



**Central Hudson Gas & Electric Company**

# **Residential Natural Gas Program**

**Phase II Process Evaluation · December 2011  
Revised December 2012**

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## **Abstract**

Central Hudson Gas and Electric, a regulated transmission and distribution utility serving gas and electric customers in New York State's Mid-Hudson River Valley, retained Applied Energy Group to conduct a process evaluation of Central Hudson's Residential Natural Gas Program.

The program offers residential natural gas customers rebates and incentives to purchase and install energy efficient space or water heating equipment and systems. It also provides education and training to Central Hudson trade allies and HVAC contractors to perform quality installations.

To arrive at the final recommendations of the process evaluation, AEG conducted interviews with Central Hudson program staff, third-party program implementers, participating customers and contractors. AEG also reviewed program materials, updated the program logic model, and assessed Central Hudson's program tracking methods and central databases. The results of the analysis, along with key findings and recommendations for program improvements are included in this report.

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## Executive Summary

Applied Energy Group, Inc. (“AEG”) was retained by Central Hudson Gas & Electric Company (“Central Hudson”) to conduct a process evaluation of its Residential Natural Gas Program.

The program targets residential customers that are interested in purchasing or replacing their space and water heating equipment with the energy efficient options offered by the program. Measures that are eligible for rebates include natural gas furnaces, steam and water boilers, indirect water heating, boiler reset controls, and programmable thermostats. In addition, incentives of up to \$420 are available to customers to install duct and air sealing from qualified contractors.

Central Hudson markets the program directly to homeowners through local media, Valpak mailers, direct mail and bill inserts to Central Hudson customers. In addition, Honeywell Utility Solutions (“Honeywell”), the program implementer, markets the program to Central Hudson’s trade allies and distributors including local heating, plumbing and HVAC contractors, and manages an external call center that provides customer service to SavingsCentral customers. Central Hudson promotes their energy efficiency programs through the SavingsCentral brand.

AEG designed the 2011 process evaluation to examine program processes and customer responses to the program. The evaluation identifies methods for gathering data and measuring program results, and makes recommendations for program improvements. To arrive at the final recommendations, AEG performed the following tasks:

- Reviewed program materials and data
- Reviewed program tracking methods
- Updated program logic model and assessed program flow
- Conducted interviews with Central Hudson staff and Honeywell
- Conducted a focus group with installation contractors
- Conducted surveys and site visits with participating customers

## Program Accomplishments

Between 2009 and 2011, participation in the Residential Natural Gas Program steadily increased both in terms of the number of customers that participated in the program and the number of projects completed.

**Table ES1 Total Customers and Completed Projects, 2009-2011**

	2009	2010	2011	Total
Number of Customers	78	199	204	479
Completed Projects	149	388	373	910

Over the three year program period, contractors installed furnaces (26 percent) more often than any other measure, followed closely by programmable thermostats (26 percent) and boilers (24 percent). The number of measures installed also grew over the three year program period.

**Table ES2 Completed Projects by Measure by Year, as of October 21, 2011**

Measures	2009	2010	2011	Total
Furnace	29	94	108	231
Boiler	45	93	86	224
Indirect Water Heater	17	60	47	124
Boiler Reset Control	16	27	38	81
Programmable Thermostat	42	110	84	236
Air Sealing	0	4	10	14
Duct Sealing	0	0	0	0
<b>Total</b>	<b>149</b>	<b>388</b>	<b>373</b>	<b>910</b>

In 2009, the program was at 206 percent of the natural gas savings target and 216 percent of the annual budget. The number of projects increased 160 percent between 2009 and 2010. Due to the success of the program, Central Hudson anticipated expending the New York Department of Public Service (“DPS”) approved 2009 to 2011 funding by the end of March 2010. Therefore, in June 2010, the DPS approved a new program budget and natural gas savings goals and modified the rebate levels. The high level of success in 2009 was not continued into 2010 and 2011, potentially due to the revised rebate levels or the significantly increased energy savings goals and budgets. In 2010 and 2011, Central Hudson was below budget and below the energy savings targets, based on energy savings estimates derived from the *New York Technical Manual*.<sup>1</sup> Between 2010 and 2011, the number of projects decreased 4 percent. An impact analysis to determine actual energy and demand savings achieved through the program will be completed in 2013.

## Summary of Key Findings and Recommendations

### Program Performance

The Residential Natural Gas Program over-performed in 2009 and 2010, such that the New York DPS approved an increase in the program budget and energy savings goals and modified the measure rebate levels in mid-2010. Despite the modification of measure rebate levels, program participation remained steady in 2011. Key findings include:

- 54 percent of customers install more than one measure. No customers have received duct sealing services and very few have received air sealing services.
- The vast majority of furnaces and boilers are rebated at the highest performance level.
- In the absence of the program, almost half of participating customers (49 percent) would have likely purchased the same equipment.
- Approximately 22 percent of customer installations were completed by 3 trade allies.

### Marketing

According to participating customers surveyed, the majority of customers learned about the program through “word-of-mouth” (26 percent), followed by Central Hudson bill inserts (24 percent) and direct mail (12 percent). The SavingsCentral website ranked fourth as the primary source of information on the

<sup>1</sup> New York Evaluation Advisory Contractor Team and TecMarket Works. (October 2010). New York Standard Approach for Estimating Energy Savings from Energy Efficiency Programs. Prepared for the New York Department of Public Service.

program (10 percent). Trade allies learned about the program through Central Hudson staff (50 percent), supply houses in which contractors buy their equipment (50 percent), and from other Central Hudson trade allies (27 percent).

### **Data Tracking**

As per the recommendations from the Phase I process evaluation conducted in late 2009, Central Hudson and Honeywell made a number of changes to Honeywell's proprietary data tracking system ("BBCS") to ensure that the appropriate metrics were tracked and delivered to Central Hudson in a timely manner. Honeywell now provides Central Hudson with weekly summary reports and detailed monthly and year-to-date reports with data on:

- Total measures
- Estimated energy savings based on historical savings
- Program participant counts
- Rebates (by measure and total)

### **Program Satisfaction**

Overall, participating customers and trade allies are very satisfied with the Residential Natural Gas Program and would like to see it continue. Several trade allies recommended that the application be simplified and web-based application submission be made available. Both trade allies and participating customers surveyed recommended that Central Hudson offer rebates on additional measures, such as geothermal, solar hot water heaters and ENERGY STAR appliances.

### **Recommendations**

AEG has several recommendations on how to improve the program. These include:

#### **Conduct a Residential Appliance Saturation Survey and Market Potential Study**

AEG recommends that, within the next year, Central Hudson conduct a Residential Appliance Saturation Survey ("RASS") to identify the type, age and efficiency level of appliances and HVAC equipment currently being used by households within Central Hudson's territory. The RASS will inform program design changes and measures to be considered for inclusion in Central Hudson's Residential Electric HVAC Program. Using the results from the RASS, a Market Potential Study should be completed that quantifies the quantity and targeted end uses where savings can be realized.

#### **Continue Aggressive Marketing Campaign to Customers and Trade Allies**

The changes to Central Hudson's marketing strategy over the last year have been positive and should be continued. Although there is evidence that customers' overall awareness of energy efficiency is increasing, customers that participated in this program were often unaware that Central Hudson offered rebates for energy efficient lighting, for example.

Central Hudson should continue to provide clear, accessible information to its residential customers on the benefits of installing energy efficient natural gas equipment and systems. Central Hudson should also continue to aggressively promote this program as part of the SavingsCentral brand and to inform



customers of its other energy efficiency programs. Honeywell should continue to aggressively market the program to trade allies.

In order to track changes in customer awareness moving forward, Central Hudson should include a question on the rebate application that asks customers to identify how they learned about the program.

### **Create a Flexible System for Completing and Submitting Rebate Applications**

Although the majority of contractors mentioned that the rebate application process is not burdensome, several had suggestions for improving the process and making it more consistent with how business operates today.

Honeywell should give create a mechanism for contractors to complete applications online and give them the option of submitting the rebate application online or of filling out the application online and printing it through Adobe Acrobat. This would streamline the application process for many contractors and potentially end the problems associated with handwriting (e.g. not enough space on the rebate forms, illegible handwriting).

## 1. Introduction

Applied Energy Group, Inc. (“AEG”) was retained by Central Hudson Gas & Electric Company (“Central Hudson”) to conduct a process evaluation of its Residential Natural Gas Program. The residential natural gas program is one of three “expedited” energy efficiency programs that have been implemented by Central Hudson to help the state meet its energy efficiency goals.<sup>2</sup>

Central Hudson is a regulated transmission and distribution utility serving approximately 300,000 electric customers and 75,000 natural gas customers in New York State’s Mid-Hudson River Valley, which extends from the suburbs of metropolitan New York City to the Capital District of Albany.

The Residential Natural Gas Program targets residential customers that are interested in purchasing or replacing their space and water heating equipment with the energy efficient options offered by the program. Retrofit and new construction or major remodeling residential customers are eligible to receive incentives for natural gas furnaces, steam and water boilers, indirect water heating, boiler reset controls, and programmable thermostats. In addition, incentives of up to \$420 are available to customers to install duct and air sealing from qualified contractors.

This is the second process evaluation that has been carried out by AEG on the Residential Natural Gas Program. The Phase I process evaluation was conducted during the first year of the program and the results were published in December 2009. AEG made recommendations to Central Hudson on how to improve program marketing, tracking, and program communications, which Central Hudson adopted in early 2010.

### 1.1 Phase II Process Evaluation Approach

AEG designed Phase II of the residential natural gas program evaluation to analyze program processes and customer and contractor responses to the program. The study identifies methods for gathering data and measuring program results. It also makes recommendations for program improvements. Impact estimates are not a part of the evaluation. However, some estimates of the impacts have been provided in the report. To arrive at the final recommendations, AEG carried out the following research activities.

#### 1.1.1 Program Materials and Data Review

AEG reviewed current program materials and relevant past studies for this report. This review was especially important for preparing the interview guides and survey instruments for other process evaluation tasks. As part of this review, the evaluation team reviewed documents provided by Central Hudson including program marketing materials (numbers, types, and means of distribution), program logic model, and key findings from the Residential Appliance Saturation Study (“RASS”) conducted in 2006. AEG also reviewed data on program performance that was provided by Honeywell Utility Solutions (“Honeywell”), the third-party program implementation contractor.

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<sup>2</sup> The New York DPS established the Energy Efficiency Portfolio Standard (“EEPS”) on June 23, 2008. As part of this portfolio standard, the DPS mandated New York State gas and electric utilities to administer energy efficiency programs in addition to the New York State Energy Research and Development Authority (“NYSERDA”).

### **1.1.2 Program Tracking and Database Review**

AEG reviewed current program tracking and reporting carried out by Central Hudson program staff and Honeywell. Honeywell has a proprietary system called BBCS that supports energy efficiency programs for their customers and is used to process rebate applications. The Phase I process evaluation considered how to improve the system to ensure Central Hudson had the data it needed to submit timely progress reports to the New York Department of Public Service ("DPS"). Phase II considered customer satisfaction levels with rebate processing times, weekly and monthly reports provided by Honeywell summarizing activities to date, and the tracking of forecasted projects utilized to closely monitor incentives and program spending.

### **1.1.3 Program Logic Model**

AEG updated the program logic model based on interviews with Central Hudson program staff and third-party program implementers. The model shows the linkages among the program's activities, outputs, key program stakeholders, and short, intermediate, and long-term outcomes. It also highlights potential external influences and program inputs. The program logic model is an important resource to program implementation and management staff, and should be periodically reviewed and updated.

### **1.1.4 Central Hudson Staff Interview**

AEG conducted a comprehensive, group interview with Central Hudson program staff in June 2011. The purpose of this interview was to get staff impressions of program performance, marketing and customer awareness of the program, and opportunities for program improvements. Individual interviews with program staff, as well as informal discussions around program performance, were also conducted between June and August 2011. Individual interviews focused on program design and delivery issues, program performance, potential areas of improvements, and overall program effectiveness.

### **1.1.5 Third Party Implementer Interview**

AEG interviewed Honeywell in August 2011. The interview provided information on program implementation activities, scheduling, program data and tracking methods, the relationship between the program implementation contractor and participating HVAC contractors, and barriers to increased participation. AEG also obtained detailed information on program performance during the second year of the program. An interview guide can be found in Appendix A.

### **1.1.6 Participating Customer Surveys**

AEG administered a 10 to 12 minute telephone survey to a sample of program participants to assess program experience and awareness, customer satisfaction, barriers to participation, free ridership and areas for potential program improvement. A survey guide can be found in Appendix B.

Between August 21, 2009 and July 8, 2011, Central Hudson approved 433 rebates for the Residential Natural Gas Program. Central Hudson provided data for all 433 rebates issued, including customer name, account number and telephone number. AEG scrubbed the participant data to remove duplicate natural gas Central Hudson account numbers from the participant list, thereby accounting for customers that received more than one rebate. The scrubbed participant data included 215 unique participants. AEG calculated the sample size at a 90 percent confidence interval with an error margin of +/-10

percent. The sample size was calculated at 56. Participants were then randomly selected based on unique identifiers determined by Microsoft Excel’s random number generator. Program participants were contacted based on the unique identifier, beginning with the smallest number.

Fifty-six (56) surveys were completed out of 120 customer contacted; therefore, the survey response rate was 47 percent.

**1.1.7 Participating Contractor Interviews**

AEG administered a five to seven minute telephone survey to Central Hudson’s Top Flight trade allies to assess their experience with the program, the most commonly installed measures, impact of the program on business, customer satisfaction and potential areas for program improvements. Top Flight contractors are among the most active in the program. AEG completed 11 surveys from a sample of 23 participating contractors. A survey guide can be found in Appendix C.

**1.2 Report Outline**

This report describes the key findings from the Residential Natural Gas HVAC Program process evaluation and provides recommendations for program improvement. Section 2 describes the program and includes information on program activities, outputs and outcomes. Section 3 outlines program performance to-date and Section 4 describes trade ally participation and contractor satisfaction. Sections 5, 6, and 7 discuss program marketing, data tracking, equipment inspections, and customer satisfaction, respectively. Section 8 outlines AEG’s key findings and recommendations for program improvements.

**2. Program Description**

The Residential Natural Gas HVAC Program was deployed on July 1, 2009. The program targets residential customers that are interested in purchasing or replacing their space and water heating equipment with the energy efficient options offered by the program. Retrofit and new construction or major remodeling residential customers are eligible to receive incentives for natural gas furnaces, steam and water boilers, indirect water heating, boiler reset controls, and programmable thermostats.

**Table 1 Program Rebates by Measure**

Equipment	Minimum Performance	Rebate
Furnace	AFUE>=90%	\$140
	AFUE>=92%	\$140
	AFUE>=92% w/ ECM Fan	\$280
	AFUE>=94% w/ ECM Fan	\$420
	AFUE>=95% w/ ECM Fan	\$420
Water Boiler	AFUE>=85%	\$350
	AFUE>=90%	\$700
Steam Boiler	AFUE>=82%	\$350
Boiler Reset Control	n/a	\$70
Indirect Water Heater	n/a	\$210
Programmable Thermostat	n/a	\$18

In addition, incentives of up to \$420 are available to customers to install duct and air sealing from qualified contractors. Customers must have a blower door test and/or a duct blaster test to be eligible for these incentives. Tests are performed by contractors that are certified by the Building Performance Institute ("BPI").<sup>3</sup>

**Table 2 Program Incentives**

Measure	Rebate	Efficiency Documentation Required
Air sealing	\$70/hour up to 6 hours	Blower door test results (test in/test out data)
Duct sealing	\$70/hour up to 6 hours	Duct blaster test results (test in/test out data)

The Residential Natural Gas HVAC Program requires that all work is completed by a qualified contractor certified by Central Hudson to participate in the programs. Contractors are required to sign a participation agreement with Central Hudson to participate, acknowledging the program rules and contractor licensing and insurance requirements.

Central Hudson markets this program with the Residential Electric HVAC Program, through local media, Valpak mailers, direct mail and bill inserts to Central Hudson customers. In addition, Honeywell markets the program to Central Hudson's trade allies and distributors including local heating, plumbing and HVAC contractors, and manages an external call center that provides customer service to SavingsCentral customers (see Section 6 for more information on program marketing). Central Hudson promotes their energy efficiency programs through the SavingsCentral brand.

The goals of the program are to:

- Educate residential customers about the program and the benefits of installing high efficiency natural gas equipment.
- Develop partnerships with contractors to bring energy efficient natural gas systems and equipment to the market.
- Demonstrate persistent energy savings and provide other benefits to end-users such as improved health, safety, and comfort.
- Help residential customers reduce their electricity and gas bills.
- Effectively install efficient space and water heating equipment in customer homes to achieve Central Hudson energy savings and budget goals.
- Encourage energy saving behavior and awareness through programmable thermostats.
- Build consumer confidence in the reliability of savings estimates through an educated and highly trained contract services team.

## 2.1 Program Budget and Savings Goals

On April 7, 2009, the New York DPS approved a three-year program budget (2009-2011) of \$228,352 with a cumulative natural gas savings goal of 68,300 therms. Due to the success of the Residential Natural Gas Program, Central Hudson anticipated expending the DPS-approved funding by the end of

<sup>3</sup> BPI certified contractors that perform a Manual J Residential Load calculation are eligible for a \$200 incentive under this program.

March 2010. Therefore, the DPS modified the program budget and savings goals in a June 2010 order.<sup>4</sup> The modified three-year program budget is \$662,426 with a savings goal of 253,770 therms. The revised budget was increased by 258 percent for 2010 and 417 percent for 2011. The revised savings goals were increased by 326 percent for 2010 and 553 percent for 2011.

**Table 3 Program Budget, Original and Revised**

	2009	2010	2011	Total
Original Budget	\$45,671	\$91,341	\$91,341	<b>\$228,353</b>
Revised Budget	\$45,671	\$236,032	\$380,724	<b>\$662,427</b>
Percent Increase	100%	258%	417%	<b>290%</b>

**Table 4 Program Therm Savings Goals, Original and Revised**

	2009	2010	2011	Total
Original Savings Target	13,660	27,320	27,320	<b>68,300</b>
Revised Savings Target	13,660	89,140	150,970	<b>253,770</b>
Percent Increase	100%	326%	553%	<b>372%</b>

## 2.2 Market Barriers

Trade allies and distributors play an important role in this program by encouraging customers to make energy efficient upgrades. Contractors are often the primary source of information and the first point of contact for customers that are in need of equipment upgrades or replacements. Therefore, it is critical that contractors have accurate and up-to-date information about the benefits of installing energy efficient equipment and systems and are able to effectively communicate these benefits to customers.

According to the Consortium for Energy Efficiency (CEE,2010), key barriers for achieving greater market penetration and quality installations of natural gas space and water heating equipment include:

- Lack of marketing tools and resources for selling high efficiency equipment. Lowest bid quotes drive the HVAC equipment sales industry. Contractors have an opportunity to sell high efficiency equipment by educating customers about the life cycle benefits of the investments. However, contractors often lack the training and tools to effectively educate the customers and provide information on the benefits and cost effectiveness of high efficiency equipment.
- Lack of consumer awareness of the benefits of investing in high efficiency equipment. The majority of heating equipment sales takes place in the replacement market where consumers need to make quick decisions. Consumers lack the information to make informed decisions and instead rely on the contractor as an expert to guide them through the purchase.
- Lack of consumer knowledge of what constitutes a “quality installation.” Consumers are unaware of what constitutes a “quality installation” or which contractors provide quality services.
- Contractors have little incentive to provide quality installations because they are more likely to provide a low cost or competitive quote installation.

<sup>4</sup> New York State DPS. Case 08-G-1020 April 7, 2009; New York State DPS. Case 09-G-0363 June 17, 2010.

- Split incentives between builders and home buyers. Home builders often choose heating equipment that is low first cost to reduce the overall price of the house, increase profit margins, and spend money in areas more visible to consumers, such as the kitchen or bathroom.

Central Hudson's Residential Natural Gas Program tries to address these barriers through a combination of education, training, and financial incentives to customers and trade allies. This approach has helped to build customer support for high efficiency equipment in the market while educating and providing tools to Central Hudson trade allies to market and install high efficiency systems.

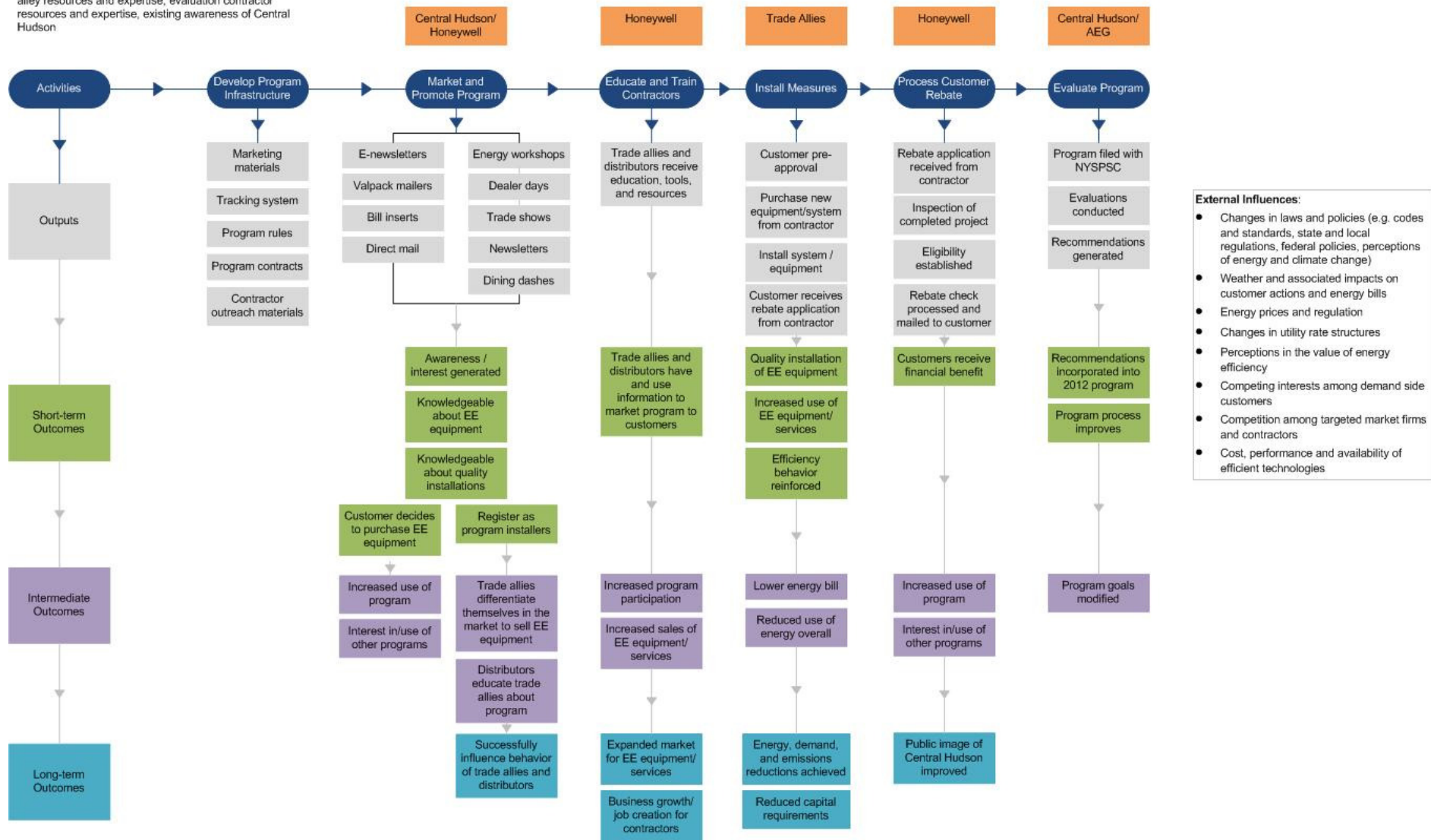
### **2.3 Program Logic Model**

Logic models are graphic representations of what the program is and how it is designed to work. Logic models make the program's assumptions explicit and testable by showing the causal relationships or linkages among the problem or situation the program is designed to address, the intervention (inputs and outputs), and program impact (short, medium, and longer-term outcomes). Models also help to identify partnerships that are critical to the program's performance.

In this logic model, the activities are oriented sequentially across the top of the page from the left to the right. For example, the program's infrastructure, including its advertising materials, tracking systems, program rules, and contracts must be developed before the program can be marketed and customers recruited. The performance spectrum, or program's theory, is oriented vertically from top to bottom.

**Figure 1 Program Logic Model**

**Inputs:** program funding, NYPSC goals and reporting requirements, Central Hudson program staff, implementation contractor resources and expertise, trade ally resources and expertise, evaluation contractor resources and expertise, existing awareness of Central Hudson





### **2.3.1 Activities and Outputs**

There are six main activities in the Residential Natural Gas HVAC Program. Outputs derive directly from program activities and include the things the program does and the people the program reaches. Because outputs help to establish linkages between the situation the program is designed to address and the program's intended outcomes, activities and outputs will be discussed together in this section.

#### *Develop Program Infrastructure*

Activities include gathering market knowledge, setting program goals, designing the program, establishing program rules, developing marketing approaches and content for customers and trade allies, and establishing institutional and operating structures. As the implementation contractor, Honeywell works with Central Hudson staff to design the program and develop its data tracking system. Marketing materials are developed jointly with Central Hudson staff. Program outputs for this activity include marketing activities, program tracking system, program rules manual, program contracts, and trade ally training materials and resources.

#### *Promote and Market Program*

Central Hudson promotes and markets the program to residential customers as part of the SavingsCentral brand. Marketing activities include bill inserts, electronic newsletters, automated telephone calls, Valpak mailers, and direct mail. Honeywell also markets the program to contractors and distributors through education and training programs, energy workshops, and quarterly newsletters.

#### *Educate and Train Central Hudson Trade Allies*

Honeywell maintains direct contact with locally based HVAC contractors and distributors in the Central Hudson service territory. Honeywell provides education and training to contractors on:

- The Central Hudson program, including education on the proper handling and delivery of paperwork, rebate processing, qualifying measures, verification of efficiency levels through AHRI, and program changes.
- How to use energy efficiency as a sales tool including statistics on program performance and energy savings to date.
- New and emerging technologies that are supported by the program.

Honeywell also hosts a number of events throughout the year that are designed to bring contractors, distributors, and manufacturers of efficient products together. These outreach events include a manufacturer representative that provides information on new program technologies and paperwork that supports the equipment.

#### *Install Measures*

Central Hudson trade allies are responsible for installing efficient equipment rebated by the program. To participate in the program, contractors must sign a participation agreement. Central Hudson maintains a listing of qualified contractors on the SavingsCentral website. Honeywell will also refer customers to this listing if approached by a Central Hudson customer.

### *Process Customer Rebate*

After the equipment is installed, the trade ally completes the rebate application and obtains the customer signature. The completed paperwork is mailed to Honeywell's rebate processing center in Syracuse. Honeywell provides contractors with a rebate processing checklist to minimize incomplete applications. For customers to qualify for a rebate the contractor must provide Honeywell with the rebate application, project invoice, and manufacturer cut sheet and/or AHRI certificate.

When the customer application arrives in Syracuse for processing, the rebate processing manager and staff evaluate the efficiency (e.g. EER level, tonnage) information on the rebate form and verify that the AHRI certificate is accurate. Staff also verify customer information against Central Hudson account data, which is imported into Honeywell's database system.

Once the information is verified, the application is either placed in rebate or hold status. If the application is ready to be rebated, a check will be cut that week, usually on Thursday or Friday afternoons, and mailed to the customer. If the application is put on hold, then it signals to Honeywell that the project must be inspected before a rebate check will be mailed to the customer.

### *Project Inspections*

Honeywell inspects the first four projects that are completed by a contractor, and then 10 percent of the projects completed by a contractor thereafter. For example, if a participating contractor has completed 104 projects for this program, the first four projects would be inspected by Honeywell staff and then 10 projects thereafter.

During the inspection, Honeywell staff debriefs the customer on overall contractor satisfaction. This feedback is one of the few sources of information on customer service that the utility has. Honeywell also checks the equipment that was installed and verifies the equipment's name plate model and serial number with the information printed on the rebate application. Honeywell has a process in place to identify duplicate serial numbers. Serial numbers are entered into BBCS, which automatically identifies duplicates.

### *Evaluate Program*

Evaluation activities include process and impact studies. Program improvement recommendations generated for Central Hudson are incorporated into the program design. The program logic model is updated to reflect program design modifications, thereby providing a continuous link between program evaluation and program design and infrastructure. Central Hudson is responsible for program filings with the DPS.

## **2.3.2 Outcomes**

Outcomes are the result of program partners and target audiences responding to the outputs of the program. There are short-term, intermediate, and long-term outcomes of the program.

### *Short-term Outcomes*

When the program is marketed and promoted, customers, trade allies, and contractors may become aware of and interested in the Residential Natural Gas Program. Customers and contractors may also become knowledgeable about the environmental benefits of installing high efficiency systems.

If contractors have the tools and resources they need to effectively market and promote the program to customers, then customers may decide to install high efficiency systems or equipment. The program may also lead to an increase in the number of quality installations performed, increased use of energy efficiency equipment, and an increase in the number of contractors that register as participants of the program.

Other short-term outcomes of the program include the financial benefit that customers receive for participating in the program and the improvement in program process from evaluations.

### *Intermediate Outcomes*

Intermediate outcomes of the program may include increased use of the program by customers and contractors, interest in and use of other Central Hudson efficiency programs, increase in the number of contractors and distributors that are marketing high efficiency equipment to customers, and reduced household energy consumption and overall consumption.

### *Long-term Outcomes*

The long-term outcomes of the program may include energy savings for Central Hudson, reduced utility emissions and capital requirements, improved public image of Central Hudson as a utility that responds to customer needs and is considerate of environmental issues, and job growth and market expansion for contractors that sell energy efficient equipment.

### **2.3.3 External Factors**

There are a variety of factors outside the control of Central Hudson and its contractors that may influence the program. Documenting these factors help improve program planning by identifying important program partners, the part(s) of the issue the program can realistically influence, which evaluation measures will accurately reflect project outcomes, and other needs that must be met to address this issue.

- Changes in political priorities (e.g. codes and standards, state and local regulations, federal policies, perceptions of energy and climate change)
- Weather and associated impacts on customer actions and energy bills
- Energy prices and regulation
- Changes in utility rate structures
- Perceptions in the value of energy efficiency
- Competing interests among demand side customers
- Competition among targeted market firms and contractors
- Cost, performance, and availability of efficient technologies

### 3. Program Performance

Due to the success of the Residential Natural Gas Program, Central Hudson anticipated expending the New York DPS approved funding by the end of March 2010. Therefore, in June 2010, the DPS approved a new program budget and natural gas savings goals and modified the rebate levels. In 2009, the program was at 206 percent of the natural gas savings target and 216 percent of the annual budget. The number of projects increased 160 percent between 2009 and 2010.

As of October 2011, Central Hudson spent approximately 64 percent or \$424,196 of the total program budget.<sup>5</sup> From July 2009 to September 2011, the program acquired an estimated 131,814 therms, or approximately 52 percent of the cumulative natural gas savings goal, and an estimated 108 MWh of annual electrical savings.<sup>6</sup> This program does not have an electric savings goal. The energy savings estimates were derived from the *New York Technical Manual*.<sup>7</sup> An impact analysis to determine actual energy and demand savings achieved through the program will be completed in 2013.

**Table 5 Program Therm Savings Goals and Actual Therm Savings, 2009 to 2011**

	2009	2010	2011	Total
Original Savings Target	13,660	27,320	27,320	<b>68,300</b>
Revised Savings Target	13,660	89,140	150,970	<b>253,770</b>
Actual Savings (as of Sept 2011)	28,076	45,229	58,509	<b>131,814</b>
% of Revised Target Achieved	206%	51%	39%	<b>52%</b>

**Table 6 Program Budgets and Actual Expenditures, 2009 to 2011**

	2009	2010	2011	Total
Original Budget	\$45,671	\$91,341	\$91,341	<b>\$228,353</b>
Revised Budget	\$45,671	\$236,032	\$380,724	<b>\$662,427</b>
Actual Expenditures (as of Oct 2011)	\$98,457	\$158,589	\$167,150	<b>\$424,196</b>
% of Revised Budget Spent	216%	67%	44%	<b>64%</b>

**Table 7 Total Customers and Completed Projects, July 2009 to October 2011<sup>8</sup>**

	2009	2010	2011	Total
Number of Customers	78	199	204	479
Completed Projects	149	388	373	910

<sup>5</sup> October 2011 Program Tracking Dashboard compiled by Central Hudson and submitted quarterly to the New York DPS.

<sup>6</sup> Savings have not yet been evaluated by an independent evaluation contractor. This is an estimate provided by Honeywell.

<sup>7</sup> New York Evaluation Advisory Contractor Team and TecMarket Works. (October 2010). New York Standard Approach for Estimating Energy Savings from Energy Efficiency Programs. Prepared for the New York Department of Public Service.

<sup>8</sup> The number of projects is equivalent to the number of measured installed. It does not necessarily correspond to the number of customers that participated in the program as one customer may have been rebated for more than one measure.

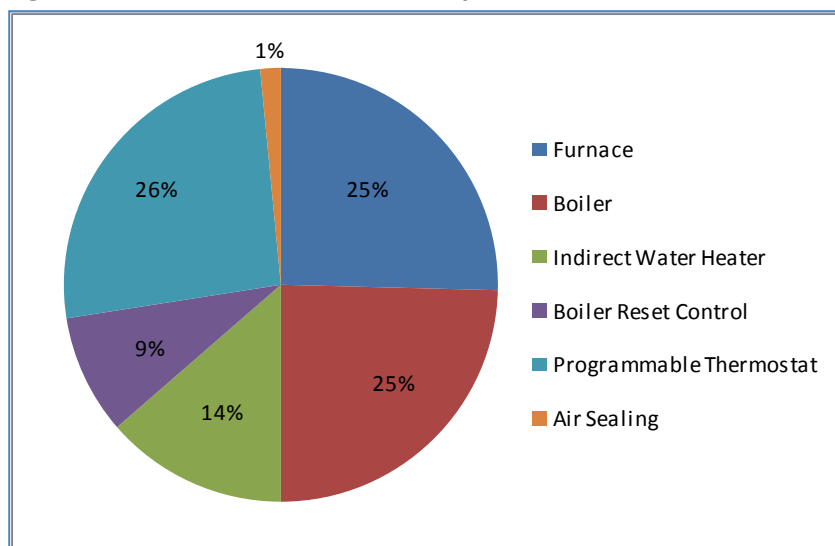
**Table 8 Program Rebates by Measure, Original and Modified**

Equipment	Minimum Performance	Original Rebate	Modified Rebate
Furnace	AFUE>=90%	\$200	\$140
	AFUE>=92%	\$200	\$140
	AFUE>=92% w/ ECM Fan	\$400	\$280
	AFUE>=94% w/ ECM Fan	\$600	\$420
	AFUE>=95% w/ ECM Fan	\$600	\$420
Water Boiler	AFUE>=85%	\$500	\$350
	AFUE>=90%	\$1,000	\$700
Steam Boiler	AFUE>=82%	\$500	\$350
Boiler Reset Control	n/a	\$100	\$70
Indirect Water Heater	n/a	\$300	\$210
Programmable Thermostat	n/a	\$25	\$18

Over the three year program period, contractors installed furnaces (26 percent) more often than any other measure, followed closely by programmable thermostats (26 percent) and boilers (24 percent). The number of measures installed grew over the three year program period. Between 2009 and 2011, the number of furnaces installed tripled and the number of indirect water heaters and boiler reset controls installed more than doubled. The number of programmable thermostats and boilers installed approximately doubled. In 2010, there were four air sealing projects and no duct sealing projects. In 2011, there have been 10 air sealing projects to date and no duct sealing projects. The average number of hours per air sealing project incentivized by Central Hudson was 5.6 hours (min=4, max=6). In almost all cases, the most efficient equipment was rebated at a significantly greater percentage than its less efficient counterpart.

**Table 9 Completed Projects by Measure by Year, July 2009 to October 2011**

Equipment	2009 Rebates		2010 Rebates		2011 Rebates	
	Number of Rebates	% Total Rebates	Number of Rebates	% Total Rebates	Number of Rebates	% Total Rebates
Furnace AFUE>=90%	1	0.7%	4	1.0%	1	0.3%
Furnace AFUE>=92%	2	1.3%	24	6%	23	6%
Furnace AFUE>=92% w/ ECM Fan	2	1.3%	1	0.3%	1	0.3%
Furnace AFUE>=94% w/ ECM Fan	1	0.7%	4	1.0%	6	1.6%
Furnace AFUE>=95% w/ ECM Fan	23	15%	61	16%	77	21%
<b>Subtotal</b>	<b>29</b>	<b>19%</b>	<b>94</b>	<b>24%</b>	<b>108</b>	<b>29%</b>
Water Boiler AFUE>=85%	2	1.3%	7	1.8%	5	1.3%
Water Boiler AFUE>=90%	42	28%	84	22%	81	22%
Steam Boiler AFUE>=82%	1	0.7%	2	0.5%	0	0.0%
<b>Subtotal</b>	<b>45</b>	<b>30%</b>	<b>93</b>	<b>24%</b>	<b>86</b>	<b>23%</b>
Boiler Reset Control	16	11%	27	7%	38	10%
Indirect Water Heater	17	11%	60	15%	47	13%
Programmable Thermostat	42	28%	110	28%	84	23%
Air Sealing	0	0%	4	1.0%	10	3%
<b>Total</b>	<b>149</b>	<b>100%</b>	<b>388</b>	<b>100%</b>	<b>373</b>	<b>100%</b>

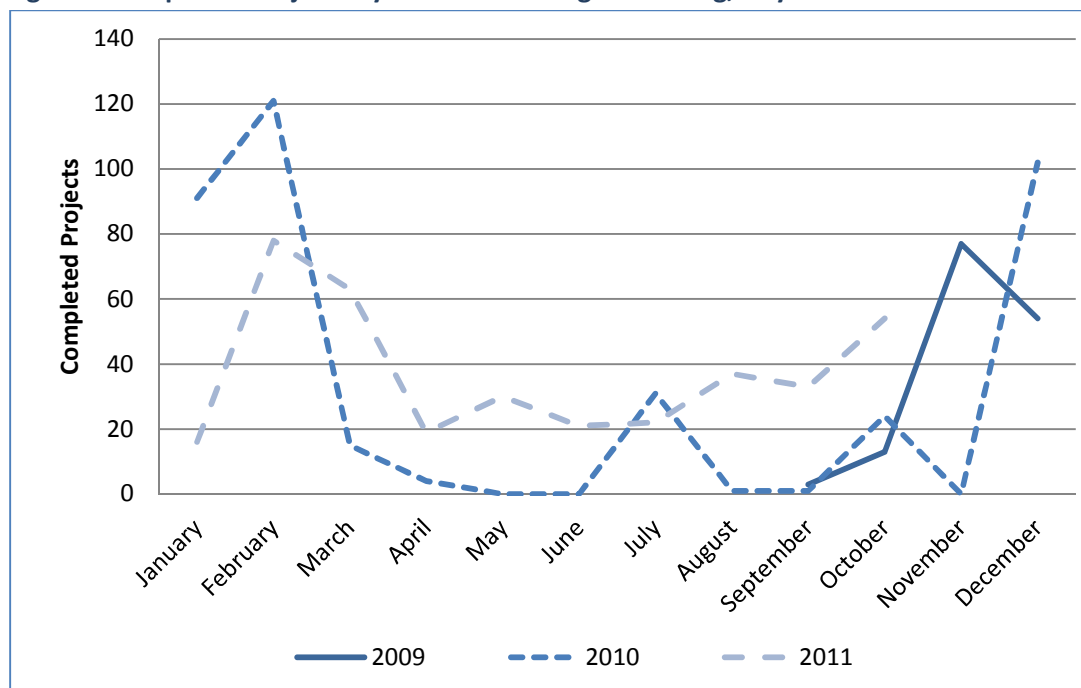
**Figure 2 Distribution of Measures, July 2009 to October 2011**

Energy efficiency programs that offer efficient space and water heating measures typically experience increased participation during the winter months, when the outside temperature is coldest and heating equipment is used on a consistent basis. During the cold New York winters, residential customers that use natural gas space and water heating equipment may find the program essential because a large portion of Central Hudson's residential customer's natural gas usage is for space and water heating. Therefore, if the equipment fails, the customer will likely replace it immediately. Additionally, as demand increases and natural gas prices spike during the winter months, customers are encouraged to decrease their natural gas usage by modifying the temperature of the home and reducing air leakage from the home.

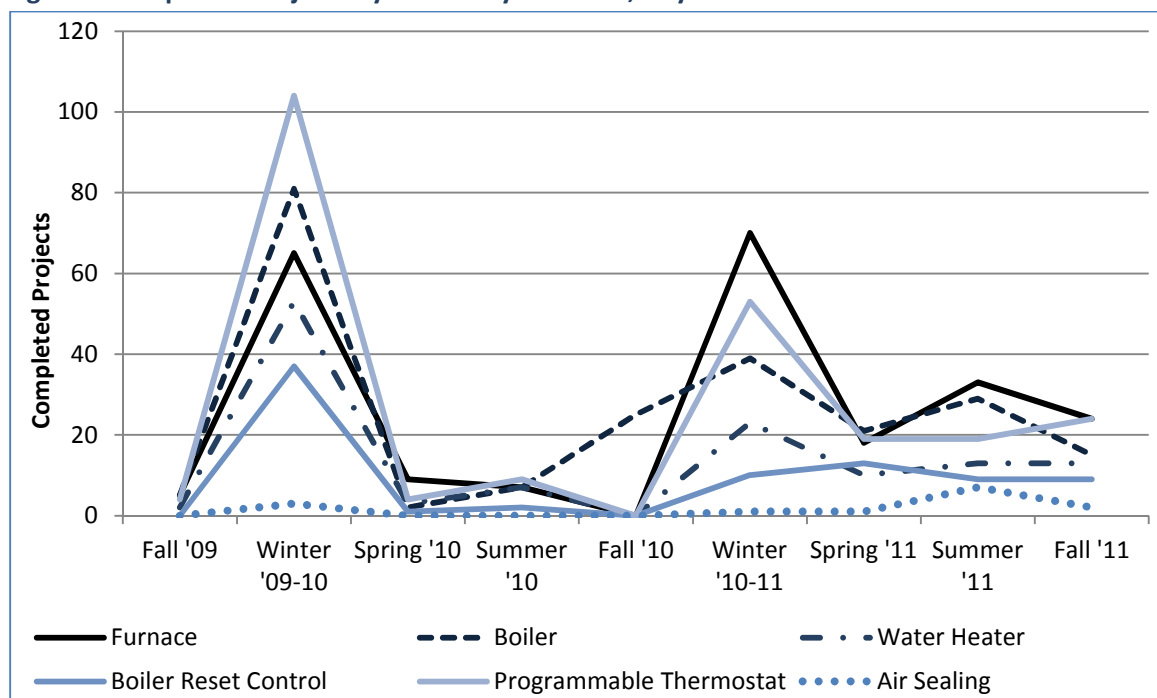
The number of completed projects per month was typical of a program that offers rebates for natural gas space and water heating equipment, with participation spiking in the winter months (November to February) and falling during the spring (March and April) and summer months (May to August).

The reduction in measure rebate levels had a negligible impact on overall 2011 program participation, which was 96 percent of 2010 participation. However, the number of projects completed spanned more evenly across the calendar year. The reasoning is likely two-fold: (1) Central Hudson customers are replacing natural gas equipment out-of-season when the equipment is not essential and (2) water heating equipment, which is utilized year-round, has failed and needs to be replaced.

**Figure 3 Completed Projects by Month including Air Sealing, July 2009 to October 2011**



**Figure 4 Completed Projects by Season by Measure, July 2009 to October 2011**



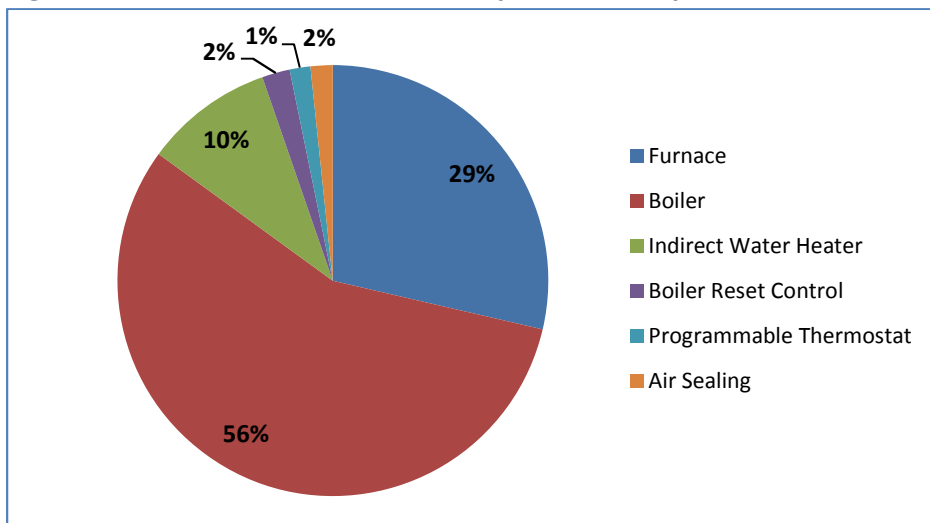
Incentives vary according to the performance level (e.g. Tier I, Tier II) of the heating and water heating equipment rebated. Equipment that operates at a higher efficiency level is rebated at a higher level. For example, rebates for water boilers range from \$350 to \$700 depending on the annual fuel utilization efficiency (“AFUE”) ratings. Offering tiered rebates helps utilities to incentivize customers to purchase the most efficient equipment on the market and is a cost-effective resource for encouraging energy-

efficiency behavior. Over the three-year program year, Central Hudson paid \$329,155 in rebates to residential natural gas customers participating in this program. The majority of rebate funds went to finance the installation of boilers (56 percent), followed by furnaces (29 percent) and indirect water heaters (10 percent).

**Table 10 Total Incentives Paid Out by Year, July 2009 to October 2011**

	2009	2010	2011	Total
Furnace	\$15,800	\$39,700	\$38,780	\$94,280
Boiler	\$43,500	\$83,550	\$58,450	\$185,500
Indirect Water Heater	\$5,100	\$16,920	\$9,870	\$31,890
Boiler Reset Control	\$1,600	\$2,610	\$2,660	\$6,870
Programmable Thermostat	\$1,050	\$2,533	\$1,512	\$5,095
Air Sealing	\$0	\$1,320	\$4,200	\$5,520
Duct Sealing	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$67,050</b>	<b>\$146,633</b>	<b>\$115,472</b>	<b>\$329,155</b>

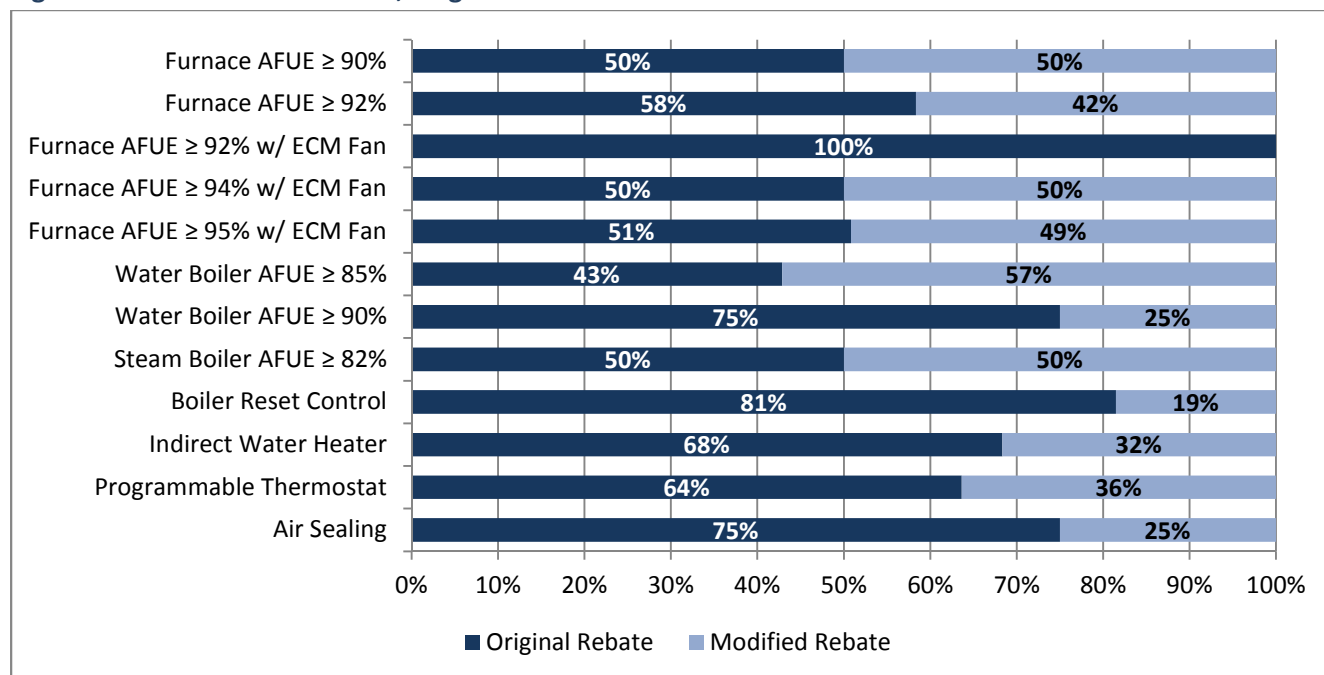
**Figure 5 Distribution of Rebate Dollars by Measure, July 2009 to October 2011**



The high level of success in 2009 was not continued into 2010 and 2011. However, the new program budget, new program savings goals and rebate levels were established in June 2010, halfway through the program year. Program participation increased between 2009 and 2010, but decreased 4 percent from 2010 to 2011. However, a closer examination of 2010 performance demonstrates that 65 percent of the measures were rebated in the first half of the year, under the original rebate.



**Figure 6 2010 Measure Rebated, Original Rebate versus Modified Rebate**



### 3.1 Number of Projects per Customer

Over the three-year program period, 46 percent of customers had one measure installed or replaced, or air sealed their home. The remaining 54 percent of participating customers were rebated for more than one measure. The most frequent combinations of multiple installations were programmable thermostats with boilers or furnaces. In the 236 projects in which customers were rebated for the installation of programmable thermostats, customers also installed or replaced a boiler or furnace.

**Table 11 Number of Measures Installed per Customer by Year, July 2009 to October 2011**

Measures Installed	2009		2010		2011	
	Number of Customers	% Total Customers	Number of Customers	% Total Customers	Number of Customers	% Total Customers
1	37	47%	87	44%	99	49%
2	20	26%	74	37%	69	34%
3	14	18%	17	9%	20	10%
4 or more	7	9%	21	11%	16	8%

### 3.2 Participant Demographics

Ninety-one (91) percent of participating customers live in a house, 7 percent in an apartment and 1.8 percent in a multifamily building.

**Table 12 Type of Housing of Participant by Percent**

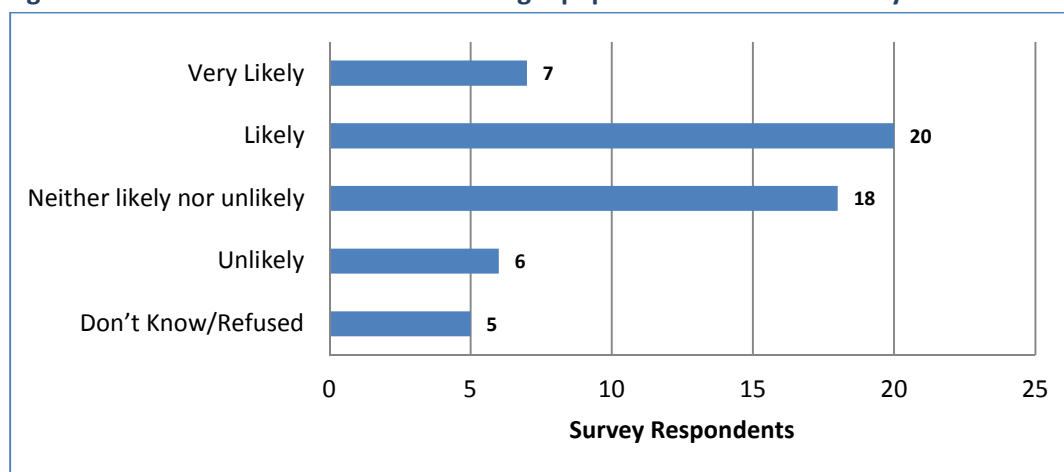
Is your home a..	Percent	Number
House	91%	51
Apartment	7%	4
Other (Multi-family building)	1.8%	1
N	100%	56

Honeywell also tracks dwelling type through the rebate application process. The majority of program participants live in single family houses. A small percentage lives in multi-family buildings.

### 3.3 What Customers Might Have Done in Absence of Program

In the absence of the program, most customers surveyed by AEG would have likely purchased and installed the exact same equipment. Seven (13 percent) respondents said they definitely would have purchased the same equipment; 20 (36 percent) respondents said they would have been likely to purchase the same equipment; 18 (32 percent) respondents would have been neither likely nor unlikely, and 6 (11 percent) respondents would have been unlikely to purchase the same equipment. An impact analysis, to be completed in 2013, will analyze free ridership and spillover.

**Figure 7 Likelihood of Customer Purchasing Equipment without the Utility Incentive**



## 4. Trade Ally Participation

Trade ally participation is one of the key elements to the design of the program. Honeywell works closely with Central Hudson trade allies to recruit HVAC contractors and distributors and educate and train them on how to market the program to customers, process paperwork, and sell energy efficient equipment.

Contractors must sign a participation agreement with Central Hudson to qualify to participate in this program. There are 411 participating contractors. Forty-eight (48) are BPI certified. Honeywell maintains a list of participating contractors for the residential natural gas and electric HVAC programs. Contractors that are registered to participate in the natural gas program also participate in the residential electric HVAC program.

### 4.1 Contractor Survey Respondents

Eleven (11) participating contractors responded to AEG’s survey for the process evaluation. Out of the 11 survey respondents, nine contractors have been active in the program for more than two years and most have been in business for more than 20 years. The remaining two contractors have been active in the program for about one to two years.

The primary reasons for program participation according to the contractors surveyed are that the program helps them to:

- (1) **Generate business.** The program is a good sales and marketing tool. Seventy-three (73) percent of contractors surveyed said that they have seen their sales increase during the past year. Two out of the eight that responded to the open-ended question of “why did you say your sales increased (decreased)?” cited the Central Hudson program as a contributing factor to the rise in sales. Six of the 11 respondents said that over 50% of their sales are from the energy efficient equipment rebated in this program.
- (2) **Remain competitive in the HVAC industry.** According to Honeywell, customers are increasingly asking contractors for energy efficient equipment. Contractors must be knowledgeable about energy efficient equipment and skilled at communicating the benefits to customers to remain competitive in the HVAC industry.
- (3) **Save customers money** by encouraging them to install energy efficient equipment.

## 4.2 Participation by Program Year

The number of participating contractors that completed projects over the three-year program period steadily increased. In 2009, 35 contractors completed 147 projects. Contractors completed an average of 4.2 projects each. In 2010, 75 participating contractors completed 386 projects, for an average of 5.4 projects per contractor. In 2011, 80 contractors completed 370 projects, for an average of 4.6 projects per contractor. A few contractors completed the majority of jobs. Approximately 3 percent of the participating contractors completed more than 20 installations annually.

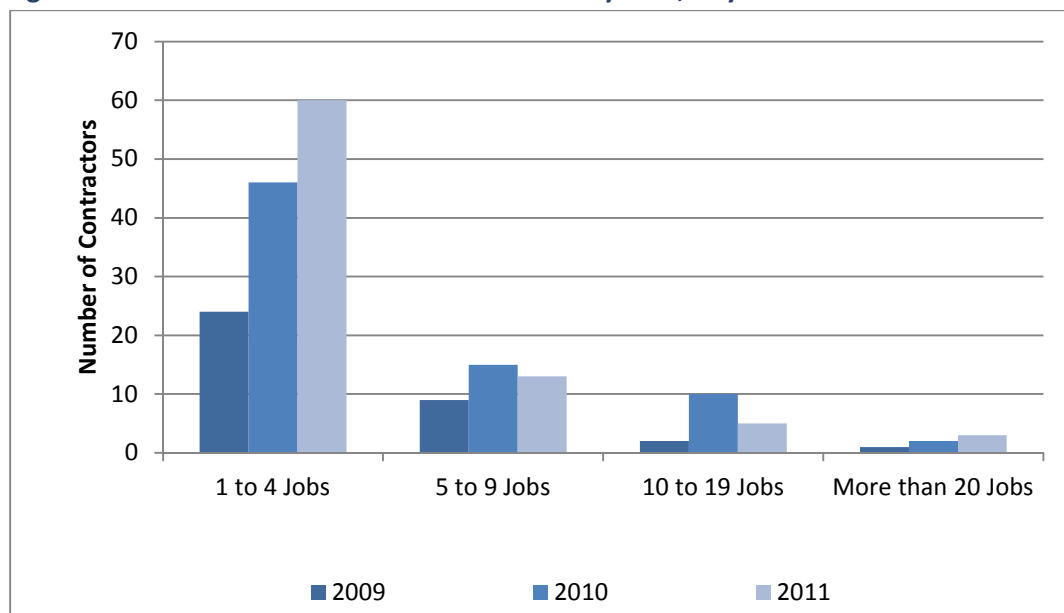
**Table 13 Contractor Participation by Year, July 2009 to October 2011**

	2009	2010	2011
Number of Contractors	36	73	81
Average Number of Jobs per	4.1	5.3	4.6
Maximum Number of Jobs per	24	40	45

**Table 14 Average Rebate Dollars per Contractor by Year, July 2009 to October 2011**

	Average	Minimum	Maximum
2009	\$1,862	\$200	\$8,350
2010	\$2,008	\$200	\$13,100
2011	\$1,420	\$140	\$11,294

**Figure 8 Distribution of Contractor Installations by Year, July 2009 to October 2011**



Out of the 118 contractors that completed projects over the three-year program period, 26 contractors installed 10 or more measures per customer.

**Table 15 Top Ten Most Active Contractors, July 2009 to October 2011**

Contractors	Measures Rebated	Sales
HECKEROTH PLUMBING HEATING OF WOODSTOCK	109	\$32,744
PERRY HEATING & COOLING, INC.	40	\$20,498
HUDSON VALLEY HEATING COMPANY	45	\$16,343
FOLKES HEATING COOLING & BURNER SERV.	43	\$14,849
APPOLO HEATING	31	\$13,897
SIGMA-TREMBLAY	26	\$12,046
ARCHIBALD HEATING & A/C	26	\$10,871
WK MECHANICAL, INC.	32	\$9,704
LOWE PLUMBING HEATING A/C, INC.	38	\$8,868
KOOL-TEMP HEATING & COOLING	18	\$7,958

### 4.3 Contractor Satisfaction

Overall, contractors are satisfied with the residential energy efficiency program. On a scale of one to five, where one indicates “not at all satisfied” and five indicates “very satisfied,” AEG asked survey respondents to rate their level of satisfaction overall and with various aspects of this program.

**Table 16 Contractor Satisfaction**

	Very Satisfied ←-----→ Not Satisfied					DK
	5	4	3	2	1	
Responsiveness of utility staff	73%	18%	9%	0%	0%	0%
Program requirements in terms of information required for utility	73%	27%	0%	0%	0%	0%
Processing time for rebate applications	64%	9%	18%	0%	0%	9%
Efficiency program overall	45%	55%	0%	0%	0%	0%

### **4.3.1 What Contractors Like Best about Program**

AEG asked contractors to state what they liked best about the residential natural gas program. In this open ended question, 80 percent of contractors cited that they liked the program's impact on their sales and the contribution of the program to the energy efficiency industry. Others said that they liked the efficiency and clarity of having direct communication with Tom Wolf, Program Manager at Honeywell, and that the program was good for customers.

Although many contractors mentioned their disappointment of seeing the rebate levels decrease this year, most thought the program remained beneficial to customers; that it saved the customer money and made energy efficiency a more affordable option because the price of equipment is reduced through program rebates.

Contractors surveyed had mixed opinions about whether customers would have installed the same equipment anyway without the program. However, the majority of survey respondents (75 percent) believed customers would not have installed high efficiency equipment without the program because of the higher upfront costs of high efficiency measures.

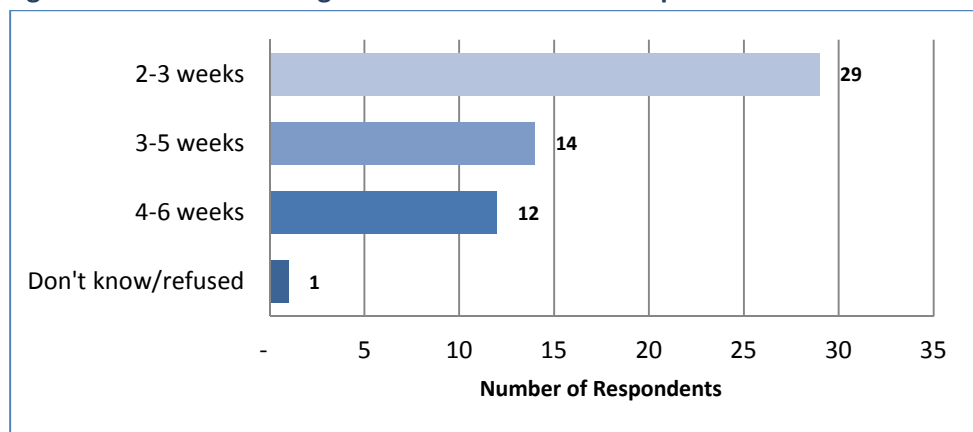
### **4.3.2 Satisfaction with Rebate Processing**

Participating contractors are required to submit a rebate application on behalf of the customer for every project completed, which includes the rebate form, with the customer's account number and signature, a dated, paid sales receipt for the purchase of the new equipment, and the serial and AHRI number of the new equipment. According to most of the contractors surveyed, this is a relatively quick and efficient process, which takes about 30 minutes to complete.

From the time an application is submitted, it should take approximately 4 to 6 weeks for a customer to receive a rebate check. Contractor responses varied widely when asked how long it takes from the time the application is submitted until the customer receives the rebate check. Contractors mentioned that a rebate check took anywhere from two to eight weeks, with most responses falling into the six to eight week category. Customers also note that the rebate processing times are approximately 4 to 8 weeks.

Contractors thought that customers were displeased with the lengthy rebate processing time. However, when AEG asked participating customers how long it took before they received their rebate; most answers fell within the two to three week category.

**Figure 9 Rebate Processing Times from Customer Perspective**



**4.3.3 Areas for Improvement**

Contractors mentioned several areas of improvement. The majority of contractors (55 percent) mentioned that they would like to see the rebate levels increase to offer the customer more incentive to install high efficiency systems, and that they would like to see the number and types of measures rebated increase.

Among the additional measures they would like to see included in the program are:

- Geothermal
- Continuous/On-Demand Hot Water Heaters
- Solar Hot Water Heating
- Tankless Hot Water Heaters
- Hot Air Furnaces and Boilers

A few contractors also mentioned that they would like to offer tiered rebates to customers whenever possible. Other areas of improvement included the need for additional marketing to customers. Some contractors found that customers were unaware of the program. Contractors also wanted to see the rebate application form simplified and made more explicit, with more space for handwriting. A rebate form that could be filled out online and printed or emailed to Honeywell would also be more convenient than a hand written application form.

**5. Program Marketing**

The Residential Natural Gas Program is marketed under the Home Energy SavingsCentral name. Honeywell also markets the program to HVAC contractors and distributors of energy efficient equipment and systems. A list of participating trade allies is posted on Central Hudson’s webpage and is easily accessible from two different locations on the SavingsCentral Natural Gas Rebates for Your Home page. Central Hudson also recognizes the most active contractors through its list of “Top Flight” trade allies.<sup>9</sup>

<sup>9</sup> See [www.savingscentral.com/Top\\_Flight\\_Trade\\_Allies.html](http://www.savingscentral.com/Top_Flight_Trade_Allies.html)

In early 2011, Central Hudson made a number of changes to its marketing approach for this and the Residential Electric HVAC program. Central Hudson now tracks its marketing activities much more closely and markets the programs directly to homeowners through a variety of advertising mediums. In 2011, Central Hudson marketed the program to homeowners through the:

- **Internet** Central Hudson marketed the program through SavingsCentral.com and CentralHudson.com. During the second quarter of the year, there were 6,039 visitors to SavingsCentral.com.
- **Television** Central Hudson filmed a 30-second television commercial and four web videos featuring satisfied customers as part of the “Energy Efficiency Pays Off with Central Hudson” satisfied residential customer campaign, beginning in April 2011. Central Hudson continued its 30-second television commercial on cable networks and four web videos on YouTube during June. This commercial and the four satisfied customer web videos continue to be viewed through the Energy Efficiency Video Channel on CentralHudson.com and through YouTube.
- **Valpak mailers** Central Hudson included an advertisement about natural gas heating rebates in a Valpak coupon mailer sent to 100,000 customers in January and February.
- **Bill Inserts** Central Hudson included a rectangular advertisement promoting the commercial lighting program on the bill inserts. Included in customer bills during May and June were photos and quotes of satisfied customers as part of the “Energy Efficiency Pays Off with Central Hudson” satisfied residential customer campaign.
- **Social media** Central Hudson posted information about energy efficiency programs on Facebook and Twitter on May 6 and 20.

Since the program's inception, Honeywell has brought additional staff into the program to reach more trade allies, and keep existing trade allies informed of new program developments. Marketing to trade allies in 2011 included:

- **Trade Ally Outreach** Central Hudson hosted a meeting with Top Flight Trade Allies on Jan. 21 to plan outreach and marketing for 2011. Central Hudson sent an e-newsletter to residential Trade Allies on Jan. 31. This is the first of six planned for 2011. Central Hudson continued to publish the declining balance of the funding pool for residential natural gas incentives so Trade Allies could be apprised of the availability of funds when they sell to the customer. This is listed on the “Trade Ally Resources” page of SavingsCentral.com. Central Hudson participated in several “Dealer Day” events at HVAC suppliers throughout the service area. The Central Hudson Energy Efficiency team met with BPI-certified Trade Allies about home sealing and the potential of the program. Central Hudson also sent out a Trade Ally e-newsletter during the first week of June.

Central Hudson is an active participant in the Energy Efficiency Program Administrator Collaborative (“EEPAC”) with NYSERDA and other New York State utilities. Central Hudson has participated in numerous conference calls and meetings with other state utilities to discuss program operations and structure to minimize market confusion and promote best practices. Additionally, Central Hudson is represented on the EEPAC Implementation Advisory Group (“IAG”) and Evaluation Advisory Group (“EAG”) as well as on various subcommittees committed to accomplishing tactical goals.

Over the last two years, Central Hudson promoted the following events in support of the natural gas program. Public events are listed and updated regularly at [www.SavingsCentral.com/events.html](http://www.SavingsCentral.com/events.html).

**Table 17 Outreach and Events, September – December 2010**

<b>Date</b>	<b>Event</b>	<b>Location</b>	<b>Audience</b>
Sept. 12	Taste of New Paltz	New Paltz	Residential customers
Sept. 15	Orange County Chamber Expo	New Windsor	Business community
Sept. 24	Ulster Business Showcase	Stone Ridge	Business community
Sept. 25	Red Hook Hardscrabble Day	Red Hook	Residential customers
Oct. 5	N. Dutchess Career/Business event	Red Hook	Business community/students
Oct. 19	Trade Ally Breakfast #1	Kingston	Trade Allies
Oct. 21	Buy Local Business Expo	Hudson	Business community
Oct. 22	Trade Ally Breakfast #2	Poughkeepsie	Trade Allies
Oct. 24	Academy Street Partnership	Poughkeepsie	Homeowners
Oct. 27	Dutchess Reg. Chamber Marketplace	Poughkeepsie	Business community
Nov. 1	Grand Efficiency Challenge Dinner	Poughkeepsie	Trade Allies
Nov. 22	Residential Energy Efficiency Workshop	Rosendale	Homeowners
Nov. 30	LaGrange Rotary Club	Poughkeepsie	Business community
Dec. 7	Orange Co. Partnership Annual Event	New Windsor	Economic dev. community
Dec. 14	HVEDC Hudson Valley Showcase	White Plains	Commercial landlords



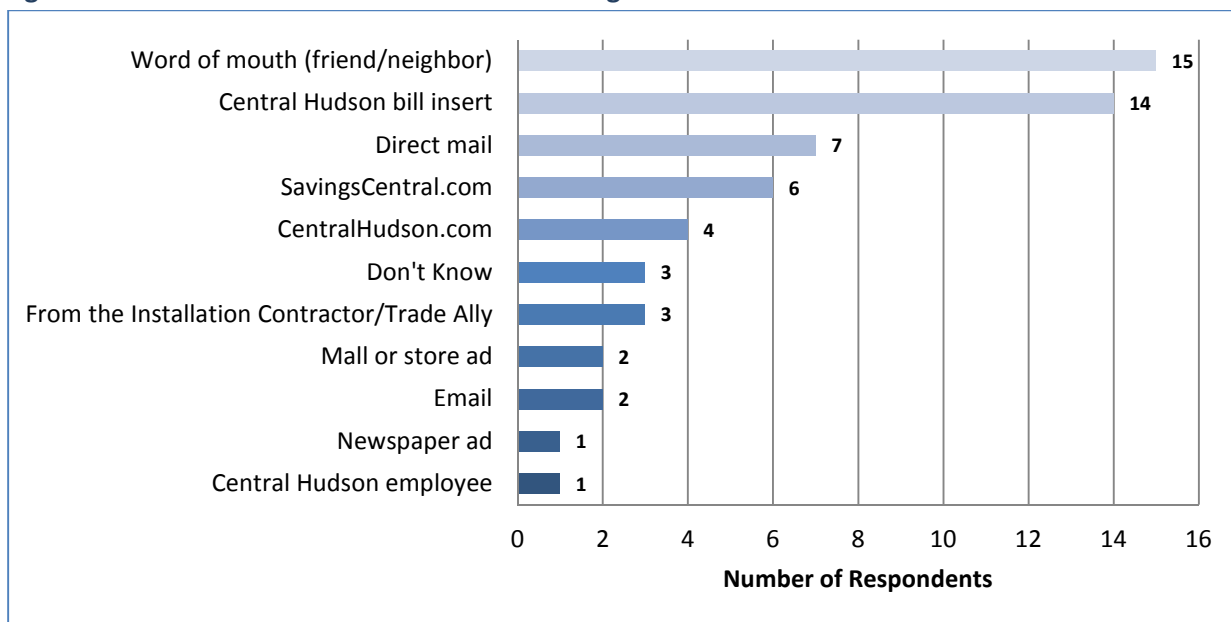
**Table 18 Outreach and Events, January – June 2011**

Date	Event	Location	Audience
Jan. 22	Fishkill EE Workshop	Fishkill	Homeowners
Jan. 27	Bus. Energy Savings Workshop #1	Kingston	Homeowners
Feb. 9	Hudson Valley Home Matters	Poughkeepsie	Homeowners
Feb. 11	BPI-certified Trade Ally meeting	Poughkeepsie	Trade Allies
Mar. 1	FW Webb	Newburgh	Trade Allies
Mar. 2	Builders Association Trade Show	New Windsor	Trade Allies
Mar. 3	RE Michel Company	Poughkeepsie	Trade Allies
Mar. 15	JD Johnson	Poughkeepsie	Trade Allies
Mar. 16	Security Supply	Kingston	Trade Allies
Mar. 17	FW Webb	Newburgh	Trade Allies
Mar. 22	Security Supply	Poughkeepsie	Trade Allies
Mar. 23	RIIM Plumbing & Heating Supply	Hopewell Jcnctn	Trade Allies
Mar. 24	RE Michel Company	New Windsor	Trade Allies
Mar. 29	Ral Supply	Fishkill	Trade Allies
Mar. 30	RIIM Plumbing & Heating Supply	Newburgh	Trade Allies
Mar. 31	Ral Supply	New Windsor	Trade Allies
Apr. 6	New Paltz Chamber Luncheon	Kingston	Business community
Apr. 12	United distributorship	Poughkeepsie	Trade Allies
Apr. 13	Comm. Lighting Open House	Kingston	industrial customers
Apr. 14	RAL Fishkill	Fishkill	Trade Allies
Apr. 15	N&S meeting w/ CH	Fishkill	Trade Allies
Apr. 18-22	Big Box Outreach Week	Hudson Valley Home Depot, Lowes	
Apr. 18-22	N&S Supply Outreach (3 stores)	Hudson Valley	Trade Allies
Apr. 19	JD Johnson Sales	Poughkeepsie	Trade Allies
Apr. 20	USGBC - Sky Top Restaurant	Kingston	Trade Allies
Apr. 27	Renewable Energy Symposium	Millbrook Green	Community
May. 4	Dealer Day – Security Supply	Poughkeepsie	Trade Allies
May. 4	Manufacturers Symposium	Poughkeepsie	Manufacturers
May. 10	Dealer Day – Yuan Co.	New Paltz	Trade Allies
May. 11	F.W. Webb	Newburgh	Trade Allies
May. 17	R.E. Michel	Newburgh	Trade Allies
May. 17	Ulster Co. Fireman's Assoc Rosendale Fire houses		
May. 18-20	Kingston outreach/audits	Kingston	Small businesses
May. 24	R.A.L. Supply	Fishkill	Trade Allies
May. 27	Orange Co. Sustainability Summit	Newburgh	Business community
Jun. 10	Meet with Home Energy Consultants	Poughkeepsie	Trade Allies
Jun. 14	N&S Supply heat pump water heater	Fishkill	Trade Allies
June. 18	Top Flight Trade Ally phone outreach	Hudson Valley	Trade Allies
June. 29	A.O.Smith heat pump wh demo	Kingston	Trade Allies
June. 29	A.O.Smith heat pump wh demo	Poughkeepsie	Trade Allies

## 5.1 How Participants Find Out About the Program

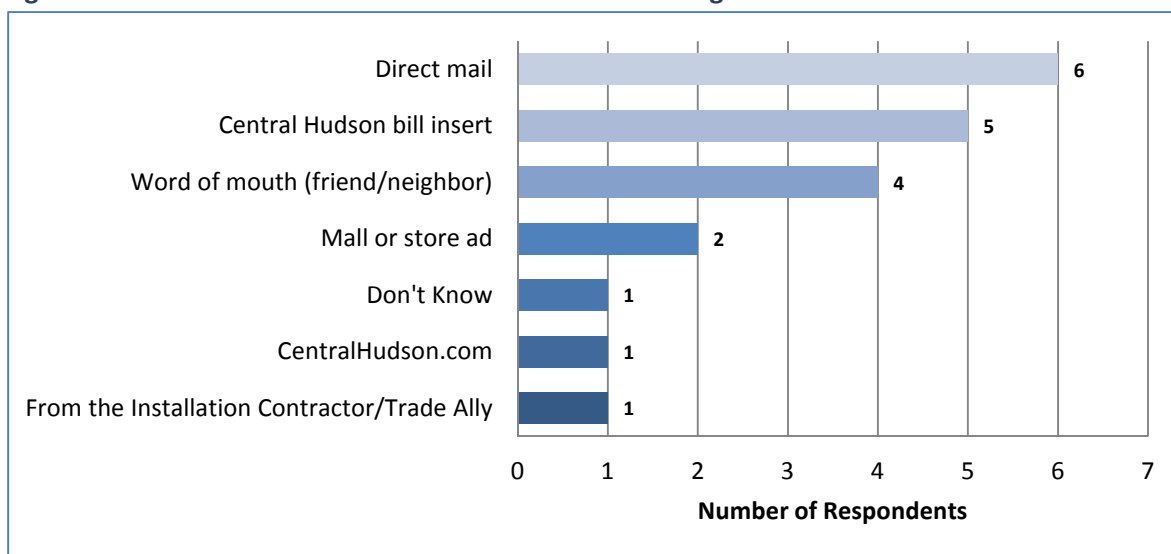
According to AEG survey respondents, participating customers most often learned of the program through word-of-mouth. Central Hudson bill inserts ranked second, followed by direct mail and the SavingsCentral website.

**Figure 10 How Customers First Learned of the Program**



Participating customers also told AEG how else they learned about Residential Natural Gas Program. For this question, direct mail, Central Hudson bill inserts and word-of-mouth also ranked in the top three. Survey respondents were less likely to learn about the program from Central Hudson trade allies, which may indicate that Central Hudson’s marketing campaign has been successful at targeting the appropriate audience. It may also indicate that homeowners are overall becoming more aware of energy efficiency and are taking the initiative to educate themselves using available resources.

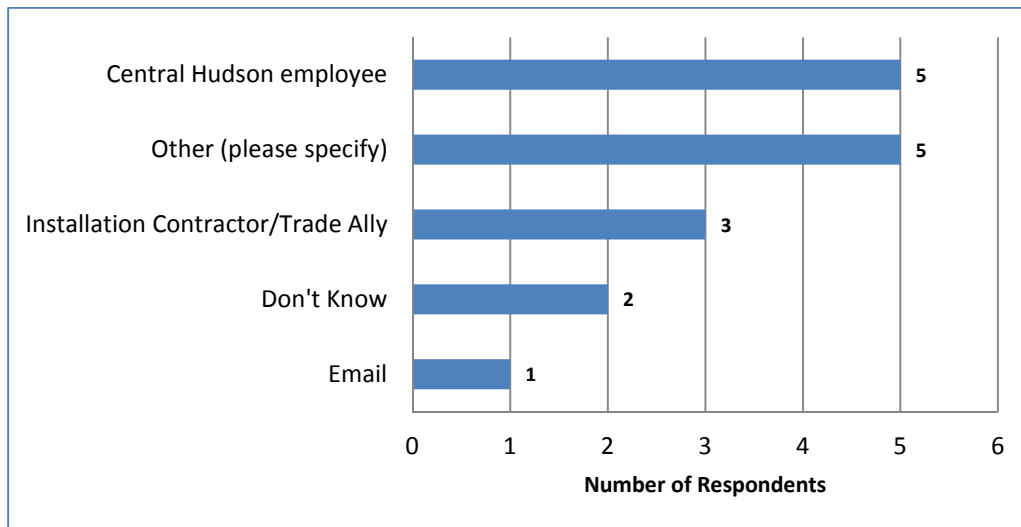
**Figure 11 Additional Sources of Information about the Program**



## 5.2 How Trade Allies Find Out About the Program

Trade allies most often learned about the program through a Central Hudson employee or through supply house flyers (mentioned under “other”). Other ways that contractors learned about the program were through customers (1) and through other Central Hudson trade allies (3).

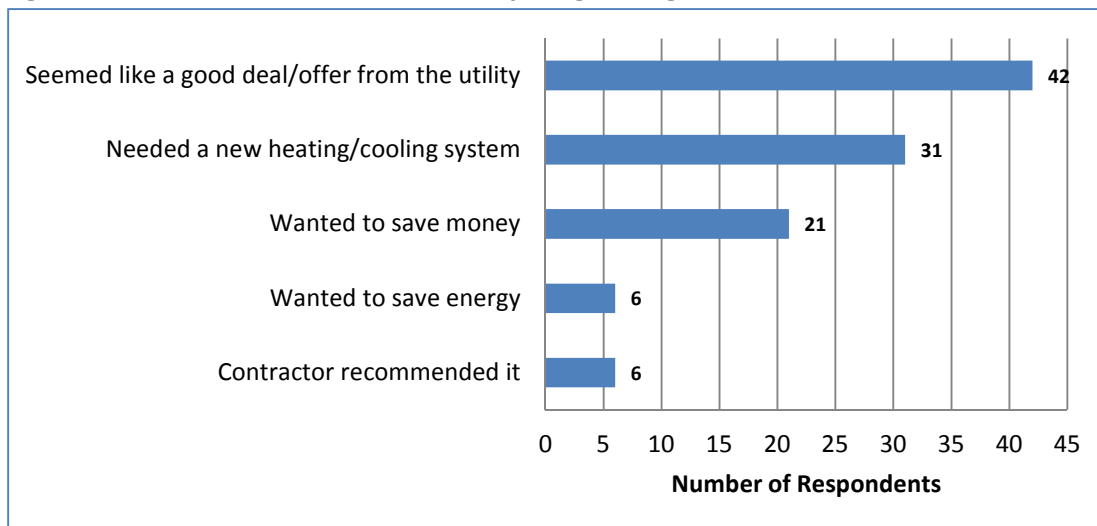
Figure 1211 How Contractors Learned of the Program<sup>10</sup>



## 5.3 Motivation for Participating in Program

Forty-two (40 percent) survey respondents cited that their primary reason for participating in the Central Hudson program was that it seemed like a good deal or offer from the utility. Others mentioned that they needed a new heating system (29 percent) or that they wanted to save money (20 percent). The remaining 12 survey respondents (11 percent) said that they wanted to save energy and that the contractor mentioned the program.

Figure 13 Customer Motivation for Participating in Program



<sup>10</sup> Respondents were able to select more than one answer category.

## 6. Data Tracking

Central Hudson and Honeywell use different methods of tracking program data. Central Hudson uses Microsoft Excel to track and report data to the DPS that is provided to them by Honeywell through its proprietary tracking system, the Backbone Client Server (“BBCS”) Tracking System. This system is designed to provide Central Hudson with weekly summary reports and detailed monthly and year-to-date reports that include information on:

- Total measures
- Estimated energy savings based on historical savings
- Program participant counts
- Rebates (by measure and total)

Additionally, Central Hudson receives an automated “Night Owl” report from Honeywell each day, which provides a real-time snapshot of all received, committed, and paid rebate applications.

Central Hudson’s rebate forms have been updated since the Phase I Process Evaluation to capture additional participant information, such as residential dwelling type. Honeywell has also made improvements to its tracking system to support the automation of energy savings calculations and to ensure the tracking system conforms to the criteria set forth in the New York DPS Energy Efficiency Program Information Reporting Manual, issued June 29, 2009. The system uses the estimation algorithms in the Consolidated Technical Manual to automatically generate an energy savings report for a custom time period. This system has improved the accuracy and availability of program data. Data requests from Central Hudson are usually generated within one business day.

## 7. Customer Satisfaction

According to Honeywell, customers are overall pleased with the installation contractors and how the contractors are able to sell the job, explain the benefits of higher efficiency and savings over time, and complete the rebate application.

*Customers are a big part of what is driving the success of the program. Customers are more educated about energy efficiency and are seeking resources and information on equipment options before selecting a contractor that meets their needs.*

Moreover, Honeywell has not seen a decrease in program participation in 2011 despite the absence of the federal tax credit, which helped contractors push energy efficient equipment last year because of the solid return on investment.

### 7.1 Program Satisfaction

Overall, participating customers are very satisfied with the program. On a scale of one to five, where one indicates “not at all satisfied” and five indicates “very satisfied,” 47 (84 percent) customers said that they were very satisfied (5) with the program and 9 (16 percent) said that they were satisfied (4).

**Table 19 Customer Satisfaction with Program**

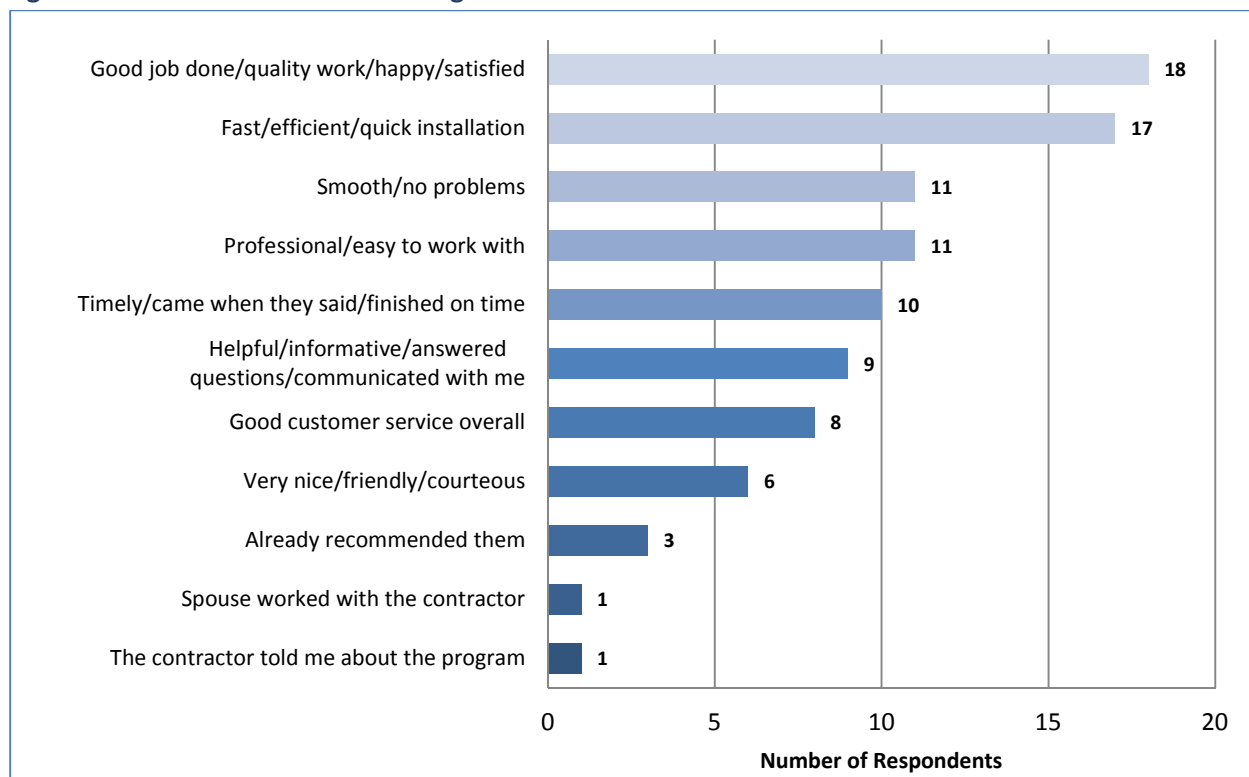
Answer Options	Very Satisfied ←-----→ Not Satisfied					DK
	5	4	3	2	1	
Amount of time it took for the application to be approved	66%	34%	0%	0%	0%	0%
Required enrollment forms	54%	46%	0%	0%	0%	0%
Types of equipment/services eligible for the program	46%	52%	0%	0%	0%	2%
Efficiency program overall	84%	16%	0%	0%	0%	0%

Customers were also satisfied with the contractor that performed the work and would recommend the contractor to someone else (83 percent). Sixty-one (61) percent of respondents said that they were very satisfied (5) with the contractor and 38 percent said that they were satisfied (4).

**Table 20 Customer Satisfaction with Contractor**

Answer Options	Very Satisfied ←-----→ Not Satisfied					DK
	5	4	3	2	1	
Overall contractor satisfaction	61%	38%	0%	0%	.02%	0%

**Figure 14 Reasons for Recommending the Contractor<sup>11</sup>**



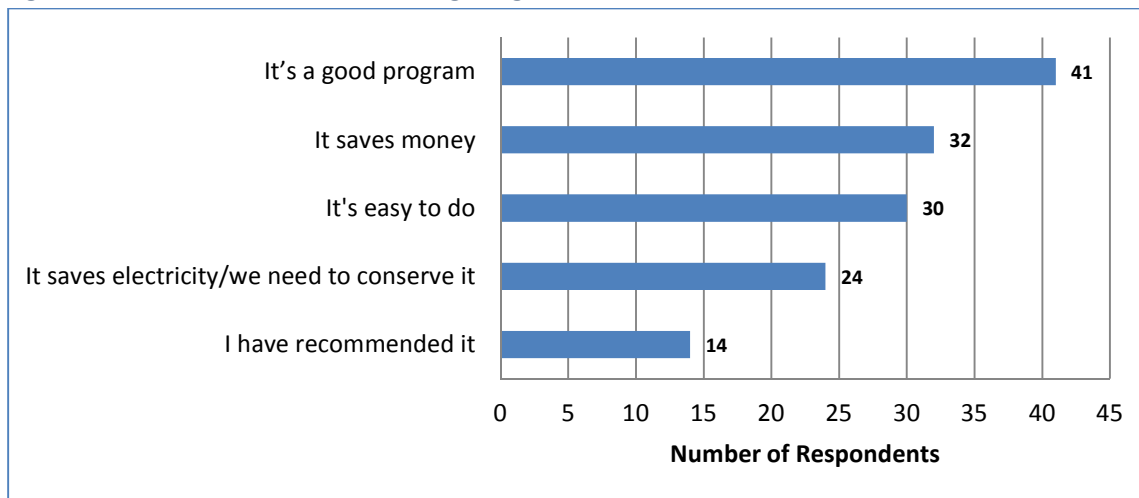
## 7.2 Would Customers Recommend the Program?

One hundred (100) percent of survey respondents would recommend the program to others based on their experience with the program. Forty-one (41) participating customers would recommend the program because “it’s a good program.” Thirty-two (32) customers would recommend it because it

<sup>11</sup> There were 47 respondents to this question (n=47).

saves money. Others said they would recommend the program because “it’s easy to do” (30) and it saves electricity (24). Finally, 14 customers said that they have already recommended the program.

**Figure 15 Reasons for Recommending Program**



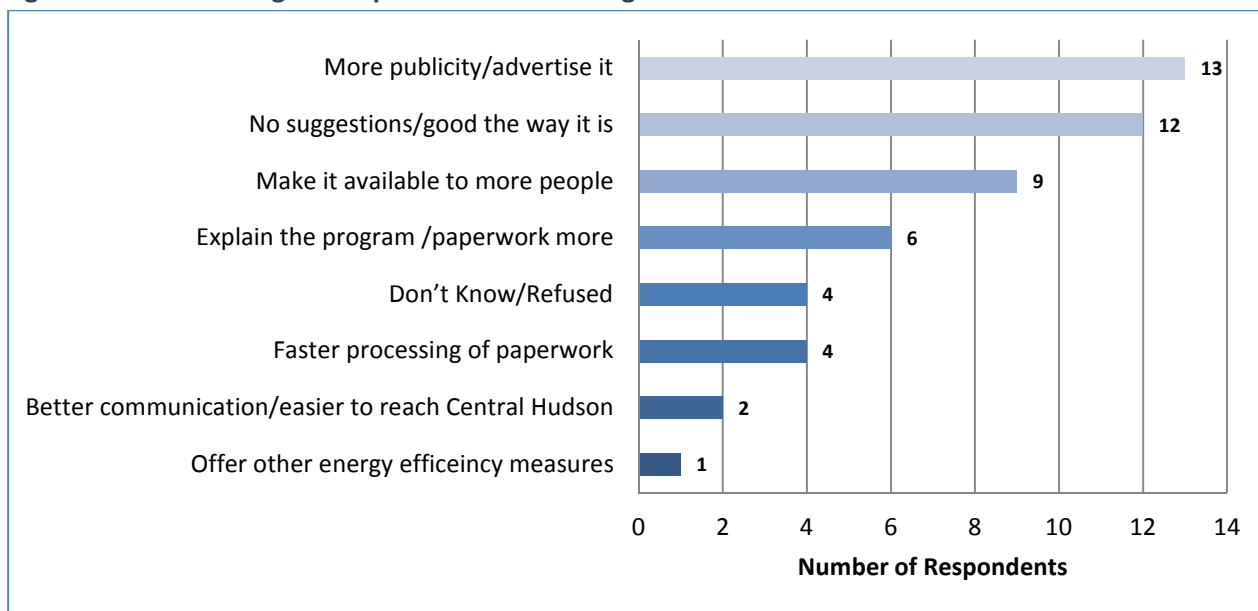
### 7.3 Areas for Program Improvement

Participating customers mentioned several areas for program improvement. These included

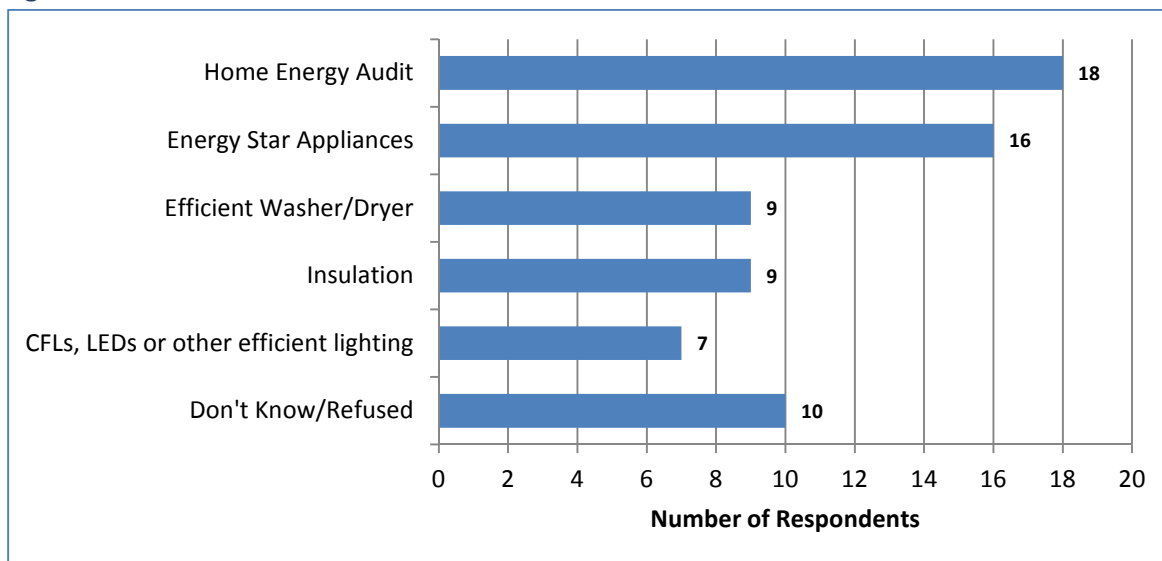
- Spend additional time and resources on marketing (25 percent)
- Broaden the program’s eligible population (18 percent)
- Clarify the program’s processes and paperwork to residential customers (12 percent)
- Decrease the time it takes to process rebates (8 percent)
- Improve communication with Central Hudson utility staff (4 percent)
- Offer additional efficiency measures (e.g. lighting, appliances) (2 percent)

Twelve respondents (or 24 percent) did not think the program needed to be improved.

**Figure 16 Areas of Program Improvement According to Customer<sup>12</sup>**



**Figure 17 Customer Recommendations for Additional Rebates**



<sup>12</sup> There were 41 respondents to this question (n=41). Respondents could select more than one answer category.

## 8. Findings, Conclusions and Recommendations

### 8.1 Program Findings

The Residential Natural Gas Program over-performed in 2009 and 2010, such that the New York DPS approved an increase in the program budget and energy savings goals and modified the measure rebate levels in mid-2010. Despite the modification of measure rebate levels, program participation remained steady in 2011. Key findings include:

- 54 percent of customers install more than one measure. No customers have received duct sealing services and very few have received air sealing services.
- In the absence of the program, almost half of participating customers (49 percent) would have likely purchased the same equipment.
- Approximately 22 percent of customer installations were completed by 3 trade allies.

#### 8.1.2. Marketing

According to participating customers surveyed, the majority of customers learned about the program through “word-of-mouth” (26 percent), followed by Central Hudson bill inserts (24 percent) and direct mail (12 percent). The SavingsCentral website ranked fourth as the primary source of information on the program (10 percent). Trade allies learned about the program through Central Hudson staff (50 percent), supply houses in which contractors buy their equipment (50 percent), and from other Central Hudson trade allies (27 percent).

#### 8.1.3. Data Tracking

As per the recommendations from the Phase I process evaluation conducted in late 2009, Central Hudson and Honeywell made a number of changes to Honeywell's proprietary data tracking system BBCS to ensure that the appropriate metrics were tracked and delivered to Central Hudson in a timely manner. Honeywell now provides Central Hudson with weekly summary reports and detailed monthly and year-to-date reports with data on:

- Total measures
- Estimated energy savings based on historical savings
- Program participant counts
- Rebates (by measure and total)

#### 8.1.4. Program Satisfaction

Overall, participating customers and trade allies are very satisfied with the Residential Natural Gas Program and would like to see it continue. Several trade allies recommended that the application be simplified and web-based application submission be made available. Both trade allies and participating customers surveyed recommended that Central Hudson offer rebates on additional measures, such as geothermal, solar hot water heaters and ENERGY STAR appliances.



## 8.2. Recommendations

AEG has several recommendations on how to improve the program. These include:

### 8.2.1 Conduct a Residential Appliance Saturation Survey and Market Potential Study

AEG recommends that, within the next year, Central Hudson conduct a Residential Appliance Saturation Survey ("RASS") to identify the type, age and efficiency level of appliances and HVAC equipment currently being used by households within Central Hudson's territory. The RASS will inform program design changes and measures to be considered for inclusion in Central Hudson's Residential Electric HVAC Program. Using the results from the RASS, a Market Potential Study should be completed that quantifies the quantity and targeted end uses where savings can be realized.

### 8.2.2 Continue Aggressive Marketing Campaign to Customers and Trade Allies

The changes to Central Hudson's marketing strategy over the last year have been positive and should be continued. Although there is evidence that customers' overall awareness of energy efficiency is increasing, customers that participated in this program were often unaware that Central Hudson offered rebates for energy efficient lighting, for example.

Central Hudson should continue to provide clear, accessible information to its residential customers on the benefits of installing energy efficient natural gas equipment and systems. Central Hudson should also continue to aggressively promote this program as part of the SavingsCentral brand and to inform customers of its other energy efficiency programs by advertising multiple methods for reducing electricity and natural gas usage. Honeywell should continue to aggressively market the program to trade allies

In order to track changes in customer awareness moving forward, Central Hudson should include a question on the rebate application that asks customers to identify how they learned about the program.

### 8.2.3 Create a Flexible System for Completing and Submitting Rebate Applications

Although the majority of contractors mentioned that the rebate application process is not burdensome, several had suggestions for improving the process and making it more consistent with how business operates today.

Honeywell should give contractors the option of submitting the rebate application online or of filling out the application online and printing it through Adobe Acrobat. This would streamline the application process for many contractors, and potentially end the problems associated with handwriting (e.g. not enough space on the rebate forms, illegible handwriting).

## Appendix A. Interview Guide for Implementation Contractor

Is the process the same as that outlined in the evaluation plan?

Does Honeywell market directly to customers as well as to contractors?

What are your marketing activities to customers? To contractors?

Do contractors receive incentives or are all rebates allocated to customers?

How many contractors have participated in this program so far?

Do contractors receive training to become BPI certified? Are they encouraged to?

What kind of quality assurance is conducted?

How are rebates processed?

What is the audit process like for duct/air sealing? Who recommends this?

What are Central Hudson's points of involvement?

## Appendix B. Survey Guide for Program Participants

Hello, I'm <interviewer's first and last name> with Applied Energy Group. We are conducting a survey for Central Hudson Gas & Electric Company. This is not a sales effort, but for research purposes only. According to our records, your household participated in the Home Energy SavingsCentral Natural Gas Rebate Program."

If the customer says: "I don't recall what the program is?"

Answer: "This program provides rebates to customers who purchase energy efficient heating equipment in their homes."

Were you involved with the decision to participate in this program, or is there someone else in your household who made that decision?

Involved with/made decision (CONTINUE)

Someone else decided (ASK TO SPEAK TO THAT PERSON, REPEAT INTRO)

Is that person available? If yes, continue, if not schedule call back.

1. What kind of energy efficiency measures/activities have you installed in your home as part of this program? (Mark all that apply)
  - a. Natural gas furnace
  - b. Natural gas boiler
  - c. Indirect water heater
  - d. Boiler reset control
  - e. Air sealing
  - f. Duct sealing
  - g. Programmable thermostat
  - h. Other (please specify)

### Program Awareness

2. How did you first become aware of the Home Energy SavingsCentral Natural Gas Rebate Program? (indicate first mention)
  - a. From the Installation Contractor/Trade Ally
  - b. Central Hudson employee
  - c. Radio Ad
  - d. Email
  - e. CentralHudson.com
  - f. SavingsCentral.com
  - g. Newspaper ad
  - h. News article
  - i. Central Hudson bill insert
  - j. Direct mail
  - k. Word of mouth (friend/neighbor)
  - l. Community event/meeting/presentation
  - m. Store or mall ad
  - n. Don't Know (skip to Participation Process)
  - o. Other (please specify)
3. Were there other ways that you became aware of this program? (Mark all that apply – DO NOT READ)

- a. From the Installation Contractor/Trade Ally
- b. Central Hudson employee
- c. Radio Ad
- d. Email
- e. CentralHudson.com
- f. SavingsCentral.com
- g. Newspaper ad
- h. News article
- i. Central Hudson bill insert
- j. Direct mail
- k. Word of mouth (friend/neighbor)
- l. Community event/meeting/presentation
- m. Store or mall ad
- n. Don’t Know
- o. Other (please specify)

**Participation Process**

Now I’d like to ask you a few questions about your participation in the program.

- 4. Have you received your rebate?
  - a. Yes
  - b. No
  - c. Don’t Know
- 5. About how long did the process take from the time you decided to recycle the appliance until you received rebate?
  - a. Number of weeks
  - b. Don’t know/refused
  - c. Comments
- 6. Why did you decide to participate? (mark all that apply – DO NOT READ)
  - a. Contractor recommended it
  - b. Needed a new heating/cooling system
  - c. Wanted to save money
  - d. Seemed like a good deal/offer from the utility
  - e. Wanted to save energy
  - f. Other (please specify)

**Customer Satisfaction**

7. Please rate your satisfaction with the following program components on a five-point scale, where ‘5’ means ‘Very Satisfied’ and ‘1’ means ‘Very Dissatisfied.’ How satisfied are you with the:

Answer Options	5	4	3	2	1	Don't Know/ Refused
Amount of time it took for the application to be approved by Central Hudson						
Required enrollment forms						
The contractor who performed the work						
The types of equipment/services eligible for the program						

– Comments

- 8. Name of Contractor
- 9. Would you recommend this contractor to someone else?

- a. Yes
  - b. No
  - c. Don't know/refused
10. Why do you say that (mark all that apply)
- a. Good job done/quality work/happy/satisfied
  - b. Professional/easy to work with
  - c. Very nice/friendly/courteous
  - d. Helpful/informative/answered my questions/communicated with me
  - e. Fast/efficient/quick installation
  - f. Smooth/no problems
  - g. Timely/came when they said/finished on time
  - h. Good customer service overall
  - i. Have already recommended them
  - j. They are the ones who told me about the program
  - k. Other (please specify)
11. Overall, how satisfied are you with Home Energy SavingsCentral Program using the same five point scale?

### Free Ridership

12. Prior to the purchase/installation of this equipment, have you ever considered purchasing a new heating or cooling system but then decided not to?
- a. Yes
  - b. No
  - c. Don't know/refused (skip to question 14)
13. What reasons prevented you from purchasing a system before? (READ RESPONSES – mark all that apply)
- a. I did not have the money at that time
  - b. I was not sure how long I would remain in my home
  - c. I don't own the home and/or wasn't sure if I would be allowed to install this equipment
  - d. I was not convinced I would save more
  - e. I did not have a contractor I felt I could trust
  - f. I thought it would cost too much money
  - g. Don't know/refused (DO NOT READ)
  - h. Other (please specify)
14. How likely is it that you would have purchased and installed the EXACT SAME EQUIPMENT if the utility had NOT OFFERED the REBATE? On a five-point scale, would you save '5' 'Very Likely,' '1' Very Unlikely,' or some number in between?

### Barriers to Participation

15. Based on your experience with this program, would you recommend this program to others?
- a. Yes
  - b. No
  - c. Don't know/refused (skip to question 17)
16. Why do you say that?
- a. It saves electricity/we need to conserve it
  - b. It saves money

- c. It's easy to do
  - d. It's a good program
  - e. I have recommended it
  - f. People I recommended it to haven't been able to get into the program
  - g. Don't know/refused
  - h. Other (please specify)
17. How could the Program be improved?
- a. Make it available to more people
  - b. More publicity/advertise it
  - c. Have more/better contractors on your list
  - d. Faster processing of paperwork
  - e. Explain the program/paperwork more
  - f. Better communication/easier to reach people at Central Hudson
  - g. No suggestions/good the way it is
  - h. Don't know/refused
  - i. Other (please specify)
18. For what additional energy efficiency measures would you like Central Hudson to provide incentives?
- a. CLFs, LEDs or other efficient lighting
  - b. Home energy audit
  - c. Insulation
  - d. Energy Star appliances
  - e. Efficient washer/dryer
  - f. Don't know/refused
  - g. Other (please specify)

### Electric Program Non-Participants

19. Do you also receive electric service from Central Hudson?
- a. Yes
  - b. No
  - c. Don't Know
20. Are you aware of Central Hudson's Home Energy SavingsCentral electric rebate program?
- a. Yes
  - b. No
  - c. Don't Know
21. Have you participated in the electric rebate program?
- a. Yes (go to electric participant survey)
  - b. No
  - c. Don't Know
22. Have you installed any of these energy efficiency measures recently in your home? (mark all that apply)
- a. Efficient central air conditioner
  - b. Efficient air source heat pump
  - c. Programmable thermostat for your central air conditioner or heat pump system
  - d. ECM powered furnace fan
  - e. Heat pump water heater

f. Other (please specify)

23. Why did you not participate in the electric rebate program? (mark all that apply)

- a. Didn't know about the program
- b. Didn't want to spend the extra money on the equipment/installation
- c. Not interested
- d. Other (please specify)

### **Customer Demographics**

24. Is your home a: (read list)

- a. House
- b. Apartment
- c. Condominium
- d. Townhouse
- e. Don't know/refused
- f. Other (please specify)

### **Other Customer Comments/Notes**

Thank you for taking the time to answer my questions!

## Appendix C. Survey Guide for Participating Contractors

Good morning/afternoon. My name is \_\_\_\_\_ and I am calling on behalf of Central Hudson Gas and Electric? May I please speak with (contact name from list); if not the right contact, then ask "May I please speak with the person most familiar with Central Hudson's Home Energy SavingsCentral Program for Residential Customers?"

When reach the right contact: Reintroduce yourself and say: We are conducting an evaluation of the Residential Program. I would like to ask you questions focusing on your experience with the Central Hudson's Home Energy SavingsCentral Program. All comments will remain confidential.

According to our records you ARE currently participating in this program. Is this correct?

Yes- CONTINUE

No- GO TO NON-PARTICIPATING CONTRACTOR INTERVIEW GUIDE

### Program Awareness

1. Have you participated in the electric program or the natural gas program?
  - a. From the Installation Contractor / Trade Ally
  - b. Central Hudson employee
  - c. Radio Ad
2. How did you learn about this program? (Mark all that are mentioned)
  - a. From the Installation Contractor / Trade Ally
  - b. Central Hudson employee
  - c. Radio Ad
  - d. Email
  - e. CentralHudson.com
  - f. SavingsCentral.com
  - g. Newspaper Ad
  - h. News Article
  - i. Central Hudson Bill Insert
  - j. Direct Mail
  - k. Word of Mouth (Friend / Neighbor)
  - l. Community Event/meeting/presentation
  - m. Mall or Store Ad
  - n. Other (Specify) VERBATIM
  - o. Don't Know (Skip to QP1)

### Reasons for Participation

3. Why did you decide to participate in the program?
4. How long have you been involved in the program?
5. Which Home Energy SavingsCentral Program are you involved with?
  - a. Electric (Continue to question QE1)
  - b. Gas (Continue to question QE2)
  - c. Both (Continue to question 4)
  - d. Not Sure / Refused

QE1. Why have you not participated in the natural gas program?



- a. How likely do you think it is that your company will participate in the gas program in the future? Why/Why not?

QE2. Why have you not participated in the electric program?

- a. How likely do you think it is that your company will participate in the gas program in the future? Why/Why not?

**Customer Interactions**

5. About how many customer installations have you completed for this program? (Check against program records)

- a. Was this number what you expected? Why/why not?
- b. What types of measures are installed most frequently through this program?
- c. Are these measures “bundled” like new HVAC equipment with a new thermostat? Why/Why not.

6. Overall, what do the customers seem to like best?

7. What did the customers seem to have problems with or dislike about the program?

8. Do you think these customers would have installed the same energy efficient equipment without this program?

- a. If so, about how many?
- b. Why/why not?

**Program Tracking**

9. What information are you required to provide Central Hudson & Honeywell staff?

- a. How frequently
- b. About how long does it take you to provide this information?
- c. About how long does it take to get your applications processed?

**Program Satisfaction**

10. Now I would like to ask you a few questions about your overall satisfaction with various aspects of this program. On a scale of “scale of “1” to “5” where “1” means “Not at all satisfied” and “5” means “Very satisfied” how satisfied are you:

Answer Options	5	4	3	2	1	Don't Know/ Refused
The responsiveness of utility staff						
Program requirements in terms of information required to collect for the utility						
The processing time for rebates						
The efficiency program overall						

11. What have you liked best about this program?

12. What needs to be changed/improved?

13. What additional energy efficient measures should Central Hudson consider providing rebates for?

**Contactors Demographics**

Finally, I’d like to ask you just a few questions about your business.

14. Are you BPI-certified?

- a. Yes
- b. No

15. How long have you been in business?
16. How many employees do you have?
17. Overall, would you say your sales during the past year have:
  - a. Increased
  - b. Decreased
  - c. Stayed the Same
  - d. Refused
18. Why do you say that?
19. About what percentage of your sales are from energy efficient equipment rebated in this program? \_\_\_\_\_%
20. Central Hudson is also interested in interviewing customers who didn't participate in the program. Did any of your customers choose to install equipment that did not meet the program's efficiency criteria?
  - a. If so, why do you think they made that decision?
  - b. Do you have the names of these customers?
21. Do you have anything else you'd like to add?

Thank you again for taking the time to discuss this program.

## Appendix D. Honeywell Field Inspection Reports

Rebate Workorder ID			Insp Workorde	E483461		Application #	
Inspector Name:	<b>thomas wolf</b>					Inspection Date:	
Customer Name:						Assignment Status:	
Customer Phone:						Inspection Status:	
Customer City:						Customer Zip:	
						Date:	
<i>My signature confirms that I am authorized and have allowed access to my property for the purpose of inspecting equipment and install for which rebates have been requested under the <b>CI</b> the Central Hudson Residential Programs</i>							
Contractor Name						Contractor Phone:	
Scheduler notes:							
Appliance:	Central Air	Heat Pump	Geothermal	Mini-Split AC	Furnace	Boiler	Water Heater
	<b>Enter/Circle Correct Information</b>			Correct	Incorrect	Can't Determine	N/A
Housing Vintage		Existing Home					
Additional Equipment:							
Condenser Manufacturer:							
Condenser Model #:							
Condenser Serial #:							
Condenser Location:							
Coil Manufacturer:							
Coil Model#:							
Coil Serial#:							
Coil Location:							
Geo Equipment Replaced:							
Geo Loop Replaced:							
Geo Unit Type:							
Geo Equipment Type:							
Furnace Manufacturer:							
Furnace/Boiler Model#:							
Furnace/Boiler Serial#:							
Furnace Location							
Hot Water heater Manufacturer							
Hot Water Heater Model#:							
Hot Water Heater Serial#:							
	<i>Unit appears to be:</i>	<i>Sized properly.</i>					
	<i>Unit appears to be:</i>	<i>Functioning properly.</i>					
	<i>Unit appears to be:</i>	<i>installed properly.</i>					
<i>Does BTU Calculation of:</i>		<i>appear correct</i>					
Contractor Workmanship Rating:		A	B	C	D	E	F
<i>Inspection Result:</i>					Pass		Fail
Inspector/Office Notes:							
Inspector Signature:	<b>Thomas wolf</b>					Date:	

Rebate Workorder ID				Insp Workorder ID			Application #
Inspector Name:							Inspection Date:
Customer Name:							Assignment Status:
Customer Phone:							Inspection Status:
Customer City:							Customer Zip:
							Date:
<i>My signature confirms that I am authorized and have allowed access to my property for the purpose of inspecting equipment and install for which rebates have been requested under the Central Hudson Savings Central.</i>							
Contractor Name				BPI Cert:			Contractor Phone:
Scheduler notes:							
Air-Sealing:	Rim Joist	Door Bottoms	Air-Duct	Attic/Hatch	Band Joist	Window	Other: _____
	<b>Enter/Circle Correct Information</b>			Correct	Incorrect	Can't Determine	N/A
<b>Housing Vintage</b>		<b>Existing Home</b>					
<b>Pre/CFM</b>							
<b>Post/CFM</b>							
<b>Diagram or Listing of Spaces to be air sealed to include dimensions:</b>							
<b>Total number of hours:</b> _____							
<b>Material used:</b> _____							
Air sealing measures appear to be:	<i>Completed properly</i>						
Measures meet Honeywell standards:	<i>Completed properly</i>						
Post/CFM numbers match Contractor:	<i>Completed properly</i>						
Contractor Workmanship Rating:	A	B	C	D	E	F	
<i>Inspection Result:</i>				Pass		Fail	
<b>Inspector/Office Notes &amp; Consumer Response to Job completion:</b>							
Inspector Signature:	<b>Thomas Wolf</b>					Date:	_____