

# Central Hudson Gas & Electric Corp

## Residential Electric HVAC: Process Evaluation Summary

*Evaluation Conducted by:* Applied Energy Group (AEG), DATE: February 2015

### PROGRAM SUMMARY

The objective of the Residential Electric HVAC Program is to replace residential electric heating and cooling systems with energy efficient systems. In addition to the equipment incentives listed in the table below, customers are eligible for \$100 per hour of duct or air sealing, up to \$600, from a Building Performance Institute (BPI) certified SavingsCentral Trade Ally, based upon blower door and/or duct blaster test results. All work must be completed by a Trade Ally; however, customers may self-install heat pump water heaters. BPI-certified Trade Allies that perform an ACCA Manual J Residential Load calculation on central air conditioner or central air source heat pump installations are eligible for a \$200 incentive.

Equipment Type	Minimum Performance	Rebate
Central Air Conditioner	SEER $\geq$ 15, EER $\geq$ 12.5	\$400
	SEER $\geq$ 16, EER $\geq$ 13.0	\$600
Central Air Source Heat Pump	SEER $\geq$ 15, EER $\geq$ 12.5, HSPF $\geq$ 8.5	\$400
	SEER $\geq$ 16, EER $\geq$ 13.0, HSPF $\geq$ 9.0	\$600
ECM Fan	Installed on qualifying heat pump	\$200
Electric Heat Pump Water Heater	Energy Factor > 2.0	\$400
Programmable Thermostat	Installed with qualifying cooling system	\$25

### EVALUATION OBJECTIVE AND HIGH LEVEL FINDINGS

An independent evaluation contractor, Applied Energy Group (AEG), designed the 2012-2013 process evaluation to gain a better understanding of program operations, assess the overall effectiveness of program operations and identify areas for improvement. 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 third party implementation contractor, ICF International (ICF).
- Conducted focus group/interviews with Trade Allies.
- Conducted surveys of participating customers.

Central Hudson exceeded the 2012 budget and MWh savings target while achieving 75 percent of the participation goal. Between January 1<sup>st</sup> and June 30<sup>th</sup>, Central Hudson spent approximately 50 percent of the budget and achieved the MWh target while achieving 33 percent of the participation goal. Between January 1, 2012 and June 30, 2013, 1,346 customers participated in the Residential Electric HVAC Program and 2,190 measures were rebated.

## **EVALUATION RECCOMENDATIONS AND PROGRAM ADMINISTRATOR RESPONSE**

The following recommendations were made by the evaluators conducting this study. Central Hudson's initial response to these recommendations is also summarized below and will be tracked over time.

### **Recommendation 1: Modify Trade Ally Participating Contractor Agreement**

Approximately 46 percent of the SavingsCentral Trade Allies did not submit a rebate application between January 1, 2012 and June 30, 2013. The Trade Allies interviewed expressed concern regarding the list on the Central Hudson website, noting that the list is quite long and that there may be HVAC contractors that are not upselling energy efficient systems or performing quality work. Additionally, Central Hudson does not require proof that the HVAC contractors have insurance.

AEG recommends that Central Hudson and ICF consider modifying the Trade Ally Participating Contractor Agreement to (1) require proof of insurance and (2) require at least two customer references. ICF should require that all Trade Allies provide proof of insurance on an annual basis.

**Response to Recommendation 1:** With the help of ICF, we are in the process of obtaining proof of insurance from all of our Trade Ally contractors. If this proof of insurance is not received then we will not allow them to be a Trade Ally. For every Trade Ally that sends in the Proof of Insurance we have set it up with their insurance company to send us a proof of insurance on an annual basis automatically. Central Hudson feels like working towards customer references for each Trade Ally will not facilitate any activity with preferred Trade Ally's. The "Gold, Silver, and Bronze" tiers are a testament to the activity that each Trade Ally has in our programs.

### **Recommendation 2: Continue Random Inspections of Trade Ally Projects**

AEG recommends that ICF continue to inspect the first four projects completed by a new Trade Ally and a random 10 percent of Trade Ally projects. The majority of participants are made aware of the program via word of mouth or the Trade Ally. Therefore, it is crucial that customers are satisfied with the program and work completed by the Trade Ally.

**Response to Recommendation 2:** This process is fully implemented.

### **Recommendation 3: Improve Application Processing QA/QC**

The program requires that all work is completed by a SavingsCentral Trade Ally, except for heat pump water heaters which may be self-installed. Three percent of measures rebated were installed by non-SavingsCentral Trade Allies.

Programmable thermostat and ECM fan rebates are offered to participants installing qualified heating and cooling systems. Of the programmable thermostats and ECM fans installed:

- 9 percent of thermostats rebated through the Residential Electric HVAC and Residential Natural Gas HVAC Programs were not installed with a qualifying heating or cooling system.
- 12 percent of ECM fans rebated were not installed with a qualifying heat pump or furnace system.

AEG recommends that Central Hudson work with ICF to ensure the rebate processing system adheres to the requirement that systems are installed by a Trade Ally and programmable thermostats and ECM fans are installed with a qualifying heating or cooling system. The total quantity of programmable thermostats or ECM fans incentivized should not exceed the total quantity of heating and/or cooling systems installed.

**Response to Recommendation 3:** Central Hudson will look into this and work with ICF to implement improvements to hopefully avoid or minimize this from happening again in the future.

**Recommendation 4:** Consider Modifying Equipment Incentives

The Trade Allies recommended that Central Hudson consider rearranging the rebates, potentially lowering the central air conditioner rebates and increasing the heat pump rebates. ICF noted that possible changes for the 2014 program included reducing the central air conditioner rebates and modifying the HVAC mini-split system requirements.

- Nearly 9 out of 10 central air conditioners rebated were a SEER  $\geq 16$  versus a SEER  $\geq 15$ .
- Heat pumps were evenly split between SEER  $\geq 15$  and SEER  $\geq 16$ .

AEG recommends that Central Hudson work with ICF to determine if the rebates should be modified, particularly for SEER  $\geq 15$  central air conditioners.

**Response to Recommendation 4:** Central Hudson is currently in the process of reviewing rebate and participation levels to possibly adjust the incentive level for particular measures, if needed.

**Recommendation 5:** Remove the Central Hudson Logo from SavingsCentral Website

The Central Hudson logo is available for download on the SavingsCentral website. AEG recommends that Central Hudson remove the logo from the website to minimize access to the logo and unapproved use of the corporate logo. Participating SavingsCentral Trade Allies can request the Central Hudson logo from ICF as needed.

**Response to Recommendation 5:** As a Company, our branding in our service territory is extremely strong. We understand that this could cause unapproved use of our logo. We will work with our Corporate Communications department to create a way to minimize this risk.

**Recommendation 6:** Consider Providing Incentives for ENERGY STAR® Appliances

Forty percent of participants surveyed suggested providing incentives for ENERGY STAR® appliances. AEG recommends that Central Hudson work with ICF to determine if ENERGY STAR® appliances are cost-effective and a viable addition to Central Hudson portfolio.

**Response to Recommendation 6:** Central Hudson will revisit prior Orders and review all measures that are approved. From there we will consider adding ENERGY STAR® measures to the program.

**Recommendation 7:** Continue SavingsCentral Marketing Campaigns to Customers and Trade Allies

The majority of program participants learned about the program from a SavingsCentral Trade Ally or word of mouth. However, only 11 percent of survey respondents reported that they were aware of other programs offered by Central Hudson.

AEG recommends that ICF continue to provide clear, accessible information to participating SavingsCentral Trade Allies. Central Hudson and ICF should also continue to aggressively promote this program as part of the SavingsCentral brand and inform customers of other energy efficiency programs.

**Response to Recommendation 7:** Central Hudson will give the SavingsCentral website a thorough review to determine if changes are warranted. The SavingsCentral brand appears on all ICF marketing pieces that are sent to customers and Trade Allies.

## **DETAILED PROCESS EVALUATION FINDINGS**

The Residential Electric HVAC Program was implemented by Honeywell until ICF took over on July 1, 2012. Since the transition, the following changes have been made to the program:

- **Revised Rebate Application.** ICF combined the rebate application for the Residential Electric and Natural Gas HVAC Programs.
- **Online Rebate Application.** Trade Allies have the option of completing the customer application in VisionDSM via an online platform rather than submitting a paper application.
- **Rebate Processing.** ICF issues incentives to customers upon Central Hudson approval of application batches and is reimbursed by Central Hudson within 30 days.

The Residential Electric HVAC Program is driven by Central Hudson's aggressive and creative advertising. ICF and Central Hudson work collaboratively to market the program. According to the participant survey, participants first became aware of the program via word of mouth (40 percent) and the SavingsCentral Trade Ally (31 percent).

Ninety-seven percent of participants surveyed noted that they were satisfied with the Residential Electric HVAC Program. While the participants surveyed are satisfied with the program overall

and most program components, the types of eligible equipment and the rebate processing time had the lowest satisfaction rates. However, ICF has decreased the rebate processing time since becoming the implementation contractor.

Central Hudson and the Trade Allies are very satisfied with ICF's performance. Central Hudson noted that the transition to ICF was fairly smooth. Central Hudson and the Trade Allies reported that ICF is easy to work with, knowledgeable and very responsive. The two parties are particularly satisfied with the Trade Ally outreach, noting that the ICF staff is very helpful and responsive to requests for information and/or training.

Nearly all participants surveyed would recommend the Trade Ally who performed the installation. Respondents were pleased with the quality of work, customer service, and professionalism displayed by the Trade Ally. Two respondents that would not recommend the Trade Ally were dissatisfied with the level of customer service. All participants surveyed reported that they would recommend the program to other customers, primarily for the bill savings.

## **EVALUATION METHODS AND SAMPLING**

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.

Between January 1, 2012 and June 30, 2013, Central Hudson rebated 2,190 measures to 1,346 participants for the Residential Electric HVAC Program. Central Hudson provided data for all 2,190 measures rebated, including customer name, account number and telephone number. AEG scrubbed the participant data to remove duplicate electric Central Hudson account numbers from the participant list, thereby accounting for customers that received more than one rebate. The scrubbed participant data included 1,346 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 65. 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.

AEG updated the program logic model based on interviews with Central Hudson program staff and the third-party implementer. The model shows the linkages among the program's activities and outputs. There are seven main activities in the Residential Electric HVAC Program, including: develop program infrastructure, market program, install measures, process rebate application and evaluate program.