will recognize material and installation costs <u>only</u> to the extent that they are reasonable and <u>actually incurred</u> by the Customer and fall within the guidelines of The Program.

12. **No Warranties** - (a) The Program does not endorse, guarantee or warrant any particular contractor, manufacturer or product. (b) The Program does not make any representation of any kind regarding the results to be achieved by the EEI's or the adequacy or safety of such EEI's.

13. **Limited Scope Review -** The scope of review by the Program and its Energy Savings Program Inspector of the installation of the EEI's is limited solely to determining whether rebates are payable. It does not include any kind of safety or code review, and should not be relied upon as one.

14. **Changes in the Energy Savings Program -** The program and these Terms & Conditions may be changed by the Program at any time without notice.

15. **Payments Assignable to a Third Party -** (a) The Customer may request that the KeySpan Energy Savings Program rebate be paid directly to a third party by so indicating on the front of this application. (b) If no payment choice is made, the Program will send the payment to the Customer directly at the address indicated in this Application.

16. **No Tax Liability to the Company -** The Program is not responsible for any tax liability which may be imposed as a result of receipt of the rebate by the Customer

17. **Contractor Insurance -** The Program is not responsible for any damage that may be caused as a result of an installation of any EEI. It is the responsibility of the customer to select Contractors who carry appropriate insurance coverage.

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