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Residential Complete System Replacement PY5 Evaluation Report

Final

Energy Efficiency / Demand Response Plan: Plan Year 5 (6/1/2012-5/31/2013)

Presented to Commonwealth Edison Company

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E. Executive Summary

This report presents a summary of the findings and results from the Impact and Process Evaluation of the EPY5 [1] Complete System Replacement (CSR) program. Under the CSR program cash incentives are offered to encourage ComEd customers to purchase higher efficiency air conditioning systems. This program is offered in conjunction with high efficiency furnace rebates through the Home Energy Efficiency Rebates (Home EER) program offered by Nicor Gas and the Residential Prescriptive Rebate Program offered by Peoples Gas and North Shore Gas.

E.1. Program Savings

Table E-1 summarizes the electricity savings from the CSR Program.

Table E-1. EPY5 Program Results

Savings Category†	Energy Savings (MWh)	Demand Savings (MW)	Coincident Peak Demand Savings (MW)
Ex Ante Gross Savings[2] (MWh)	2,375	N/A	N/A
Verified Gross Realization Rate‡	1.31	N/A	N/A
Verified Gross Savings (MWh)	3,109	4.50	2.29
Net to gross ratio (NTG) ‡	0.99	0.99	0.99
Verified Net Savings (MWh)	3,077	4.45	2.27

Source: Utility tracking data and Navigant analysis
† See the Glossary in the Appendix for definitions
‡ Based on evaluation research findings.

E.2. Impact Estimate Parameters

In the course of estimating verified gross and net savings, the evaluation used a variety of parameters in its calculations. Some of those parameters were deemed for this program year and others were adjusted based on evaluation research. For instance, full load cooling hours and a demand coincidence factor were deemed in the Illinois Technical Reference Manual (Illinois TRM). Where available, actual values from the ComEd tracking database were used for cooling capacity, base efficiency, and proposed efficiency. More detail on this is provided in Section 2.2

[1] The EPY5 program year began June 1, 2012 and ended May 31, 2013.
[2] From Tracking System

E.3. Impact Estimate Parameters for Future Use

In the course of our EPY5 research, the evaluation team did research on parameters used in impact calculations including those in the Illinois TRM. Some of those parameters are eligible for deeming for future program years or for inclusion in future versions of the TRM. The evaluation team's parameters recommended for possible future use are shown in the following table.

Table E-2. Impact Estimate Parameters for Possible Future Use

Parameter	Value	Data Source
Early Replacement Rates for Secondary Complete System Replacement Measures.	43% Early Replacement	Evaluation Team Research

Source: EM&V analysis

CSR participants were asked questions to determine whether they contacted a trade ally because of issues with their furnace or their central air conditioning (CAC) unit. The unit (furnace or CAC unit) that initially caused the customer to contact the trade ally was labeled the "primary unit". The furnace or CAC unit that was also replaced, but did not initially prompt the customer to contact the trade ally was labeled the "secondary unit". The CSR participants were asked a series of questions about the condition of the primary measure and the secondary unit replaced to determine the rate of early replacement.

Forty-three percent of the *secondary* measures installed (the measure that did *not* cause the participant to contact a trade ally) by Complete System Replacement participants could be considered early replacement measures, instead of replace-on-burnout. Early replacement was calculated based on the condition, age, and repair history of the replaced units. Fourteen percent of the *primary* CSR measures (the measure that did cause the participant to contact a trade ally) could be considered early replacement, and seven percent of furnace only participants reported that their units were early replacement.

E.4. Participation Information

The program had 4,521 participants in EPY5 and installed 4,675 projects as shown in the following table.

Table E-3. EPY5 Primary Participation Detail

Participation	ComEd
Participants	4,521
Installed Projects	4,675

Source: Utility tracking data and Navigant analysis.

E.5. Conclusions and Recommendations

The following provides insight into key program findings and recommendations:

Tracking Database

Finding 1. The database ComEd uses to track the CSR program obtains data from both gas utility program implementers. The data is often incomplete or is inconsistent across the programs. This makes determining program level savings very difficult.

Recommendation. Navigant recommends that the utilities and implementation contractors involved in the CSR and Home EER programs work together to develop a tracking database that is functional for all parties. This includes agreed upon savings assumptions, database fields, and common language for those fields.

Net-to-Gross estimates

Finding 2. The NTG rate found in this evaluation is 99% combining participant free ridership (0.41), trade ally free ridership (0.25), and spillover (0.12 participating trade ally and 0.20 nonparticipating trade ally)**.**

Recommendation. Assuming other criteria specified in the NTG Framework are met, the NTG rate found in this evaluation should be used as the deemed NTG rate for this program for the beginning of the program year starting after the submittal of this report.

Demand Savings Estimates.

Finding 4. ComEd did not provide ex ante demand savings estimates for the CSR program.

Recommendation. Navigant recommends that ComEd track ex ante demand savings in their tracking database.

1. Introduction

1.1 Program Description

Under the Complete System Replacement (CSR) program, cash incentives and education are offered to encourage upgrading air conditioning systems for ComEd. This program is offered in conjunction with high efficiency furnace rebates through the Home Energy Efficiency Rebates (Home EER) program offered by Nicor Gas and the Residential Prescriptive Rebate Program offered by Peoples Gas and North Shore Gas. The CSR program was designed to conserve electricity and natural gas and lower participants' monthly energy bills. Both rental and owner-occupied dwellings are eligible for rebates for furnaces and air conditioning systems. Customers must be active residential customers of ComEd and one of the aforementioned gas utilities to receive rebates for high efficiency furnaces and air conditioning systems, and the premises must be used for residential purposes in existing buildings.

The CSR program promises customers a quick turn-around rebate to invest in long-term savings through better technology. Rebates are offered for the installation of air conditioning systems in conjunction with high-efficiency furnaces. The dollar amount of the rebate depends on the size and efficiency of the replacement measures. The CSR program covered by this evaluation ran from June 1, 2012 through May 30, 2013. The CSR rebates range from $600 to $1,000 depending on the gas utility, furnace efficiency level, and CAC unit efficiency level.

1.2 Evaluation Objectives

The Evaluation Team identified the following key researchable questions for EPY5:

1.2.1 Impact Questions

1. Are interactive effects of "bundled" measures being properly captured?
2. What is the rate of non-participating and "drop-out" trade ally spillover?
3. What is the rate of early replacement of air conditioners and furnaces participating in the Home EER/CSR program?
4. What are the program's net and gross savings?
5. Are the TRM algorithms applied appropriately and the tracking system calculating savings correctly?

1.2.2 Process Questions

1. What are the reasons that trade allies may have participated in PY1 but not chosen to continue participating in PY2, and how can trade ally retention be increased?

2. Evaluation Approach

This evaluation covers the second full-scale year of program operation. Navigant calculated the ex ante gross savings estimates by totaling all paid CSR projects installed during EPY5 from the tracking database. To determine verified gross savings by measure, the evaluation team applied the algorithm found in Section 2.1.2 from the Illinois TRM version 1.0. Navigant surveyed participants to estimate the ratio of early replacement to replace-on-burnout installations. The evaluation compared ex ante to ex post savings to find the measure and program level realization rates for the CSR program. The NTG ratio was determined using a combination of the participant free-ridership and spillover rates from the survey for the EPY4 evaluation[3] and participating trade ally free-ridership and spillover and non-participating trade ally spillover from the EPY5 evaluation trade ally surveys.

2.1 Overview of Data Collection Activities

The core data collection activities included participating trade ally surveys, non-participating trade ally surveys and participant surveys. The full set of data collection activities is shown in the following table.

Table 2-1. Core Data Collection Activities

N	What	Who	Target Completes	Completes Achieved	When	Comments
Impact Assessment						
1	Tracking System Review	Projects	Census	Census	May – September 2013	
2	Engineering Analysis	Projects	Census	Census	May – September 2013	
3	Telephone Survey	Participating Trade Allies	48	49	September-October 2013	Data colleting supporting SO analysis
4	Telephone Survey	Non-Participating Trade Allies	50-70	55	September-October 2013	Data colleting supporting SO analysis
5	Telephone Survey	Program Participants	70 CSR/ 70 Furnace	70 CSR/ 70 Furnace	September-October 2013	Data collection supporting early replacement analysis only.
Process Assessment						
6	In Depth Interviews	Program Manager/Implementer Staff	2-5	2	May – September 2013	In Depth Interviews

[3] Free ridership questions were not asked of the participants in the EPY5 survey.

2.2 Verified Savings Parameters

Verified Gross and Net Savings (energy and coincident peak demand) resulting from the PY5 CSR Program were calculated using the following algorithms as defined by the Illinois TRM version 1.0:

Central Air Conditioner

$$\Delta kWh = \left(FLH_{cool} \times Capacity \times \left(\frac{1}{SEER_{base}} - \frac{1}{SEER_{ee}}\right)\right)/1000$$

Where:

- ΔkWh = Difference between baseline equipment and efficient equipment usage
- FLH_{cool} = Full load cooling hours
- Capacity = Size of new equipment in Btuh
- $SEER_{base}$ = Seasonal Energy Efficiency Ratio of existing unit
- $SEER_{ee}$ = Seasonal Energy Efficiency Ratio of ENERGY STAR unit

$$\Delta kW = \left(Capacity \times \left(\frac{1}{EER_{base}} - \frac{1}{EER_{ee}}\right)\right)/1000 \times CF$$

Where:

- ΔkW = Difference between baseline equipment and efficient equipment demand
- EER_{base} = EER Efficiency of existing unit
- EER_{ee} = EER Efficiency of ENERGY STAR unit
- CF = Summer System Peak Coincidence Factor for Central A/C (during system peak hours)

The following table presents the parameters that were used in the verified gross and net savings calculations and indicates which were examined through evaluation activities and which were deemed.

Table 2-2. Verified Gross and Net Savings Parameter Data Sources

Input Parameters	Data Source	Deemed or Evaluated?
ΔkWh	PY4 EM&V Program Tracking Data Analysis	Evaluated
FLH_{cool}	TRM v1.0	Deemed TRM v1.0
Capacity	PY4 EM&V Program Tracking Data Analysis	Evaluated
$SEER_{base}$	PY4 EM&V Program Tracking Data Analysis	Evaluated
$SEER_{ee}$	PY4 EM&V Program Tracking Data Analysis	Evaluated
ΔkW	PY4 EM&V Program Tracking Data Analysis	Evaluated
EER_{base}	PY4 EM&V Program Tracking Data Analysis	Evaluated
EER_{ee}	PY4 EM&V Program Tracking Data Analysis	Evaluated
CF	TRM v1.0	Deemed TRM v1.0

2.3 Verified Gross Program Savings Analysis Approach

To determine verified gross savings for the program, Navigant calculated energy and demand savings for each project using the IL TRM algorithm shown above and ComEd tracking data. Some projects were missing information in the ComEd tracking data. In these cases, Navigant used default values that were provided by ComEd. These values and more detailed methodology information are provided in Section 3.

2.4 Verified Net Program Savings Analysis Approach

NTG research methods in EPY5 combined EPY4 participant survey results and EPY5 participating and non-participating trade ally survey results (as explained at the end of this section). Research for both years used a self-report method where participants and trade allies answer questions about the program. The trade ally survey instrument determined the increase in program-qualified CAC unit sales that resulted from program participation and program awareness.

2.4.1 Free-Ridership

Free-ridership for EPY5 was calculated using a combination of participant free-ridership rates from the EPY4 evaluation[4], participating trade ally free-ridership rates from the EPY5 evaluation, and participating and non-participating trade ally spillover from the EPY5 evaluation.

Forty-nine participating trade allies were surveyed for the EPY5 evaluation. The trade allies were stratified into three groups based on the total program savings each trade ally was responsible for. Each stratum accounted for one-third of the program savings. The first stratum contained the 26 highest volume trade allies, the second stratum contained 107 "medium" volume trade allies, and the third strata consisted on the 968 lowest volume trade allies.

2.4.2 Spillover

Participating trade ally spillover for PY2 was calculated using the sample shown in Table 2-3 below.

Table 2-3. Stratified Sample Design for Trade Allies, CI = 90%

Strata	Trade Allies	Target Sample	Actual Sample
Highest Volume Trade Allies	26	12	13
Medium Volume Trade Allies	107	17	18
Lowest Volume Trade Allies	968	19	18
Total	**1,101**	**48**	**49**

Non-participating trade ally spillover rates were calculated for EPY5, using two groups of non-participating trade allies. So-called "drop out" trade allies: those who had participated in EPY4, but did not participate in EPY5; and true non-participating trade allies: those who reported that they were aware of the Home EER program, but had never participated. Non-participating trade ally

[4] Free ridership questions were not asked of the participants in the EPY5 survey.

spillover was determined using a method comparing sales of program qualified furnaces before either EPY4 participation or becoming aware of the program, and after EPY4 program participation or becoming aware of the program. The methodology also looks at the influence of the program on any potential spillover. A detailed presentation of the spillover methodology can be found in Section 7.2.

2.4.3 NTG

The overall program NTG was calculated by averaging the EPY4 participant and the EPY5 trade ally free-ridership rates, and then adding the EPY4 participant spillover, and EPY5 participating trade ally and non-participating trade ally spillover, as follows:

$$NTG_{Program} = 1 - \frac{(FR_{Part.} + FR_{TA})}{2} + SO_{Part.} + SO_{Part.TA} + SO_{Non-Part.TA}$$

Where NTGProgram = Program NTG
FRPart. = Participant Free-Ridership
FR_{TA} = Trade Ally Free-Ridership
$SO_{Part.}$ = Participant Spillover
SO_{PartTA} = Participating TA Spillover
$SO_{Non\text{-}PartTA}$ = Non-Participating TA Spillover

The participant and trade ally free-ridership rates were averaged to account for multiple perspectives in the decision-making process. Since Nicor Gas offered "instant discounts" as part of their program, some participants may not have been aware that they were participating in the program, and therefore it seems appropriate to take the trade ally perspective into consideration in calculating free ridership. An individual free-ridership and spillover rate was calculated for each participating trade ally surveyed, and then sales-weighted to calculate the participating trade ally free-ridership and spillover for the program. A detailed presentation of the net-to-gross methodology can be found in section 7.2.1.

2.5 Process Evaluation

The EPY5 evaluation activities included an inquiry into the reasons that trade allies may have participated in the CSR program in EPY4, but did not participate in EPY5. The trade ally interviews attempted to establish the reasons why trade allies did not continue participating, and the steps that the utilities can take to increase trade ally retention.

3. Gross Impact Evaluation

Navigant performed a tracking system review to determine if all necessary information for evaluation purposes was provided. Because there were blank fields in the tracking system, Navigant requested savings algorithms and assumptions from ComEd. To determine ex ante gross savings estimates, Navigant totaled the energy savings listed for all paid projects in EPY5. The verified gross savings were calculated using algorithms from the IL TRM, assumptions provided by ComEd, as well as actual values from the tracking database. The verified gross realization rate is the ratio of the verified gross savings estimates by the ex-ante gross savings estimate.

3.1 Tracking System Review

Before calculating verified gross savings, Navigant performed a tracking system review to determine if all necessary evaluation information was provided. All the necessary fields for calculating energy and demand savings are present, but many times not all fields held values. In these cases, default values had to be assumed.

Key findings include:

1. The majority of paid projects in EPY5 did not list an existing SEER value or were far out of the accepted range (greater than six and less than 25). In these cases, a default existing SEER value of 10 was used.
2. The majority of paid projects in EPY5 either did not list a new system capacity or listed a new system capacity that was out of the accepted range (greater than 15,000 and less than 65,000 Btuh). In these cases, Navigant used a default new system capacity of 33,600 Btuh as detailed in the IL TRM.
3. During the time frame that EPY5 ran, 815 projects did not have a program year listed in the tracking system.
4. Finally, the ComEd tracking database provides a column called "Implementer" that shows a "1" for Integrys projects and a "2" for Nicor Gas projects. Of the EPY5 projects in the tracking database, 814 projects do not have an implementer listed. However, ComEd and Navigant staff determined that rebate numbers with a hyphen belonged to Nicor so the implementer and utility for each project could be determined.

3.2 Program Volumetric Findings

In EPY5, the ComEd CSR program rebated 4,675 projects for a total of 4,460 participants. This is slightly more than double the number of projects for EPY4 (2,054 projects).

Table 3-1. EPY5 Volumetric Findings Detail

Detail	Nicor Gas	Integrys	Total
Participants	3,698	762	4,460
Installed Projects	3,886	789	4,675

Source: EM&V analysis

3.3 Gross Program Impact Parameter Estimates

As described in Section 2, energy and demand savings are estimated using the following formula as specified in the TRM:

Central Air Conditioner

$$\Delta kWh = \left(FLH_{cool} \times Capacity \times \left(\frac{1}{SEER_{base}} - \frac{1}{SEER_{ee}}\right)\right)/1000$$

$$\Delta kW = \left(Capacity \times \left(\frac{1}{EER_{base}} - \frac{1}{EER_{ee}}\right)\right)/1000 \times CF$$

The EM&V team conducted research to validate the parameters that were not specified in the TRM. The results are shown in the following table.

Table 3-2. Verified Gross Savings Parameters

Input Parameters	Value		Default †	Source
FLH_{cool}	Chicago, Single Family	570	570	IL TRM
	Chicago, Multi-Family	506		
	Rockford, Single Family	512		
	Rockford, Multi-Family	467		
Capacity	Actual if within the range of greater than 15,000 Btuh and less than 65,000 Btuh		33,600	Evaluated†
$SEER_{base}$	Actual if within the range of greater than 6 and less than 25		10	Evaluated†
$SEER_{ee}$	Actual if within the range of greater than 14.25 and less than 25		14.5	Evaluated†
EER_{base}	Actual based on $SEER_{base}$; calculated		9.2	Evaluated†
EER_{ee}	Actual based on $SEER_{ee}$; calculated		12.0	Evaluated†
CF	91.5%		91.5%	IL TRM

† Default values were used if actual data was not available in the tracking system. The source of the default values was the Illinois TRM version 1.0.
Source: Evaluation Team analysis.

3.4 Development of the Verified Gross Realization Rate

Navigant determined the ex-ante gross savings by finding the sum of the energy savings for all paid projects in EPY5. These energy savings were reported in the ComEd tracking database. Navigant calculated verified gross energy and demand savings estimates using IL TRM algorithms, assumptions provided by ComEd, and actual project information from the tracking database. The

verified gross energy savings were divided by the ex-ante gross energy savings to find the verified gross realization rate for the program.

3.5 Verified Gross Program Impact Results

To determine the verified gross savings, Navigant calculated savings for each project using the IL TRM algorithm and assumptions shown in Section 2. The resulting total program verified gross savings is 3,109 MWh and 4.50 MW. Navigant was unable to replicate the savings values recorded in the ComEd tracking database using the algorithm and assumptions provided by ComEd. ComEd also provided the SQL code used to determine the kWh savings listed in the tracking database. Navigant reviewed the code and was unable to find the reason for the incorrect savings recorded.

One possible reason for the discrepancy could be that the implementers have differentiated between projects that are early replacements and projects that are replace-on-burnout. The IL TRM shows slightly different baseline assumptions for these two cases. However, it is unclear if this distinction is made in the ComEd tracking database. Additionally, the algorithm and assumptions provided by ComEd did not make this distinction.

Another possible reason for the discrepancy is that ComEd could have used very low full load hours to calculate savings. This is the one variable that does not have a column designated in the ComEd tracking database. Therefore, Navigant was unable to verify the values used to determine ex ante savings.

Table 3-3. PY5 Verified Gross Impact Savings Estimates

	Gross Energy Savings (MWh)	90/10 Significance?	Gross Peak Demand Savings (MW)	90/10 Significance?
Ex-Ante PY5 Gross Savings	2,375	Yes	N/A	Yes
Verified Gross Realization Rate	1.31		N/A	
Verified Gross Savings	3,109		4.50	

Source: Evaluation Team analysis.

4. Net Impact Evaluation

SAG determined[5] that the NTG value should be calculated by the EM&V team and applied retrospectively to calculate verified net savings. The participating trade ally free ridership rate was calculated from the trade ally survey at 0.25 (see Table 4-1). The spillover calculated from the same survey was 0.12.

Table 4-1. Participating Trade Ally Free Ridership and Spillover

	Sales Weighted Free-Ridership	Sales Weighted Spillover	N
Highest Volume Trade Allies	0.21	0.12	13
Medium Volume Trade Allies	0.34	0.10	18
Lowest Volume Trade Allies	0.35	0.20	18
All Participating Trade Allies	**0.25**	**0.12**	**49**

Source: Evaluation Team analysis.

Non-participating trade ally spillover was explored in "drop-out" and never-participated trade ally surveys. Navigant calculated spillover for each non-participating trade ally and then sales-weighted spillover for the program.

Table 4-2. Non-Participating Trade Ally Spillover

	Sales Weighted Spillover	N
Non-Participating Trade Allies	0.20	45

Source: Evaluation Team analysis.

The overall program NTG was calculated by averaging the EPY4 participant and the EPY5 trade ally free-ridership rates, and then adding the EPY4 participant spillover, and EPY5 participating trade ally and non-participating trade ally spillover, as follows:

$$NTG_{Program} = 1 - \frac{(FR_{Part.} + FR_{TA})}{2} + SO_{Part.} + SO_{Part.TA} + SO_{Non-Part.TA}$$

Where NTGProgram = Program NTG
FRPart. = Participant Free-Ridership
FR_{TA} = Trade Ally Free-Ridership
$SO_{Part.}$ = Participant Spillover
SO_{PartTA} = Participating TA Spillover
$SO_{Non\text{-}PartTA}$ = Non-Participating TA Spillover

[5] http://ilsagfiles.org/SAG_files/Meeting_Materials/2013/August 5-6, 2013 Meeting/ComEd EPY5-PY6 Proposal Comparisons with SAG.xls, which is to be found on the IL SAG web site here: http://ilsag.info/net-to-gross-framework-1.html

The participant free ridership rate from the EPY4 study was 0.41. The participant spillover was assumed to be zero since it is unlikely participants would have bought another CAC unit (particularly without participating in the program), and the evaluation found no evidence that participation in the CSR program led to the adoption of any additional energy saving measures.

The resulting program NTG rate is as follows:

$$1 - \frac{(0.41 + 0.25)}{2} + 0 + \ 0.12 \ + \ 0.20 = 0.99$$

The following table presents the verified net savings for the program.

Table 4-3. PY5 Verified Net Impact Savings Estimates

	Gross Energy Savings (MWh)	90/10 Significance?	Gross Peak Demand Savings (MW)	90/10 Significance?
Verified Gross Savings	3,109	Yes	4.50	Yes
NTG Ratio	0.99		0.99	
Verified Net Savings	3,077		4.45	

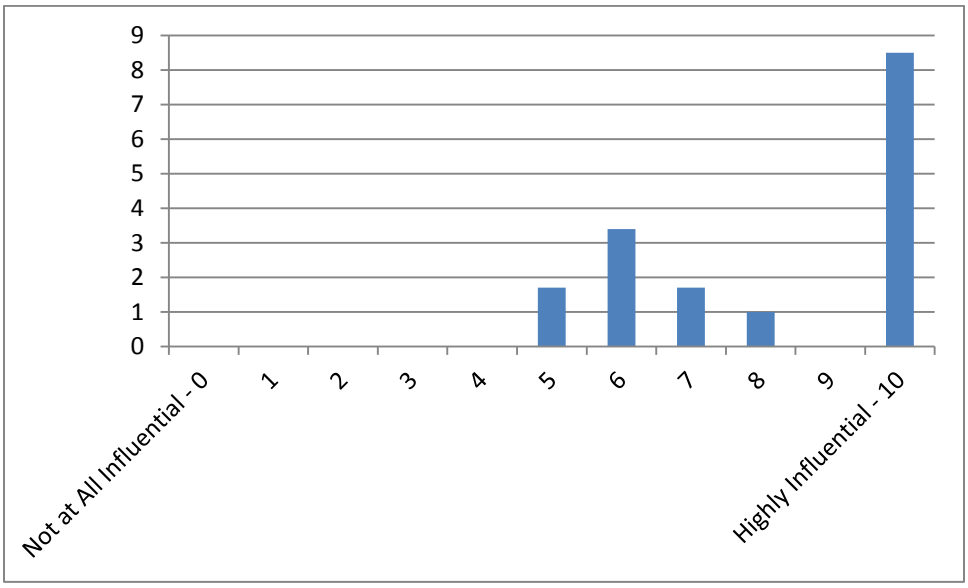
Source: Evaluation Team analysis.

5. Process Evaluation

Participating Trade Ally Process Results

The participating trade allies were asked if the CSR program had changed the efficiency levels of the central air conditioning units they offer to their customers. Thirty-five percent of the participating trade allies responded that they had increased the number of high efficiency units they offer to their customers. When those trade allies who responded that they had changed their sales practices as a result of the program were asked to rate how influential the program had been on this change, all of these trade allies stated that the program had been influential, and half stated that the program had been "highly influential".

Figure 5-1. Influence of Program on Trade Ally CAC Offerings (n = 17)

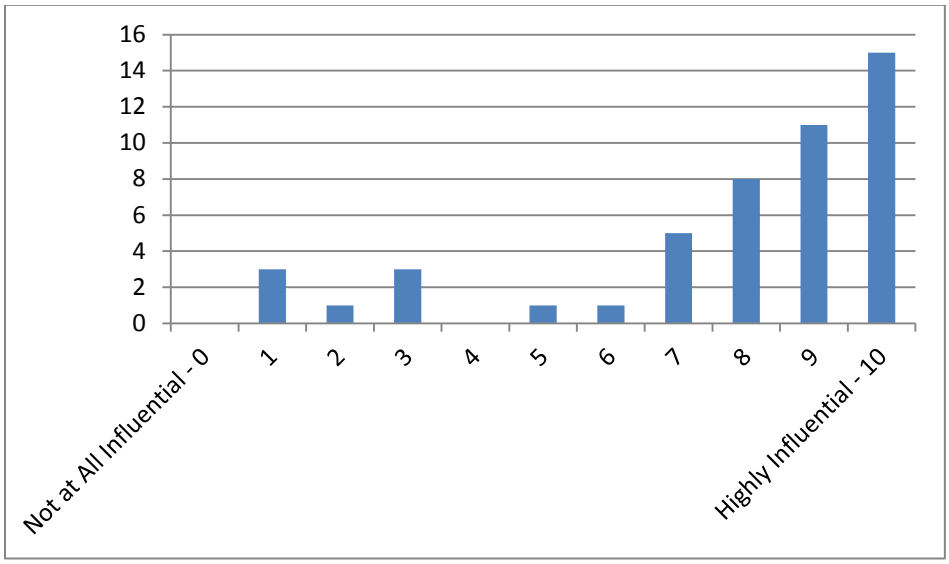


Source: Trade ally survey.

When asked how often they recommended that their customers purchase the high efficiency CAC options, seventy-three percent of trade allies responded that they always recommended the high efficiency options. One trade ally stated that they "sometimes" recommend the high efficiency option, and the remaining trade allies stated that they "often" recommend the high efficiency option. No participating trade allies stated that they "rarely" or "never" recommended the high efficiency option.

The trade allies were asked how influential the CSR program was on their customers' decision to purchase a high efficiency CAC unit. The trade allies were asked about two main aspects of the program: the utility incentive and the utility educational materials. Almost one-third of the trade allies (31%) stated that the utility incentives were "highly influential", giving the program a rating of "10".

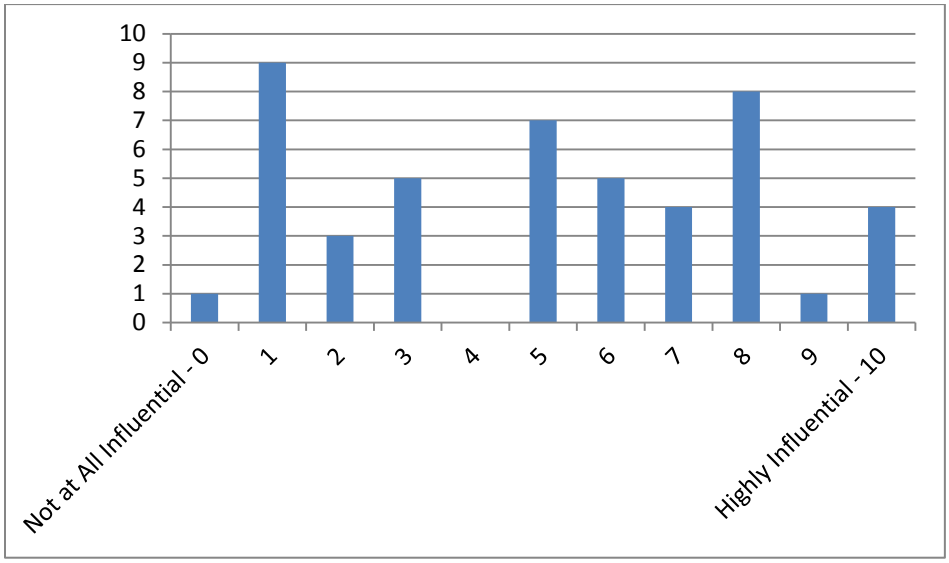
Figure 5-2. Influence of Program Incentive on Customers (n = 48)



Source: Trade ally survey.

The trade allies felt that the utility educational materials were less influential on their customers' decisions to purchase higher efficiency CAC units. Thirty-eight percent of the trade allies stated rated the influence of the educational materials at a four or less (out of a possible ten). However, thirty-six percent of trade allies stated that the program materials were influential, rating them a seven or above.

Figure 5-3. Influence of Program Educational Materials on Customers (n = 47)



Source: Trade ally survey.

The trade allies were also asked several questions about a promotional effort that ComEd implemented in the late winter/early spring of 2013. For that period of time the utility increased the rebated amount on a SEER 16 CAC unit from $350 to $500. Approximately 85% of the trade allies reported that their customers purchased a 16 SEER or higher CAC unit, and 62% of those trade allies

(53% of all trade allies) reported that some of their customers did purchase the 16 SEER or higher CAC because of the additional $150 rebate. When asked what percentage of their customers purchased a 16 SEER or higher CAC unit because of the additional rebate, the average response was 48% of customers.

Almost one-third (32%) of the participating trade allies stated that they thought other HVAC contractors are selling more efficient products, but are not offering program rebates to their customers. When asked why they thought other HVAC contractors were not participating in the program, the primary reason stated was the paperwork required. Several trade allies stated that they thought other contractors would inform customers about the program and the availability of the rebate, but would not complete the paper work for their customers. This response is consistent with the responses given by the non-participating trade allies.

The participating trade allies were asked if there were anyway that the CSR program could be improved. While most trade allies were very positive about the program and their experiences with it, there were a few suggestions. The most common suggestion was that the trade allies would like a central air conditioning only rebate, separate from the CSR program. The trade allies also mentioned that they would prefer to receive one check for the CSR program, instead of separate checks. Another suggestion was having rebated amounts consistent between the gas utilities (Peoples Gas, North Shore Gas, and Nicor Gas) to reduce confusion.

Non-Participating Trade Ally Process Results

This section discusses the process results obtained from the non-participating trade ally interviews. Non-participating trade allies who reported that they sold program qualified measures but did not submit the measures for a rebate were asked the reasons that they did not submit them to the program. The most commonly cited reason was that the trade allies were relying upon their customers to submit the rebates to Nicor Gas, Peoples Gas and North Shore Gas instead of doing it themselves. Another commonly cited reason was that the customers were not interested in participating in the program. When asked why their customers were not interested in participating in the program, the trade allies stated that the customers thought that the program rebates were not sufficient to warrant the effort to submit the application.

The trade allies also stated that they did not submit rebate application for program qualified furnaces because they themselves thought that the program paperwork was burdensome. Also cited reasons were that the trade ally did not have enough information about the program, and that the financial incentive was insufficient.

None of the trade allies reported that either they or any of the customers had had prior bad experiences with any ComEd, Nicor Gas, Peoples Gas and North Shore Gas or other utility program that would discourage them from participating in the Complete System Replacement program.

The trade allies who never participated in the program were more likely to report that they did not submit rebates for all qualified measures because they did not have sufficient information about the program. However, the "drop-out" trade allies were more likely to report that they thought that the program application process was too burdensome, and they were more likely to rely on their customers to complete the application process.

6. Conclusions and Recommendations

Program Savings Goals Attainment

Finding 1. The program achieved 3,077 verified net MWh savings for EPY5, and had 4,521 program participants. The program exceeded its goal of 2,200 MWh.

Tracking Database

Finding 2. The database ComEd uses to track the CSR program obtains data from both gas utility program implementers. The data is often incomplete or is inconsistent across the programs. This makes determining program level savings unnecessarily difficult.

Recommendation. Navigant recommends that the utilities and implementation contractors involved in the Complete System Replacement, Residential Prescriptive Rebates, and Home Energy Efficiency Rebates programs work together to develop a tracking database that is functional for all parties. This includes agreed upon savings assumptions, database fields, and common language for those fields.

Net-to-Gross Rate

Finding 3. The NTG rate found in this evaluation is 99% combining participant free ridership (0.41) and trade ally free ridership (0.25) and spillover (0.12 participating trade ally, and 0.20 nonparticipating trade ally).

Recommendation. Assuming other criteria specified in the NTG Framework are met, the NTG rate found by this evaluation should be applied retrospectively for EPY5, and may be used as the deemed NTG for EPY7.

Demand Savings Estimates.

Finding 4. ComEd did not provide ex ante demand savings estimates for the CSR program.

Recommendation. Navigant recommends that ComEd track ex ante demand savings in their tracking database.

Early Replacement Analysis.

Finding 5. Complete System Replacement customers installed and received a rebate for both a furnace and a central air conditioning unit. Customers would typically contact a trade ally because one of these measures was experiencing issues, and would then decide to also replace the other measure. Forty-three percent of the *second* measures installed (the measure that did *not* cause the participant to contact a trade ally) by Complete System Replacement participants could be considered early replacement measures, instead of replace-on-burnout. Early replacement was calculated based on the condition, age, and repair history of the replaced units. Fourteen percent of the first CSR measures (the measure that did cause the participant to contact a trade ally) could be considered early replacement, and seven percent of furnace only participants reported that their units could be considered early replacement.

Recommendation. Navigant suggests that the IL TRM be changed to allow the secondary measure replaced by a CSR participant to be considered early replacement. Navigant suggests that the early replacement rate for the secondary measure be deemed at 43%.

Trade Ally Participation.

Finding 6. Forty-five percent of non-participating trade allies reported that they had sold program qualified CAC units without applying for rebates for those measures, resulting in a non-participating spillover rate of 16%. When asked why they did not submit these measures to the program, the most commonly cited reasons had to do with the perception or experience that the program requirement were burdensome. In many cases the trade allies were relying on their customers to apply for rebates from the program.

Recommendation. The implementation contractors for the Home EER program, CSR program and the RPR program should continue to reach out to "drop-out" trade allies to ensure that they have adequate program information and support.

7. Appendix

7.1 Glossary

High Level Concepts

Program Year

- EPY1, EPY2, etc. Electric Program Year where EPY1 is June 1, 2008 through May 31, 2009, EPY2 is June 1, 2009 through May 31, 2010, etc.
- GPY1, GPY2, etc. Gas Program Year where GPY1 is June 1, 2011 through May 31, 2012, GPY2 is June 1, 2012 through May 31, 2013.

There are two main tracks for reporting impact evaluation results, called Verified Savings and Impact Evaluation Research Findings.

Verified Savings composed of

- Verified Gross Energy Savings
- Verified Gross Demand Savings
- Verified Net Energy Savings
- Verified Net Demand Savings

These are savings using deemed savings parameters when available and after evaluation adjustments to those parameters that are subject to retrospective adjustment for the purposes of measuring savings that will be compared to the utility's goals. Parameters that are subject to retrospective adjustment will vary by program but typically will include the quantity of measures installed. In EPY5/GPY2 the Illinois TRM was in effect and was the source of most deemed parameters. Some of ComEd's deemed parameters were defined in its filing with the ICC but the TRM takes precedence when parameters were in both documents.

Application: When a program has deemed parameters then the Verified Savings are to be placed in the body of the report. When it does not (e.g., Business Custom, Retrocommissioning), the evaluated impact results will be the Impact Evaluation Research Findings.

Impact Evaluation Research Findings composed of

- Research Findings Gross Energy Savings
- Research Findings Gross Demand Savings
- Research Findings Net Energy Savings
- Research Findings Net Demand Savings

These are savings reflecting evaluation adjustments to any of the savings parameters (when supported by research) regardless of whether the parameter is deemed for the verified savings analysis. Parameters that are adjusted will vary by program and depend on the specifics of the research that was performed during the evaluation effort.

Application: When a program has deemed parameters then the Impact Evaluation Research Findings are to be placed in an appendix. That Appendix (or group of appendices) should be labeled Impact Evaluation Research Findings and designated as "ER" for short. When a program does not have deemed parameters (e.g., Business Custom, Retrocommissioning), the Research Findings are to be in the body of the report as the only impact findings. (However, impact findings may be summarized in the body of the report and more detailed findings put in an appendix to make the body of the report more concise.)

Program-Level Savings Estimates Terms

N	Term Category	Term to Be Used in Reports‡	Application†	Definition	Otherwise Known As (terms formerly used for this concept)§
1	Gross Savings	Ex-ante gross savings	Verification and Research	Savings as recorded by the program tracking system, unadjusted by realization rates, free ridership, or spillover.	Tracking system gross
2	Gross Savings	Verified gross savings	Verification	Gross program savings after applying adjustments based on evaluation findings for only those items subject to verification review for the Verification Savings analysis	Ex post gross, Evaluation adjusted gross
3	Gross Savings	Verified gross realization rate	Verification	Verified gross / tracking system gross	Realization rate
4	Gross Savings	Research Findings gross savings	Research	Gross program savings after applying adjustments based on all evaluation findings	Evaluation-adjusted ex post gross savings
5	Gross Savings	Research Findings gross realization rate	Research	Research findings gross / ex-ante gross	Realization rate
6	Gross Savings	Evaluation-Adjusted gross savings	Non-Deemed	Gross program savings after applying adjustments based on all evaluation findings	Evaluation-adjusted ex post gross savings
7	Gross Savings	Gross realization rate	Non-Deemed	Evaluation-Adjusted gross / ex-ante gross	Realization rate
1	Net Savings	Net-to-Gross Ratio (NTGR)	Verification and Research	1 – Free Ridership + Spillover	NTG, Attribution
2	Net Savings	Verified net savings	Verification	Verified gross savings times NTGR	Ex post net
3	Net Savings	Research Findings net savings	Research	Research findings gross savings times research NTGR	Ex post net
4	Net Savings	Evaluation Net Savings	Non-Deemed	Evaluation-Adjusted gross savings times NTGR	Ex post net
5	Net Savings	Ex-ante net savings	Verification and Research	Savings as recorded by the program tracking system, after adjusting for realization rates, free ridership, or spillover and any other factors the program may choose to use.	Program-reported net savings

‡ "Energy" and "Demand" may be inserted in the phrase to differentiate between energy (kWh, Therms) and demand (kW) savings.

† **Verification** = Verified Savings; **Research** = Impact Evaluation Research Findings; **Non-Deemed** = impact findings for programs without deemed parameters. We anticipate that any one report will either have the first two terms or the third term, but never all three.

§ Terms in this column are not mutually exclusive and thus can cause confusion. As a result, they should not be used in the reports (unless they appear in the "Terms to be Used in Reports" column).

Individual Values and Subscript Nomenclature

The calculations that compose the larger categories defined above are typically composed of individual parameter values and savings calculation results. Definitions for use in those components, particularly within tables, are as follows:

Deemed Value – a value that has been assumed to be representative of the average condition of an input parameter and documented in the Illinois TRM or ComEd's approved deemed values. Values that are based upon a deemed measure shall use the superscript "D" (e.g., delta watts^{D}, HOU-Residential^{D}).

Non-Deemed Value – a value that has not been assumed to be representative of the average condition of an input parameter and has not been documented in the Illinois TRM or ComEd's approved deemed values. Values that are based upon a non-deemed, researched measure or value shall use the superscript "E" for "evaluated" (e.g., delta watts^{E}, HOU-Residential^{E}).

Default Value – when an input to a prescriptive saving algorithm may take on a range of values, an average value may be provided as well. This value is considered the default input to the algorithm, and should be used when the other alternatives listed for the measure are not applicable. This is designated with the superscript "DV" as in X^{DV} (meaning "Default Value").

Adjusted Value – when a deemed value is available and the utility uses some other value and the evaluation subsequently adjusts this value. This is designated with the superscript "AV" as in X^{AV}

Glossary Incorporated From the TRM

Below is the full Glossary section from the TRM Policy Document as of October 31, 2012[6].

Evaluation: Evaluation is an applied inquiry process for collecting and synthesizing evidence that culminates in conclusions about the state of affairs, accomplishments, value, merit, worth, significance, or quality of a program, product, person, policy, proposal, or plan. Impact evaluation in the energy efficiency arena is an investigation process to determine energy or demand impacts achieved through the program activities, encompassing, but not limited to: *savings verification*, *measure level research*, and *program level research*. Additionally, evaluation may occur outside of the bounds of this TRM structure to assess the design and implementation of the program.

Synonym: **Evaluation, Measurement and Verification (EM&V)**

> **Measure Level Research**: An evaluation process that takes a deeper look into measure level savings achieved through program activities driven by the goal of providing Illinois-specific research to facilitate updating measure specific TRM input values or algorithms. The focus of this process will primarily be driven by measures with high savings within Program Administrator portfolios, measures with high uncertainty in TRM input values or algorithms (typically informed by previous savings verification activities or program level research), or measures where the TRM is lacking Illinois-specific, current or relevant data.

[6] IL-TRM_Policy_Document_10-31-12_Final.docx

Program Level Research: An evaluation process that takes an alternate look into achieved program level savings across multiple measures. This type of research may or may not be specific enough to inform future TRM updates because it is done at the program level rather than measure level. An example of such research would be a program billing analysis.

Savings Verification: An evaluation process that independently verifies program savings achieved through prescriptive measures. This process verifies that the TRM was applied correctly and consistently by the program being investigated, that the measure level inputs to the algorithm were correct, and that the quantity of measures claimed through the program are correct and in place and operating. The results of savings verification may be expressed as a program savings realization rate (verified ex post savings / ex ante savings). Savings verification may also result in recommendations for further evaluation research and/or field (metering) studies to increase the accuracy of the TRM savings estimate going forward.

Measure Type: Measures are categorized into two subcategories: custom and prescriptive.

Custom: Custom measures are not covered by the TRM and a Program Administrator's savings estimates are subject to retrospective evaluation risk (retroactive adjustments to savings based on evaluation findings). Custom measures refer to undefined measures that are site specific and not offered through energy efficiency programs in a prescriptive way with standardized rebates. Custom measures are often processed through a Program Administrator's business custom energy efficiency program. Because any efficiency technology can apply, savings calculations are generally dependent on site-specific conditions.

Prescriptive: The TRM is intended to define all prescriptive measures. Prescriptive measures refer to measures offered through a standard offering within programs. The TRM establishes energy savings algorithm and inputs that are defined within the TRM and may not be changed by the Program Administrator, except as indicated within the TRM. Two main subcategories of prescriptive measures included in the TRM:

Fully Deemed: Measures whose savings are expressed on a per unit basis in the TRM and are not subject to change or choice by the Program Administrator.

Partially Deemed: Measures whose energy savings algorithms are deemed in the TRM, with input values that may be selected to some degree by the Program Administrator, typically based on a customer-specific input.

In addition, a third category is allowed as a deviation from the prescriptive TRM in certain circumstances, as indicated in Section 3.2:

Customized basis: Measures where a prescriptive algorithm exists in the TRM but a Program Administrator chooses to use a customized basis in lieu of the partially or fully deemed inputs. These measures reflect more customized, site-specific calculations (e.g., through a simulation model) to estimate savings, consistent with Section 3.2.

7.2 Detailed Impact Research Findings and Approaches

7.2.1 Net Program Impact Approach

7.2.1.1 Free-Ridership

Participant Free Ridership

In order to calculate participant free ridership using data obtained from the participant interviews, the program participants were asked a series of questions to determine the likelihood that they would have purchased the high efficiency equipment had the program been unavailable, and the importance of the program on their decision.

If the customer did not have specific plans to install the program measure prior to participation, the qualifying measure was considered "early replacement", and free ridership is estimated to be zero.

If the installation was not an early replacement, then

$$FR = \frac{LIKELIHOOD * (1/3) + IMPORTANCE * (2/3)}{10}$$

Else,

$$FR = \frac{\frac{(LIKELIHOOD + TIMING)}{2} * (1/3) + (1 - IMPORTANCE) * (2/3)}{10}$$

Trade Ally Perspective of Participant Free Ridership

To calculate participant free ridership using data obtained from the trade ally interviews, the trade allies were asked the likelihood that they would have sold the same volume of high efficiency equipment had the program been unavailable, and the importance of the program incentive and the program educational and marketing materials on the participants' decision to select equipment with higher levels of efficiency.

$$FR = \frac{LIKELIHOOD * (1/3) + [1 - MAX\ INFLUENCE(Program\ Incentive, Program\ Materials)] * (2/3)}{10}$$

7.2.1.2 Spillover

Participating Trade Ally Spill over

To calculate participant spillover using data obtained from the trade ally interviews, the trade allies were asked to a series of questions designed to estimate approximately what percentage of qualifying equipment was purchased by non-program participants, and the influence their own recommendations and the program materials had on their customers' decisions to purchase high efficiency equipment.

$$SO = \%NonPart\ HE\ Purch * MAX\ INFLUENCE(TA\ Recommendation, Program\ Materials)$$

Non-Participating Trade Ally Spillover

In order to calculate non-participating trade ally spillover using data obtained from the phone interviews, the non-participating trade allies were asked the following:

1. What percentage of customers purchased high efficiency furnaces (those with 92% AFUE ratings or above) before participating in the Home EER program/becoming aware of the Home EER program?
2. What percentage of customers purchased high efficiency furnaces (those with 92% AFUE ratings or above) since participating in the Home EER program/becoming aware of the Home EER program?
3. (For trade allies who reported an increase in high efficient furnace sales) On a scale from zero to five, where zero is not at all influential and five is highly influential, how influential was your participation in the Home EER program/becoming aware of the Home EER program on increasing the percentage of customers who purchased high efficiency furnaces? The response to this question was divided by five to calculate the program influence score.

Both "drop-out" trade allies (those who participated in EPY4 but did not participate in EPY5) and trade allies who never participated in the program were included in the survey effort. The "drop-out" trade allies were asked about their high efficiency CAC unit sales from before they participated in the program and their sales since they *last* participated in the program. The trade allies who had never participated were asked about their sales before they became aware of the CSR program and their sales after they became aware of the program.

The difference between high efficiency CAC unit sales after participating in the program/becoming aware of the program and high efficiency CAC unit sales before participating in the program/becoming aware of the program was classified as potential spillover. The potential spillover was discounted based on the reported influence of the program on the high efficiency furnace sales.

The trade allies were also asked the number of CAC units, regardless of efficiency, that they sold in the previous year. This was multiplied by the percentage of HE sales that were potential spillover, to give an estimate of the number of HE units each TA sold that were not part of the program. That number of units was then multiplied by 534 kWh (the per unit savings) to calculate the overall energy spillover savings associated with each trade ally.

The non-participating trade ally spillover was calculated using the following formula:

$$\begin{aligned} Non-Part\ TA\ SO \\ &= (\%\ of\ HE\ Sales\ After\ Program\ Participation \\ &- \%\ of\ Sales\ Before\ Program\ Participation) * Program\ Influence\ Score \\ &* Number\ of\ Total\ CAC\ Units\ Sold * 534\ kWh \end{aligned}$$

The spillover kWh savings associated with the individual trade allies was then totaled, giving the spillover savings for the sample population. The sample population spillover was then scaled up to the entire non-participating trade ally population.

Table 7-1. Non-Participant Trade Ally Spillover Savings

	Sample Population SO Savings (kWh)	N	Non-Part Population	Non-Part TA SO Savings (kWh)
Drop-Out	107,521	30	155	556,801
Never Participated	2,436	25	426	41,487

Source: Evaluation Team analysis.

After the population spillover savings were calculated, the spillover savings were divided by the program savings to achieve the program drop-out (non-participant) trade ally spillover rate.

Table 7-2. Non-Participant Trade Ally Spillover

Non-Part TA SO Savings (kWh)	Program Savings	Non-Part TA SO Rate
598,288	3,011,855	0.20

Source: Evaluation Team analysis.

7.2.2 Early Replacement Analysis Methodology and Results

This section presents the results of the Home EER/Complete System Replacement early replacement analysis. Navigant sought to determine the number of Home EER/CSR participants for whom either the furnace, central air conditioning unit, or both units would be considered an "early replacement," as opposed to a "standard replacement" or "replace or burnout". The purpose of this analysis is to inform future changes to the Illinois Technical Resource Manual. Telephone interviews were conducted with seventy Home EER/CSR participants who replaced both their furnaces and central air conditioning units, and seventy Home EER participants who only replaced their furnaces.

In order to classify a replaced furnace or CAC unit, the CSR program participants were asked a series of questions about the condition of their furnaces and CAC units at the time they were replaced. The furnace participants were asked the same series of questions about the condition of their furnaces at the time they were replaced, and, if they have them, their CAC units at the time that the furnace was replaced.

The questions used to determine early replacement included questions about whether the units had undergone repairs, the cost and number of any repairs, the age of the replaced equipment, and how long the equipment would have lasted had it not been replaced. A detailed presentation of the early replacement algorithm can be found in Figure 7-1.

The seventy Home EER/CSR participants were selected randomly from the Home EER tracking database. These participants were grouped into two categories: those who initially contacted their contractor because of their furnace, and those who initially contacted their contractor because of their CAC unit. These classifications were based on self-report data from the telephone interview. Measure 1 and Measure 2 are assigned based on these categories.

Table 7-3. Home EER/CSR Participant Classification

	Measure 1	Measure 2	N
Initial Furnace Customer	Furnace	CAC	42
Initial CAC Customer	CAC	Furnace	28

Source: Evaluation Team analysis.

The following table presents the results from the early replacement survey. As shown in the following table, there is an increase in the number of early replacement units between Measure 1 and Measure 2, from 14% to 43% for both furnaces and CAC units.

Table 7-4. Home EER/CSR Early Replacement Rates

	Measure 1 Early Replacement		Measure 2 Early Replacement	
Initial Furnace Customer	6	14%	17	40%
Initial CAC Customer	4	14%	13	46%
Total	**10**	**14%**	**30**	**43%**

Source: Evaluation Team analysis.

Seventy Home EER furnace participants were also randomly selected from the program tracking database. The furnace participants were asked the same early replacement questions as the Home EER/CSR participants. Table 7-5 presents the results of the furnace only participant surveys. Fewer furnace only participants were classified as early replacement than CSR participants. One possible reason for the discrepancy was the high upfront cost of replacing both units. Program participants who are willing and able to pay to replace both the furnace and CAC unit are possibly more willing and able to replace their systems before it is absolutely necessary.

Figure 7-1. CSR Early Replacement Algorithm

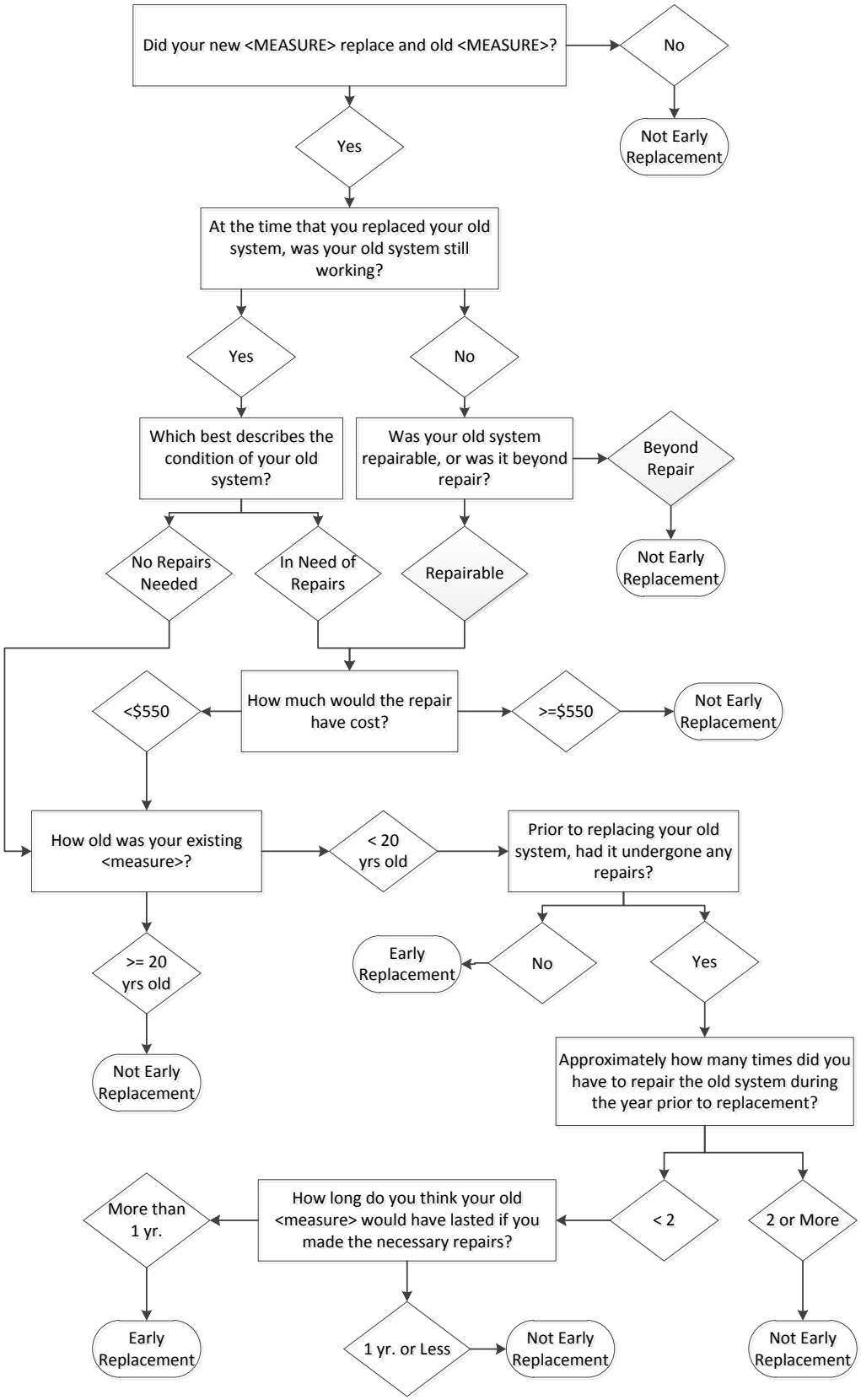


Table 7-5. Home EER Early Replacement Rates

	Furnace Early Replacement		n
Furnace Only Participants	5	7%	70

Source: Evaluation Team analysis.

7.3 TRM Recommendations

The following research findings and recommendations may assist the Illinois TRM Technical Advisory Committee annual updating process:

Navigant suggests that the IL TRM be changed to allow the secondary measure replaced by a CSR participant to be considered early replacement. Navigant suggests that the early replacement rate for the secondary measure be deemed at 43%.

7.4 Data Collection Instruments

7.4.1 Trade Ally Survey Guide – CSR Program

SCREENER/INTRODUCTION

INTRO1 Hello, my name is_____ , and I'm calling on behalf of ComEd to ask your organization's feedback on their Complete System Replacement program. This is not a sales call. May I speak to <CONTACT NAME>?

[IF <CONTACT NAME> IS NULL] May I speak to your residential sales, service or installation manager? [If not available, request their name and a good time to call back.]

[IF NOT A GOOD TIME for respondent, ask to set appointment for time convenient to the respondent]

The following questions refer to the Complete System Replacement Program, which is run by ComEd in conjunction with the Nicor Gas Home Energy Efficiency Rebate Program and the Peoples Gas and North Shore Gas Residential Prescriptive Rebate Program.

I will be referring to the Complete System Replacement Program as the CSR program, or simply as the program throughout the survey.

Naturally Occurring Baseline and Free Ridership

I'm going to ask you some questions about your sales of energy-efficient equipment *prior* to your involvement with the Complete System Rebate Program.

BL1. Prior to your involvement with the CSR Program, did you offer your customers a high efficiency option for Central Air Conditioning systems?

1. (Yes)
2. (No) – SKIP TO BL4

888. Don't Know – SKIP TO BL4
999. Refused – SKIP TO BL4

[IF BL1= "Yes"]
BL2. Prior to your involvement with the CSR Program, how often did you *recommend* the high efficiency option to your customers? Would you say that you recommended it always, often, sometimes, rarely, or never? [IF NECESSARY, REMIND INTERVIEWEE THAT YOU'RE DISCUSSING THE PRE-PROGRAM TIME FRAME]

1. ALWAYS RECOMMENDED THE HIGH EFFICIENCY OPTION
2. OFTEN
3. SOMETIMES
4. RARELY

5. NEVER/ONLY WHEN CUSTOMERS SPECIFICALLY REQUESTED HIGH EFFICIENCY OPTIONS
000. OTHER: (SPECIFY)
888. DON'T KNOW
999. REFUSED

[IF BL1= "Yes"]
BL3. About what percent of the time did customers actually *purchase* the high efficiency option for central air conditioning, prior to your involvement with the Program?
RECORD PERCENTAGE
888. DON'T KNOW
999. REFUSED

BL4. Now that you are participating in the Program, have you changed what central air conditioning products you offer to customers?
1. YES
2. NO
888. DON'T KNOW
999. REFUSED

[IF BL1=No and BL4=No, ask BL4a]
BL4a. Earlier you indicated that you did not offer high efficiency central air conditioning units prior to participation in the program, but then you said that you did not change your offerings since participating. Can you explain in your own words when you began offering high efficiency CAC units?
[RECORD VERBATIM]
888. DON'T KNOW
999. REFUSED

[IF BL4= "Yes"]
BL5. Please describe the changes that you've made to your product offerings.
[RECORD VERBATIM]
888. DON'T KNOW
999. REFUSED

[IF BL4= "Yes"]
BL6. On a scale of 0 to 10, with 10 being the most influential, how much influence did the program have on your decision to change your CAC offerings?
ENTER RATING 0 - 10
888. DON'T KNOW
999. REFUSED

[IF BL4= "Yes"]

BL7. Do you still offer standard efficiency CAC units or do you only stock/offer high efficiency options now?

1. BOTH STANDARD EFFICIENCY AND HIGH EFFICIENCY OPTIONS
2. HIGH EFFICIENCY OPTIONS ONLY SKIP TO BL11a
000. OTHER: (SPECIFY) SKIP TO BL11a
888. DON'T KNOW SKIP TO BL11a
999. REFUSED SKIP TO BL11a

[IF BL7=1]

BL8. How often do you recommend that customers purchase the high efficiency options? Would you say that you recommend them always, often, sometimes, rarely, or never?

1. ALWAYS RECOMMENDED THE HIGH EFFICIENCY OPTION
2. OFTEN
3. SOMETIMES
4. RARELY
5. NEVER/ONLY WHEN CUSTOMERS SPECIFICALLY REQUESTED HIGH EFFICIENCY OPTIONS
000. OTHER: (VERBATIM)
888. DON'T KNOW
999. REFUSED

[IF BL7=1]

BL9. About what percent of all your customers actually *purchase* the high efficiency option for central air conditioning? Please think about all sales of CAC units, *including but not limited to* the participants in the Program.

RECORD PERCENTAGE
888. DON'T KNOW
999. REFUSED

[IF BL7=1]

B10. Of those customers who purchase the high efficiency option for central air conditioning, about what percent of them are ***not*** participants in the CSR Program? [IF NECESSARY, ADD "You said that approximately [RESPONSE TO B9] of all your customers select the high efficiency option; about how many of those customers are *not* participating in the program?"]

RECORD PERCENTAGE
888. DON'T KNOW
999. REFUSED

BL11a. Using a 0 to 10 likelihood scale where 0 is **not at all likely** and 10 is **extremely likely**, if the program had not been available, what is the likelihood that you would have been *recommending* the same high efficiency central air conditioning products, as provided through the program?

ENTER RATING 0 - 10
888. DON'T KNOW
999. REFUSED

BL11b. Using a 0 to 10 likelihood scale where 0 is **not at all likely** and 10 is **extremely likely**, if the program had not been available, what is the likelihood that you would have sold the same volume of high efficiency central air conditioning products, as provided through the program?
ENTER RATING 0 - 10
888. DON'T KNOW
999. REFUSED

BL12. On a scale of 0 to 10, with 10 being the most influential, how much influence do you think *your recommendation* has on your customers' decision to select higher levels of efficiency when purchasing CAC units?
ENTER RATING 0 - 10
888. DON'T KNOW
999. REFUSED

BL13a. On a scale of 0 to 10, with 10 being the most influential, how much influence do you think *utility program incentives* have on your customers' decision to select higher levels of efficiency when purchasing CAC units?
ENTER RATING 0 - 10
888. DON'T KNOW
999. REFUSED

BL13ai. Of your customers who participated in the program, did any choose to purchase a 16 SEER or higher unit?
ENTER RATING 0 - 10
888. DON'T KNOW
999. REFUSED

BL13aii. In the late winter/early spring of 2013 ComEd ran a promotion increasing the rebate amount from $350 to $500 for units that were 16 SEER or above. Did any of those customers who purchased a 16 SEER or higher CAC unit do so because of the additional $150 rebate? [If yes.] What percentage of those customers was it?

BL13b. On a scale of 0 to 10, with 10 being the most influential, how much influence do you think *utility educational materials* have on your customers' decision to select higher levels of efficiency when purchasing CAC units?
ENTER RATING 0 - 10
888. DON'T KNOW
999. REFUSED

PROGRAM SPILLOVER

D1. Did your experience with the CSR Program in any way influence you to recommend additional energy efficiency measures to customers that did not receive a program rebate?

1. YES
2. NO
000. OTHER: (VERBATIM)
888. DON'T KNOW
999. REFUSED

[If D1 = "Yes" ask D2 – D6]

D2. What efficiency measures were recommended?

RECORD VERBATIM - CLARIFY AS NECESSARY
888. DON'T KNOW
999. REFUSED

D2a. How many of the recommended measures were installed?

RECORD VERBATIM - CLARIFY AS NECESSARY
888. DON'T KNOW
999. REFUSED

D3. Please briefly describe how the Program has influenced your decisions to recommend additional high-efficiency measures that did not receive program rebates.

RECORD VERBATIM - CLARIFY AS NECESSARY
888. DON'T KNOW
999. REFUSED

D4. On a scale of 0 to 10, with 10 being the most influential, how much influence did the program have on your decision to recommend additional, non-rebated high-efficiency measures?

ENTER RATING 0 - 10
888. DON'T KNOW
999. REFUSED

NON-PARTICIPANT SPILLOVER

E1. Do you believe that other HVAC Contractors that are not participating in the Program are increasing their sales of energy efficient measures because of the influence of the Program? In other words, are they selling more energy efficient products than they would have if the Program did not exist?

1. (Yes)

2. (No)
000. Other: (verbatim)
888. Don't Know
999. Refused

[If E1 = "yes"]
E1a. Why do you think that other HVAC Contractors who are selling more efficient products are not offering program rebates to their customers on these units?
RECORD VERBATIM - CLARIFY AS NECESSARY
888. Don't Know
999. Refused

E2. Please briefly describe how the Program is influencing the market for energy efficiency measures in Chicagoland.
[Probe for availability, types of equipment, timing, quantity, and efficiency]
RECORD VERBATIM - CLARIFY AS NECESSARY
888. DON'T KNOW
999. REFUSED

We have one final question for you.

Q9. What additional suggestions, if any, do you have as to how the Complete System Replacement program can be improved? (RECORD VERBATIM)
RECORD VERBATIM - CLARIFY AS NECESSARY
888. DON'T KNOW
999. REFUSED

Thank you for your time.

7.4.2 Early Replacement Guide – HEER and CSR Program

INTRODUCTION AND SCREENING QUESTIONS

INTRO1 Hello, my name is _____, and I'm calling on behalf of Nicor Gas to ask your help in evaluating the energy efficiency program that gave you a rebate on equipment you had installed in your home in <PARTIC_DATE>. Let me assure you that this is not a sales call.
May I speak with <**CUST NAME**>?

1. CONTINUE WITH CUSTOMER ONCE THEY ARE ON THE PHONE
2. CUSTOMER NOT AVAILABLE [SCHEDULE CALLBACK]
3. NOT A GOOD TIME TO CONDUCT SURVEY [SCHEDULE CALLBACK]

INTRO2 Nicor Gas has hired us to evaluate their energy efficiency programs, and we'd like to talk briefly with you because records in Nicor Gas' files show that you took part in their Home

Energy Efficiency Rebate program this past year and installed a high efficiency furnace and redeemed a program rebate.

SCR1 Do you live at <SERVICE_ADDRESS>?

1. Yes [SKIPTO SCR2]
2. No
3. Not now, but did live there

888. Don't Know [THANK AND TERMINATE]
999. Refused [THANK AND TERMINATE]

SCR2 The **Home Energy Efficiency Rebate** Program gives a cash rebate for Nicor Gas customers buying a high-efficiency furnace. The check may have been paid directly to the equipment contractor, in which case you should have been seen a credit reducing the cost of equipment on the contractor's bill. Do you remember the program?

1. Yes [SKIPTO EQT1]
2. No, I don't recall having any equipment installed in the past year (since June 2012) [SKIP TO SCR2A]
3. Yes, I had equipment installed but I don't recall hearing about a Nicor Gas rebate. [SKIPTO EQT1]

888. Don't Know
999. Refused

SCR2a Is there someone in the household at <SERVICE_ADDRESS> who might recall the program and could talk about your household's experience with the Home Energy Efficiency Rebate program?

1. Yes [ASK TO SPEAK WITH PERSON WHO RECALLS PROGRAM & CONTINUE WITH THAT PERSON; take call-back info] [SKIPTO INTRO2]
2. No, I'm sure your records are in error. [THANK AND TERMINATE]

888. Don't Know
999. Refused

The following questions refer to the Home Energy Efficiency Rebate Program, which may be referred to as "the Program" or the "HEER Program" throughout the survey for the sake of brevity.

[ASK IF PARTTYPE = FURN]

SCR3 Our records indicate that you purchased and received a rebate for a high efficiency furnace from the HEER program. Does this sound correct?

1. Yes [SKIPTO C1]
2. No [ASK SCR3a]

888. Don't Know [THANK AND TERMINATE]
999. Refused [THANK AND TERMINATE]

SCR3a Do you recall what equipment you purchased through the program?

1. Boiler
2. Water Heater

3. Central Air Conditioner [ASK SCR3b]
888. Don't Know [THANK AND TERMINATE]
999. Refused [THANK AND TERMINATE]

SCR3b You stated that you received a rebate for a central air conditioning unit, which would have been part of a packaged rebate along with a high efficiency furnace. Does this sound familiar?

1. Yes [SKIPTO A1] [PARTTYPE = CSR]
2. No [THANK AND TERMINATE]
888. Don't Know [THANK AND TERMINATE]
999. Refused [THANK AND TERMINATE]

[ASK IF PARTTYPE = CSR]

SCR4 Our records indicate that you purchased and received a rebate for a high efficiency furnace and a high efficiency central air conditioning unit through the complete system replacement portion of the HEER program. Does this sound correct?

1. Yes [SKIPTO A0]
2. No [ASK SCR4a]
888. Don't Know [THANK AND TERMINATE]
999. Refused [THANK AND TERMINATE]

SCR4a Did you recall what equipment you purchased through the program?

1. Furnace Only [ASK SCR4b]
2. Boiler [THANK AND TERMINATE]
3. Water Heater [THANK AND TERMINATE]
4. Central Air Conditioner Only [ASK SCR4c]
888. Don't Know [THANK AND TERMINATE]
999. Refused [THANK AND TERMINATE]

SCR4b You stated that you received a rebate for a furnace only, and did not purchase or receive a rebate for a central air conditioning unit. Is this correct?

1. Yes [SKIPTO C1] [PARTTYPE = Furn]
2. No [THANK AND TERMINATE]
888. Don't Know [THANK AND TERMINATE]
999. Refused [THANK AND TERMINATE]

SCR4c You stated that you received a rebate for a central air conditioning unit, which would have been part of a packaged rebate along with a high efficiency furnace. Does this sound familiar?

1. Yes [SKIPTO A0] [PARTTYPE = CSR]
2. No [THANK AND TERMINATE]
888. Don't Know [THANK AND TERMINATE]
999. Refused [THANK AND TERMINATE]

CSR PARTICIPANTS

[ASK IF A0 – B8 IF PARTTYPE = CSR]

A0 Thinking back to when you first decided to contact a contractor, what was the main reason you decided to call a contractor? [DO NOT READ – ACCEPT ONLY ONE RESPONSE]

1. Furnace broke down [MEASURE 1 = FURNACE]
2. Furnace appeared to be at end of useful life [MEASURE 1 = FURNACE]
3. Furnace was not working optimally [MEASURE 1 = FURNACE]
4. Needed new furnace [MEASURE 1 = FURNACE]
5. CAC unit broke down [MEASURE 1 = air conditioning system (AC)]
6. CAC unit appeared to be at end of useful life [MEASURE 1 = air conditioning system (AC)]
7. CAC unit was not working optimally [MEASURE 1 = air conditioning system (AC)]
8. Needed new CAC [MEASURE 1 = air conditioning system (AC)]
9. Something else broke down, not the furnace or CAC unit [ASK A0a]
10. Learned there were rebates or discounts available for a limited time [ASK A0a]
11. Decided to replace furnace to save energy/money [MEASURE 1 = FURNACE]
12. Decided to replace CAC to save energy/money [MEASURE 1 = air conditioning system (AC)]

777 Other [PROBE FOR AC OR FURNACE, ASSIGN MEASURE 1]
888. Don't Know
999. Refused

[ASK IF A0 = 9 or 10]

A0a When you were deciding to replace your furnace and air conditioning system, did you first decide to replace your furnace or your air conditioning system?

1. Furnace [MEASURE 1 = FURNACE]
2. Air Conditioning system [MEASURE 1 = air conditioning system (AC)]
3. Both at same time [MEASURE 1 = FURNACE]

888. Don't know
999. Refused

[IF MEASURE 1 = FURNACE, MEASURE 2 = air conditioning system (AC)]
[IF MEASURE 1 = air conditioning system (AC), MEASURE 2 = FURNACE]

A1 Did your new <MEASURE 1> replace an old <MEASURE 1>?

1. Yes
2. No [SKIP TO B1]

888. Don't Know
999. Refused

[ASK A2 and A3 IF A0 IS NOT 1 or 4]

A2 At the time you replaced your old system with a new <MEASURE 1>, was your old <MEASURE 1> still working?

1. Yes
2. No [SKIP TO A4]

888. Don't Know

999. Refused

A3 Which of the following best describes the condition of your old <MEASURE 1>?
1. The old system was working with no need of repair
2. The old system was working but needed repair
888. Don't Know
999. Refused

[ASK IF A0 = 1 or 4 or IF A2 = 2]
A4 Was your old <MEASURE 1> repairable, or was it beyond repair?
1. Repairable
2. Beyond Repair
888. Don't Know
999. Refused

[ASK IF A4 = 1 or IF A3 = 2]
A5 Do you remember how much the repair would have cost? Was it…
1. Less than $550
2. More than $550
888. Don't Know
999. Refused

A6 How old was your existing <MEASURE 1>? [IF NEEDED] In years.
NUMERIC OPEN END
888. Don't know
999. Refused

[ASK IF A6 = 888, 999]
A6a. What would you estimate the approximate age of your old <MEASURE 1> to be?
1. Less than 2 years
2. 2 to (less than) 5 years
3. 5 to (less than) 10 years
4. 10 to (less than) 15 years
5. 15 to (less than) 20 years
6. 20 or more years
888. Don't know
999. Refused

A7 Prior to replacing your old <MEASURE 1>, had it undergone any repairs?
1. Yes
2. No
888. Don't know
999. Refused

[ASK IF A7 = 1]

A7a Approximately how many times did you have to repair the old <MEASURE 1> during the year prior to replacement?

NUMERIC OPEN END

888. (Don't know)

999. (Refused)

A8 How long do you think your old <MEASURE 1> would have lasted if you had made the necessary repairs? Would you say..?

1. 1 year or less
2. 2 or 3 years
3. 4 or 5 years
4. or more than five years

888. Don't know

999. Refused

Now I have a few questions about the other equipment that you replaced as part of the CSR program, the <MEASURE 2>.

B1 Did your new <MEASURE 2> replace an old <MEASURE 2>?

1. Yes
2. No [SKIP TO Q1]

888. Don't Know

999. Refused

B2 At the time you replaced your old system with a new <MEASURE 2>, was your old <MEASURE 2> still working?

1. Yes
2. No [SKIP TO B4]

888. Don't Know

999. Refused

B3 Which of the following best describes the condition of you old <MEASURE 2>?

1. The old system was working with no need of repair
2. The old system was working but needed repair

888. Don't Know

999. Refused

[ASK IF B2 = 2]

B4 Was your old <MEASURE 2> repairable, or was it beyond repair?

1. Repairable
2. Beyond Repair

888. Don't Know

999. Refused

[ASK IF B4 = 1 or IF B3 = 2]

B5 Do you remember about how much the repair would have cost? Was it…

1. Less than $550
2. More than $550
888. Don't Know
999. Refused

B6 How old was your existing <MEASURE 2>? [IF NEEDED] In years.

NUMERIC OPEN END

888. Don't know
999. Refused

[ASK IF B6 = 888, 999]

B6a. What would you estimate the approximate age of your old <MEASURE 2> to be?

1. Less than 2 years
2. 2 to (less than) 5 years
3. 5 to (less than) 10 years
4. 10 to (less than) 15 years
5. 15 to (less than) 20 years
6. 20 or more years
888. Don't know
999. Refused

B7 Prior to replacing your old <MEASURE 2>, had it undergone any repairs?

1. Yes
2. No
888. Don't know
999. Refused

[ASK IF B7 = 1]

B7a Approximately how many times did you have to repair the old <MEASURE 2> during the year prior to replacement?

NUMERIC OPEN END

888. (Don't know)
999. (Refused)

B8 How long do you think your old <MEASURE 2> would have lasted if you had made the necessary repairs? Would you say..?

1. 1 year or less
2. 2 or 3 years
3. 4 or 5 years
4. or more than five years
888. Don't know
999. Refused

FURNACE ONLY PARTICIPANTS

[ASK IF C1 – D8 IF PARTTYPE = FURN]

C1 Did your new furnace replace an old furnace?

1. Yes
2. No [SKIP TO D1]

888. Don't Know

999. Refused

C2 At the time you replaced your old system with a new furnace, was your old furnace still working?

1. Yes
2. No [SKIP TO C4]

888. Don't Know

999. Refused

C3 Which of the following best describes the condition of your old furnace?

1. The old system was working with no need of repair
2. The old system was working but needed repair

888. Don't Know

999. Refused

[ASK IF C2 = 2]

C4 Was your old furnace repairable, or was it beyond repair?

1. Repairable
2. Beyond Repair

889. Don't Know

999. Refused

[ASK IF C4 = 1 or IF C3 = 2]

C5 Do you remember how much the repair would have cost? Was it…

1. Less than $550
2. More than $550

889. Don't Know

999. Refused

C6 How old was your existing furnace (in years)?

NUMERIC OPEN END

888. Don't know

999. Refused

[ASK IF C6 = 888, 999]

C6a. What would you estimate the approximate age of your old furnace to be?

1. Less than 2 years
2. 2 to (less than) 5 years
3. 5 to (less than) 10 years

4. 10 to (less than) 15 years
5. 15 to (less than) 20 years
6. 20 years
888. Don't know
999. Refused

C7 Prior to replacing your old furnace, had it undergone any repairs?
1. Yes
2. No
888. Don't know
999. Refused

[ASK IF C7 = 1]
C7a Approximately how many times did you have to repair the old furnace during the year prior to replacement?
NUMERIC OPEN END
888. (Don't know)
999. (Refused)

C8 How long do you think your old furnace would have lasted if you had made the necessary repairs? Would you say..?
1. 1 year or less
2. 2 or 3 years
3. 4 or 5 years
4. or more than five years
888. Don't know
999. Refused

D1 Do you currently have a central air conditioning system?
1. Yes
2. No [SKIP TO Q1]
888. Don't Know [SKIP TO Q1]
999. Refused [SKIP TO Q1]

CSR1 When you replaced your furnace, did you consider replacing your air conditioning system at the same time?
1. Yes, and I replaced my air conditioning system. [ASK B1 – B7, MEASURE 2 = air conditioning system]
2. Yes, I considered replacing my air conditioning system, but did not replace it.
3. No, I did not consider replacing my air conditioning system.
000. Other [RECORD VERBATIM]
888. Don't know
999. Refused

[ASK IF CSR1 = 2]
CSR2 What were the reasons that you did not replace your air conditioning unit? [DO NOT READ, ACCEPT MULTIPLE]

1. Too expensive
2. Air Conditioning System works fine
3. Repair costs were reasonable
000. Other [RECORD VERBATIM]
888. (Don't know)
999. (Refused)

D3 Which of the following best describes the condition of your air conditioning system at the time that you replaced your furnace?

1. The CAC unit was working with no need of repair
2. The CAC unit was working but needed repair
888. Don't Know
999. Refused

[ASK IF D3 = 2]

D5 Do you remember how much the repair cost? Was it…

1. Less than $550
2. More than $550
888. Don't Know
999. Refused

D6 How old is your existing air conditioning system (in years)?

NUMERIC OPEN END
888. Don't know
999. Refused

[ASK IF D6 = 888, 999]

D6a. What would you estimate the approximate age of your old air conditioning system to be?

1. Less than 2 years
2. 2 to (less than) 5 years
3. 5 to (less than) 10 years
4. 10 to (less than) 15 years
5. 15 to (less than) 20 years
6. 20 or more years
888. Don't know
999. Refused

[SKIP IF D3 = 2]

D7 Has your air conditioning system undergone any repairs?

1. Yes
2. No
888. Don't know
999. Refused

[ASK IF D3 = 2 or IF D7 = 1]

D7a Approximately how many times have you had to repair your air conditioning system over the past year?

NUMERIC OPEN END
888. (Don't know)
999. (Refused)

D8 How long do you think your air conditioning system will last? Would you say..?
1. 1 year or less
2. 2 or 3 years
3. 4 or 5 years
4. or more than five years
888. Don't know
999. Refused

DEMOGRAPHICS

Q1. I have just a few questions left to ask for classification purposes. "First, do you own or rent the home at <SERVICE_ADDRESS>?"
1. Own
2. Rent
000. Other, specify
888. Don't know
999. Refused

Q2. What type of home do you live in? Is it a…
1. Single Family detached,
2. Single Family attached (duplex, town home, etc.)
3. Multifamily Apartment or Condominium
000. Other, specify
888. Don't know
999. Refused

Q3. How many people currently live full-time in that home, at least six months of the year, including you?
ENTER NUMBER OF PEOPLE
888. Don't know
999. Refused

Q4. Approximate when was your home built? [READ LIST ONLY IF NEEDED]
1. Before 1950
2. 1950 – 1959
3. 1960 – 1969
4. 1970 – 1979
5. 1980 – 1989
6. 1990 – 1999
7. 2000 – 2009
8. Since 2010
888. Don't know
999. Refused

Comments Do you have any comments about the HEER program that you would like to share today?

RECORD SUMMARY

888. Don't know

999. Refused

Thank you for taking the time to help with our survey and the helpful information you provided. Have a nice day/evening.

7.4.3 Non-Participating TA Survey Guide – HEER and CSR Program

INTRODUCTION AND SCREENING QUESTIONS

INTRO1 Hello, my name is _____, and I'm calling from an independent research firm on behalf of Nicor Gas. May I please speak with <CONTACT NAME>? This is not a sales call. [IF NECESSARY] We are currently conducting important research about sales of heating and cooling equipment in Nicor Gas territory. By participating in the short survey, you will help Nicor Gas understand area HVAC sales practices, which will help design better programs in the future. We will be reporting in aggregate form, and therefore your company-specific information will remain confidential.

1. CONTINUE WITH CONTACT ONCE THEY ARE ON THE PHONE
2. CONTACT NOT AVAILABLE [SCHEDULE CALLBACK]
3. NOT A GOOD TIME TO CONDUCT SURVEY [SCHEDULE CALLBACK]

[ASK IF <PART DATE> IS NOT NULL]

SCR1 We are contacting you because your company participated in the Nicor Gas Home Energy Efficiency Rebate Program in <PART DATE>, but have not participated since. Does this sound correct?

1. YES [SKIP TO FurnSO1] [CONTACT TYPE = PART]
2. NO [ASK SCR2]

888. Don't Know [ASK SCR2]

999. Refused [ASK SCR2]

[ASK IF <PART DATE> IS NULL or SCR1 = 2, 888, or 999]

SCR2 Are you familiar with Nicor Gas' Home Energy Efficiency Rebate Program, where your customers can receive financial incentives for purchasing high efficiency HVAC and water heating equipment?

1. YES [ASK SCR2a]
2. NO [SKIP TO INFO]

888. Don't Know [SKIP TO INFO]

999. Refused [SKIP TO INFO]

For the sake of brevity, from now on I'm going to refer to the Home Energy Efficiency Rebate Program as the "HEER Program" or simply "the Program".

[ASK IF SCR2 = 1]

SCR2a Did you participate in the HEER Program?

1. YES [ASK SCR1b] [CONTACT TYPE = PART]
2. NO [SKIP TO AW1] [CONTACT TYPE = NONPART]
889. Don't Know [SKIP TO AW1] [CONTACT TYPE = NONPART]
999. Refused [SKIP TO AW1] [CONTACT TYPE = NONPART]

SCR2b When did you last participate in the Program?
RECORD DATE (e.g., approximate date is acceptable = July of 2012)
890. Don't Know
999. Refused

[ASK IF SCR2 = 2, 888, or 999]
INFO1 Would you like to receive information about the HEER Program or be contacted by a Nicor Gas representative to hear more about the benefits of the program?
1. YES – RECEIVE INFO [THANK AND TERMINATE]
2. YES – CONTACT [THANK AND TERMINATE]
3. YES – RECEIVE INFO AND CONTACT [THANK AND TERMINATE]
4. NO [THANK AND TERMINATE]
888. Don't Know
999. Refused

AWARENESS

AW1 How did you first learn about the Program as a contractor? [DO NOT READ]
1. Trade association [IF YES, RECORD WHICH]
2. Customer
3. Friend in the furnace/boiler/water heater industry
4. Radio
5. TV
6. Other news media
7. Bill insert from Nicor Gas
8. Direct mailing to me from Nicor Gas
9. Nicor Representative
10. RSG Representative
11. Other Utility
777. Other RECORD VERBATIM
888. Don't Know
999. Refused

AW2 When did you first learn about the Program?
RECORD APPROXIMATE DATE
888. Don't Know
999. Refused

AW3 On a scale from zero to five, where zero is not at all knowledgeable and five is highly knowledgeable, how knowledgeable are you about the Program?
RECORD RATING

888. Don't Know
999. Refused

AW4 Have you received any promotional materials from Nicor Gas regarding the program?
1. Yes [ASK AW4a]
2. No
888. Don't Know
999. Refused

AW4a Can you please describe the promotional materials that you received?
RECORD VERBATIM
888. Don't Know
999. Refused

AW5 Have you attended any Nicor Gas training sessions, such as a Nicor Gas PEEZA session with Program representatives?
1. Yes [ASK AW5a]
2. No
888. Don't Know
999. Refused

AW5a Can you please describe the training sessions that you attended?
RECORD VERBATIM
888. Don't Know
999. Refused

AW6 Have you looked at the program website to find information?
1. Yes [ASK AW6a]
2. No
888. Don't Know
999. Refused

AW6a Did you find the information that you needed?
1. Yes
2. No
888. Don't Know
999. Refused

CSR1 Are you familiar with the Complete System Replacement, or CSR, aspect of the HEER program? [IF NECESSARY] The CSR Program is a joint program run with ComEd, where your customers can receive an additional rebate for replacing their central air conditioning unit at the same time as their furnace.
1. Yes [ASK CSR2]
2. No [SKIP TO FURNSO1]
888. Don't Know [SKIP TO FURNSO1]

999. Refused [SKIP TO FURNSO1]

CSR2 Using the same 0 to 5 scale, where zero is not at all familiar and 5 is very familiar, how familiar are you with the CSR program?

RECORD RATING
888. Don't Know
999. Refused

CSR3 Did you participate in the CSR Program?
1. YES [ASK CSR3a] [CSR CONTACT TYPE = PART]
2. NO [SKIP TO AW7] [CSR CONTACT TYPE = NONPART]
888. Don't Know [SKIP TO AW7] [CSR CONTACT TYPE = NONPART]
999. Refused [SKIP TO AW7] [CSR CONTACT TYPE = NONPART]

[IF CSR3a = 1]
CSR3a When did you last participant in the Program?
RECORD DATE
888. Don't Know
999. Refused

DROP OUT PARTICIPANT SPILLOVER

[ASK FurnSO1 – FurnQuanPart_A IF CONTACT TYPE = PART]

I'm going to ask you a few questions about your HVAC sales in Nicor Gas territory. Please answer ONLY for sales in Nicor Gas territory.

Furnaces

FurnSO1 Before you participated in the Program, of all the furnaces you sold, what percentage of your customers purchased high efficiency furnaces, meaning those with 92% AFUE ratings or above? [PROBE FOR PERCENTAGE]

RECORD PERCENTAGE
888. Don't Know
999. Refused

FurnSO2 Since participating in the Program, has the percentage of your customers who purchase high efficiency furnaces (those with 92% AFUE ratings or above) increased, decreased, or remained the same? I'm asking specifically about the time period after you *last* participated in the program.
1. INCREASED FREQUENCY
2. DECREASED FREQUENCY
3. REMAINED THE SAME [SKIP TO FurnQuanPart]
888. Don't Know
999. Refused

FurnSO3 Since you last participated in the Program, of all the furnaces you sold, what percentage of your customers purchased high efficiency furnaces (those with 92% AFUE ratings or above)? [IF NECESSARY] Remember, I'm asking specifically about the time period after you *last* participated in the program. [PROBE FOR PERCENTAGE]

RECORD PERCENTAGE
888. Don't Know
999. Refused

PERCENT EFFIC = FurnSO3 or FurnSO1 if FurnSO2 = 3

CONSISTENCY CHECK:
[ASK IF FurnSO2 = 1 AND FurnSO3 < FurnSO1] or [ASK IF FurnSO2 = 2 AND FurnSO3 > FurnSO1]
FurnConCh I noticed that you stated that your high efficiency furnace sales have been higher/lower since your participation in the program, but the percentage of sales that you gave was lower/higher after your participation in the program. These responses seem to contradict each other; can you help me understand this? [REPEAT QUESTIONS FurnSO1 – FurnSO3 AS NECCESARY]

[ASK IF FurnSO2 = 1]
FurnSO4 On a scale from zero to five, where zero is not at all influential and five is very influential, how influential was your participation in the Program on increasing the percentage of your customer who purchased high efficiency furnaces (those with 92% AFUE ratings or above)? [PROBE FOR RATING]

RECORD RATING
888. Don't Know
999. Refused

[ASK ALL PARTS]
FurnQuanPart About how many furnaces, regardless of efficiency, did you sell in the past year? [IF NECESSARY] All answers given will remain confidential.

RECORD QUANTITY
888. Don't Know
999. Refused

[PROBE FOR QUANTITY IF NECESSARY]
FurnQuanPart_A Was it…

1. Fewer than 10
2. Between 10 and 25
3. Between 25 and 50
4. Between 50 and 100
5. Between 100 and 250
6. More than 250

888. Don't Know
999. Refused

[ASK CACSO1 – CACQuanPart_A IF CAC CONTACT TYPE = PART]

CACs

CACSO1 Before you participated in the CSR program, what percentage of your customer purchased high efficiency central air conditioning units, meaning those with 14.5 SEER ratings or above? [PROBE FOR PERCENTAGE]

RECORD PERCENTAGE
888. Don't Know
999. Refused

CACSO2 Since your participation in the CSR program, has the percentage of your customer who purchase high efficiency CAC units (those with 14.5 SEER ratings or above) increased, decreased, or remained the same? I'm asking specifically about the time since you *last* participated in the program.

1. INCREASED FREQUENCY
2. DECREASED FREQUENCY
3. REMAINED THE SAME [SKIP TO CACQuanPart]
888. Don't Know
999. Refused

CACSO3 Since you last participated in the CSR program, what percentage of your customers purchased high efficiency CAC units (those with 14.5 SEER ratings or above)? [IF NECESSARY] Remember, I'm asking specifically about the time since you *last* participated in the program. [PROBE FOR PERCENTAGE]

RECORD PERCENTAGE
888. Don't Know
999. Refused

CONSISTENCY CHECK:
[ASK IF CACSO2 = 1 AND CACSO3 < CACSO1] or [ASK IF CACSO2 = 2 AND CACSO3 > CACSO1]
CACConCh I noticed that you stated that your high efficiency CAC sales have been higher/lower since your participation in the program, but the percentage of sales that you gave was lower/higher after your participation in the program. These responses seem to contradict each other; can you help me understand this? [REPEAT QUESTIONS CACSO1 –CACSO3 AS NECCESARY]

[ASK IF CACSO2 = 1]
CACSO4 On a scale from zero to five, where zero is not at all influential and five is very influential, how influential was your participation in the CSR program on increasing the percentage of your customer who purchased high efficiency furnaces (those with 14.5 SEER ratings or above)?

RECORD RATING
888. Don't Know
999. Refused

[ASK ALL CSR PARTS]

CACQuanPart About how many total CAC units did you sell in the past year? I'm asking about all CAC units, not just high efficiency ones. [IF NECESSARY] All answers given will remain confidential.

RECORD QUANTITY
888. Don't Know
999. Refused

[PROBE FOR QUANTITY IF NECESSARY]

CACQuanPart_A Was it…

1. Fewer than 10
2. Between 10 and 25
3. Between 25 and 50
4. Between 50 and 100
5. Between 100 and 250
6. More than 250
888. Don't Know
999. Refused

AWARE NON-PARTICIPANT SPILLOVER

[ASK FurnSO5 – FurnQuanNP_A IF CONTACT TYPE = NONPART]

Furnaces

FurnSO5 Before you learned about the Program, of all the furnaces you sold, what percentage of your customers purchased high efficiency furnaces, those with 92% AFUE ratings or above? [PROBE FOR PERCENTAGE]

RECORD PERCENTAGE
888. Don't Know
999. Refused

FurnSO6 Since you've learned about the Program, has the percentage of your customers who purchase high efficiency furnaces (those with 92% AFUE ratings or above) increased, decreased, or remained the same?

1. INCREASED FREQUENCY
2. DECREASED FREQUENCY
3. REMAINED THE SAME [SKIP TO FurnQuanNP]
888. Don't Know
999. Refused

FurnSO7 Since you've learned about the Program, of all the furnaces you sold, what percentage of your customers purchased high efficiency furnaces (those with 92% AFUE ratings or above)? [PROBE FOR PERCENTAGE]

RECORD PERCENTAGE
888. Don't Know

999. Refused

PERCENT EFFIC = FurnSO7 or FurnSO5 if FurnSO6 = 3

CONSISTENCY CHECK:
[ASK IF FurnSO6 = 1 AND FurnSO7 < FurnSO6] or [ASK IF FurnSO6 = 2 AND FurnSO7 > FurnSO6]
FurnConCh I noticed that you stated that your high efficiency furnace sales have been higher/lower since you learned about the program, but the percentage of sales that you gave was lower/higher after you learned about the program. These responses seem to contradict each other; can you help me understand this? [REPEAT QUESTIONS FurnSO5 – FurnSO7 AS NECCESARY]

[ASK IF FurnSO6 = 1]
FurnSO8 On a scale from zero to five, where zero is not at all influential and five is very influential, how influential was learning about the Program on increasing the percentage of your customers who purchased high efficiency furnaces (those with 92% AFUE ratings or above)? [PROBE FOR RATING]

RECORD RATING
888. Don't Know
999. Refused

FurnQuanNP About how many furnaces, regardless of efficiency, did you sell in the past year? [IF NECESSARY] All answers given will remain confidential.

RECORD QUANTITY
888. Don't Know
999. Refused

[PROBE FOR QUANTITY IF NECESSARY]
FurnQuanNP_A Was it…

1. Fewer than 10
2. Between 10 and 25
3. Between 25 and 50
4. Between 50 and 100
5. Between 100 and 250
6. More than 250

888. Don't Know
999. Refused

[ASK CACSO5 – CACQuanNP_A IF CSR CONTACT TYPE = NONPART]

CAC

CACSO5 Before you learned about the CSR program, what percentage of your customer purchased high efficiency CAC units, meaning those with 14.5 SEER ratings or above? [PROBE FOR PERCENTAGE]

RECORD PERCENTAGE
888. Don't Know

999. Refused

CACSO6 Since you've learned about the CSR program, has the percentage of your customer who purchased high efficiency CAC units (those with 14.5 SEER ratings or above) increased, decreased, or remained the same?

1. INCREASED FREQUENCY
2. DECREASED FREQUENCY
3. REMAINED THE SAME [SKIP TO CACQuanNP]

888. Don't Know
999. Refused

CACSO7 Since you've learned about the CSR program, what percentage of your customers purchased high efficiency CAC units (those with 14.5 SEER ratings or above)? [PROBE FOR PERCENTAGE]

RECORD PERCENTAGE

888. Don't Know
999. Refused

CONSISTENCY CHECK:
[ASK IF CACSO6 = 1 AND CACSO7 < CACSO6] or [ASK IF CACSO6 = 2 AND CACSO7 > CACSO6]
CACConCh I noticed that you stated that your high efficiency CAC sales have been higher/lower since you learned about the program, but the percentage of sales that you gave was lower/higher after you learned about the program. These responses seem to contradict each other; can you help me understand this? [REPEAT QUESTIONS CACSO5 – CACSO7 AS NECCESARY]

[ASK IF CACSO6 = 1]
CACSO8 On a scale from zero to five, where zero is not at all influential and five is very influential, how influential was learning about the CSR program on increasing the percentage of your customer who purchased high efficiency CAC units (those with 14.5 SEER ratings or above)?

RECORD RATING

888. Don't Know
999. Refused

CACQuanNP About how many CAC units did you sell in the past year? I'm asking about all CAC units, not just high efficiency ones. [IF NECESSARY] All answers given will remain confidential.

RECORD QUANTITY

888. Don't Know
999. Refused

[PROBE FOR QUANTITY IF NECESSARY]
CACQuanNP_A Was it…

1. Fewer than 10
2. Between 10 and 25
3. Between 25 and 50

4. Between 50 and 100
5. Between 100 and 250
6. More than 250
888. Don't Know
999. Refused

PRICE MATCHING

PM1 In your best estimate, approximately what percentage of your customers are aware of the Nicor Gas HEER program?

RECORD PERCENTAGE
888. Don't Know
999. Refused

PM2 Using a zero to five scale, where zero is not at all knowledgeable and five is highly knowledgeable, how knowledgeable are you customers about the HEER program?

RECORD RATING
888. Don't Know
999. Refused

PM3 Have you ever had to lower your sales price on a furnace to match the program rebate, without submitting a program application for a rebate?

1. Yes [ASK PM4]
2. No
888. Don't Know
999. Refused

PM4 Why did you not submit a rebate for these units?

RECORD VERBATIM
888. Don't Know
999. Refused

[ASK PM5 – PM8 IF CSR CONTACT TYPE = PART OR NONPART]

PM5 In your best estimate, approximately what percentage of your customers are aware of the CSR program?

RECORD PERCENTAGE
888. Don't Know
999. Refused

PM6 Using a zero to five scale, where zero is not at all knowledgeable and five is highly knowledgeable, how knowledgeable are your customers about the CSR program?

RECORD RATING
888. Don't Know
999. Refused

PM7 Have you ever had to lower your sales price on a CAC unit to match the program rebate, without submitting a program application for a rebate?

1. Yes [ASK PM8]
2. No
888. Don't Know
999. Refused

PM8 Why did you not submit a rebate for these units?

RECORD VERBATIM
888. Don't Know
999. Refused

PROCESS SECTION

Barriers to participation

B1 Earlier you stated that approximately <PERCENT EFFIC> percent of your sales since you <participated in/learned about> the program were for energy efficiency furnaces, but you did not submit rebates for these units. Can you explain why you chose not to? [DO NOT READ, ACCEPT UP TO 3]

1. Customers not interested
2. Paper work was too burdensome
3. Did not have enough information about the program
4. Insufficient financial incentive
5. Personal dissatisfaction with prior HEER program participation
6. Personal dissatisfaction with prior Nicor Gas program participation
7. Personal dissatisfaction with other utility program participation
8. Customer dissatisfaction with prior HEER program participation
9. Customer dissatisfaction with prior Nicor Gas program participation
10. Customer dissatisfaction with prior other utility program participation

777.OTHER – RECORD VERBATIM
888. Don't Know
999. Refused

[IF B1 = 1]

B1a Do you know why your customers were not interested in participating?

RECORD VERBATIM
888. Don't Know
999. Refused

[IF B1 = 5, 6, 7 ASK B1b and B1c]

B1b Do you remember what program it was?

RECORD VERBATIM
888. Don't Know
999. Refused

B1c Can you describe how you were dissatisfied with your experience?
RECORD VERBATIM
888. Don't Know
999. Refused

[IF B1 = 8, 9, 10 ASK B1d and B1e]
B1d Did your customer mention what program it was?
RECORD VERBATIM
888. Don't Know
999. Refused

B1e Do you know why your customer was dissatisfied with their experience?
RECORD VERBATIM
888. Don't Know
999. Refused

B2 Do you have any recommendations for changes that can be made to the program to increase participation by contractors like yourself?
RECORD VERBATIM
888. Don't Know
999. Refused

B3 If the HEER program were to offer a rebate directly to you, the trade ally, to subsidize the sale of a high efficiency furnace, would you be more likely to participate in the program, less likely to participate in the program, or neither more or less likely to participate?
1. More Likely
2. Less Likely
3. Neither
888. Don't Know
999. Refused

B4 If the HEER program were to offer a rebate directly to its trade allies to subsidize the sale of high efficiency furnaces, what affect would this have on the price that your customers pay for a high efficiency unit? Would you
1. Lower the price of HE furnaces across the board for all customers by the full amount of the incentive
2. Use the incentive money to decrease the cost of HE furnaces only as necessary to sell more units
3. Sell the all HE furnaces at the same price and retain the incentive money
888. Don't Know
999. Refused

INSTALLATION PRACTICES/EARLY REPLACEMENT SECTION

Now I'd like to ask you a few questions about your general installation practices.
D1 When you install HVAC equipment, about what percent of the time do you typically…

[READ EACH AND RECORD % FOR EACH, 777 FOR DO NOT SELL CAC UNITS, 888 FOR DON'T KNOW AND 999 FOR REFUSED]

A Perform a load calculation to determine proper equipment sizing?
B Measure for and adjust the airflow level?
C Charge the refrigerant to the manufacturer's recommended sub-cooling value?
D Check the quality of the duct sealing of associated ducts?
E Perform duct sealing as part of the HVAC installation?

D2 About how often do you recommend replacing both heating and cooling equipment when a customer decides to replace one or the other? Would you say always, most of the time, sometimes, or never?

1. Always
2. Most of the time
3. Sometimes
4. Never [SKIP TO INFO]
888. Don't know
999. Refused

D3 What are the main reasons you would recommend replacing both units at the same time? [DO NOT READ, UP TO 3 MULTIPLE RESPONSES ALLOWED]

1. Sell more units
2. More cost effective for the customer
3. To ensure system compatibility
4. The other unit is close to failing
5. Units are a similar age
6. To convert them to a type of unit we sell and maintain
777. Other [SPECIFY]
888. Don't know
999. Refused

D4 About what percentage of the time do your customers follow through on this recommendation?

RECORD PERCENTAGE
888. Don't Know
999. Refused

D5 In your opinion, what is the primary reason customers do not follow through on the recommendation to replace both units at the same time? [DO NOT READ LIST; RECORD ONE ANSWER]

1. Do not wish to pay the upfront costs
2. Cannot afford to incur upfront costs at this time
3. Believe the other unit is in good enough shape/will last longer
4. Moving soon
777. Other [SPECIFY]
888. Don't Know
999. Refused

[ASK ALL]
INFO Would you like to receive additional information about the Program or be contacted by a Nicor Gas representative to hear more about the benefits of the program?

1. YES – RECEIVE INFO
2. YES – CONTACT
3. YES – RECEIVE INFO AND CONTACT
4. NO
888. Don't Know
999. Refused

[INSERT STANDARD THANK YOU AND SIGN OFF]

7.4.4 Non-Participating TA Survey Guide – RPR and CSR Program

INTRODUCTION AND SCREENING QUESTIONS

INTRO1 Hello, my name is _____, and I'm calling from an independent research firm on behalf of Peoples Gas and North Shore Gas. May I please speak with <CONTACT NAME>? This is not a sales call. [IF NECESSARY] We are currently conducting important research about sales of heating and cooling equipment in Peoples Gas and North Shore Gas territory. By participating in the short survey, you will help the utilities understand area HVAC sales practices, which will help design better programs in the future. We will be reporting in aggregate form, and therefore your company-specific information will remain confidential.

4. CONTINUE WITH CONTACT ONCE THEY ARE ON THE PHONE
5. CONTACT NOT AVAILABLE [SCHEDULE CALLBACK]
6. NOT A GOOD TIME TO CONDUCT SURVEY [SCHEDULE CALLBACK]

[ASK IF <PART DATE> IS NOT NULL]
SCR1 We are contacting you because your company participated in the Residential Prescriptive Rebate Program in <PART DATE>, but have not participated since. Does this sound correct?

3. YES [SKIP TO FurnSO1] [CONTACT TYPE = PART]
4. NO [ASK SCR2]
889. Don't Know [ASK SCR2]
999. Refused [ASK SCR2]

[ASK IF <PART DATE> IS NULL or SCR1 = 2, 888, or 999]

SCR2 Are you familiar with Peoples Gas and North Shore Gas' Residential Prescriptive Rebate Program, where your customers can receive rebates for purchasing high efficiency HVAC and water heating equipment?

3. YES [ASK SCR2a]
4. NO [SKIP TO INFO]
891. Don't Know [SKIP TO INFO]
999. Refused [SKIP TO INFO]

For the sake of brevity, from now on I'm going to refer to the Residential Prescriptive Rebate Program simply as "the Program". I'm also going to refer to Peoples Gas and North Shore Gas as "the utilities".

[ASK IF SCR2 = 1]

SCR2a Did you participate in the Program?

3. YES [ASK SCR2b] [CONTACT TYPE = PART]
4. NO [SKIP TO AW1] [CONTACT TYPE = NONPART]
892. Don't Know [SKIP TO AW1] [CONTACT TYPE = NONPART]
999. Refused [SKIP TO AW1] [CONTACT TYPE = NONPART]

SCR2b When did you last participate in the Program?

RECORD DATE (e.g., approximate date is acceptable = July of 2012)

893. Don't Know
999. Refused

[ASK IF SCR2 = 2, 888, or 999]

INFO1 Would you like to receive information about the Program or be contacted by a Gas utility representative to hear more about the benefits of the program?

5. YES – RECEIVE INFO [THANK AND TERMINATE]
6. YES – CONTACT [THANK AND TERMINATE]
7. YES – RECEIVE INFO AND CONTACT [THANK AND TERMINATE]
8. NO [THANK AND TERMINATE]
889. Don't Know
999. Refused

AWARENESS

AW1 How did you first learn about the Program as a trade ally?

12. Trade association [IF YES, RECORD WHICH]
13. Customer
14. Friend in the furnace/boiler/water heater industry
15. Radio
16. TV
17. Other news media
18. Bill insert from Peoples Gas/North Shore Gas
19. Direct mailing to me from Peoples Gas/North Shore Gas
20. Peoples Gas/North Shore Gas Representative

21. Franklin Energy Representative
22. Other Utility
777. Other RECORD VERBATIM
889. Don't Know
1000. Refused

AW2 When did you first learn about the Program?
RECORD APPROXIMATE DATE
889. Don't Know
999. Refused

AW3 On a scale from zero to five, where zero is not at all knowledgeable and five is highly knowledgeable, how knowledgeable are you about the Program?
RECORD RATING
889. Don't Know
999. Refused

AW4 Have you received any promotional materials from the utilities regarding the program?
3. Yes [ASK AW4a]
4. No
889. Don't Know
999. Refused

AW4a Can you please describe the promotional materials that you received?
RECORD VERBATIM
889. Don't Know
999. Refused

AW5 Have you attended any utility training sessions?
3. Yes [ASK AW5a]
4. No
889. Don't Know
999. Refused

AW5a Can you please describe the training sessions that you attended?
RECORD VERBATIM
889. Don't Know
999. Refused

AW6 Have you looked at the program website to find information?
3. Yes [ASK AW6a]
4. No
889. Don't Know
999. Refused

AW6a Did you find the information that you needed?
3. Yes
4. No
889. Don't Know
999. Refused

CSR1 Are you familiar with the Complete System Replacement, or CSR, aspect of the Residential Prescriptive Rebate program? [IF NECESSARY] The CSR Program is a joint program run with ComEd, where your customers can receive an additional rebate for replacing their central air conditioning unit at the same time as their furnace.
3. Yes [ASK CSR2]
4. No [SKIP TO FURNSO1]
889. Don't Know [SKIP TO FURNSO1]
999. Refused [SKIP TO FURNSO1]

CSR2 Using the same 0 to 5 scale, where zero is not at all familiar and 5 is very familiar, how familiar are you with the CSR program?
RECORD RATING
889. Don't Know
999. Refused

CSR3 Did you participant in the CSR Program?
3. YES [ASK CSR3a] [CSR CONTACT TYPE = PART]
4. NO [SKIP TO AW7] [CSR CONTACT TYPE = NONPART]
889. Don't Know [SKIP TO AW7] [CSR CONTACT TYPE = NONPART]
999. Refused [SKIP TO AW7] [CSR CONTACT TYPE = NONPART]

[IF CSR3a = 1]
CSR3a When did you last participant in the CSR Program?
RECORD DATE
889. Don't Know
999. Refused

DROP OUT PARTICIPANT SPILLOVER

[ASK FurnSO1 – FurnQuanPart_A IF CONTACT TYPE = PART]

Now I'm going to ask you a few questions about your HVAC sales. The next few questions are about your heating measure sales. When I refer to a high efficiency heating unit, I'm specifically asking about high efficiency furnaces with a AFUE rating of 92% or above, and boilers with an AFUE of 90% or greater.

I am also asking about sales only in Peoples Gas and North Shore Gas Territory. Please do your best to only count sales in those territories.

Furnaces

FurnSO1 Before you participated in the Program, of all the heating units you sold, what percentage of your customers purchased high efficiency heating unit, ? [PROBE FOR PERCENTAGE]

RECORD PERCENTAGE
889. Don't Know
999. Refused

FurnSO2 Since you last participated in the Program, has the percentage of your customers who purchase high efficiency heating units (furnaces with 92% AFUE ratings or above and boilers with 90% AFUE ratings or above) increased, decreased, or remained the same? I'm asking specifically about the time period after you *last* participated in the program.

4. INCREASED FREQUENCY
5. DECREASED FREQUENCY
6. REMAINED THE SAME [SKIP TO FurnQuanPart]
889. Don't Know
999. Refused

FurnSO3 Since you last participated in the Program, of all the furnaces you sold, what percentage of your customers purchased high efficiency furnaces (furnaces with 92% AFUE ratings or above and boilers with 90% AFUE ratings or above)? [IF NECESSARY] Remember, I'm asking specifically about the time period after you *last* participated in the program. [PROBE FOR PERCENTAGE]

RECORD PERCENTAGE
889. Don't Know
999. Refused

PERCENT EFFIC = FurnSO3 or FurnSO1 if FurnSO2 = 3

CONSISTENCY CHECK:
[ASK IF FurnSO2 = 1 AND FurnSO3 < FurnSO1] or [ASK IF FurnSO2 = 2 AND FurnSO3 > FurnSO1]
FurnConCh I noticed that you stated that your high efficiency heating unit sales have been higher/lower since your participation in the program, but the percentage of sales that you gave was lower/higher after your participation in the program. These responses seem to contradict each other; can you help me understand this? [REPEAT QUESTIONS FurnSO1 – FurnSO3 AS NECCESARY]

[ASK IF FurnSO2 = 1]
FurnSO4 On a scale from zero to five, where zero is not at all influential and five is very influential, how influential was your participation in the Program on increasing the percentage of your customer who purchased high efficiency heating units (furnaces with 92% AFUE ratings or above and boilers with 90% AFUE ratings or above)? [PROBE FOR RATING]

RECORD RATING
889. Don't Know
999. Refused

[ASK ALL PARTS]

FurnQuanPart About how many heating units (furnaces and boilers), regardless of efficiency, did you sell in the past year? [IF NECESSARY] All answers given will remain confidential.

RECORD QUANTITY
889. Don't Know
999. Refused

[PROBE FOR QUANTITY IF NECESSARY]

FurnQuanPart_A Was it…

7. Fewer than 10
8. Between 10 and 25
9. Between 25 and 50
10. Between 50 and 100
11. Between 100 and 250
12. More than 250
889. Don't Know
999. Refused

[ASK CACSO1 – CACQuanPart_A IF CAC CONTACT TYPE = PART]

CACs

Now I'm going to ask you a few questions about your participation in the Complete System Replacement (CSR) portion of the Residential Prescriptive Rebate program. [IF NECESSARY] The CSR program offers additional rebates to your customers for installing a high efficiency CAC unit at the same time as a high efficiency furnace.

CACSO1 Before you participated in the CSR program, what percentage of your customer purchased high efficiency central air conditioning units, meaning those with 14.5 SEER ratings or above? [PROBE FOR PERCENTAGE]

RECORD PERCENTAGE
889. Don't Know
999. Refused

CACSO2 Since your participation in the CSR program, has the percentage of your customer who purchase high efficiency CAC units (those with 14.5 SEER ratings or above) increased, decreased, or remained the same? I'm asking specifically about the time since you *last* participated in the program.

4. INCREASED FREQUENCY
5. DECREASED FREQUENCY
6. REMAINED THE SAME [SKIP TO CACQuanPart]
889. Don't Know
999. Refused

CACSO3 Since you last participated in the CSR program, what percentage of your customers purchased high efficiency CAC units (those with 14.5 SEER ratings or above)? [IF NECESSARY] Remember, I'm asking specifically about the time since you *last* participated in the program. [PROBE FOR PERCENTAGE]

RECORD PERCENTAGE

889. Don't Know

999. Refused

CONSISTENCY CHECK:

[ASK IF CACSO2 = 1 AND CACSO3 < CACSO1] or [ASK IF CACSO2 = 2 AND CACSO3 > CACSO1]

CACConCh I noticed that you stated that your high efficiency CAC sales have been higher/lower since your participation in the program, but the percentage of sales that you gave was lower/higher after your participation in the program. These responses seem to contradict each other; can you help me understand this? [REPEAT QUESTIONS CACSO1 –CACSO3 AS NECCESARY]

[ASK IF CACSO2 = 1]

CACSO4 On a scale from zero to five, where zero is not at all influential and five is very influential, how influential was your participation in the CSR program on increasing the percentage of your customer who purchased high efficiency furnaces (those with 14.5 SEER ratings or above)?

RECORD RATING

889. Don't Know

999. Refused

[ASK ALL CSR PARTS]

CACQuanPart About how many total CAC units did you sell in the past year? I'm asking about all CAC units, not just high efficiency ones. [IF NECESSARY] All answers given will remain confidential.

RECORD QUANTITY

889. Don't Know

999. Refused

[PROBE FOR QUANTITY IF NECESSARY]

CACQuanPart_A Was it…

7. Fewer than 10
8. Between 10 and 25
9. Between 25 and 50
10. Between 50 and 100
11. Between 100 and 250
12. More than 250

889. Don't Know

999. Refused

AWARE NON-PARTICIPANT SPILLOVER

[ASK FurnSO5 – FurnQuanNP_A IF CONTACT TYPE = NONPART]
Now I'm going to ask you a few questions about your HVAC sales. The next few questions are about your heating measure sales. When I refer to a high efficiency heating unit, I'm specifically asking about high efficiency furnaces with a AFUE rating of 92% or above, and boilers with an AFUE of 90% or greater.

I am also asking about sales only in Peoples Gas and North Shore Gas Territory. Please do your best to only count sales in those territories.

Furnaces

FurnSO5 Before you learned about the Program, of all the heating units you sold, what percentage of your customers purchased high efficiency units? [PROBE FOR PERCENTAGE]
RECORD PERCENTAGE
889. Don't Know
999. Refused

FurnSO6 Since you've learned about the Program, has the percentage of your customers who purchase high efficiency furnaces (furnaces with 92% AFUE ratings or above and boilers with 90% AFUE ratings and above) increased, decreased, or remained the same?
4. INCREASED FREQUENCY
5. DECREASED FREQUENCY
6. REMAINED THE SAME [SKIP TO FurnQuanNP]
889. Don't Know
999. Refused

FurnSO7 Since you've learned about the Program, of all the furnaces you sold, what percentage of your customers purchased high efficiency furnaces (furnaces with 92% AFUE ratings or above and boilers with 90% AFUE ratings and above)? [PROBE FOR PERCENTAGE]
RECORD PERCENTAGE
889. Don't Know
999. Refused

PERCENT EFFIC = FurnSO7 or FurnSO5 if FurnSO6 = 3

CONSISTENCY CHECK:
[ASK IF FurnSO6 = 1 AND FurnSO7 < FurnSO6] or [ASK IF FurnSO6 = 2 AND FurnSO7 > FurnSO6]
FurnConCh I noticed that you stated that your high efficiency heating unit sales have been higher/lower since you learned about the program, but the percentage of sales that you gave was lower/higher after you learned about the program. These responses seem to contradict each other; can you help me understand this? [REPEAT QUESTIONS FurnSO5 – FurnSO7 AS NECCESARY]

[ASK IF FurnSO6 = 1]
FurnSO8 On a scale from zero to five, where zero is not at all influential and five is very influential, how influential was learning about the Program on increasing the percentage of your customers who purchased high efficiency heating units (furnaces with 92% AFUE ratings or above and boilers with 90% AFUE ratings and above)? [PROBE FOR RATING]

RECORD RATING
889. Don't Know
999. Refused

FurnQuanNP About how many heating units (boilers and furnaces), regardless of efficiency, did you sell in the past year? [IF NECESSARY] All answers given will remain confidential.
RECORD QUANTITY
889. Don't Know
999. Refused

[PROBE FOR QUANTITY IF NECESSARY]
FurnQuanNP_A Was it…
7. Fewer than 10
8. Between 10 and 25
9. Between 25 and 50
10. Between 50 and 100
11. Between 100 and 250
12. More than 250
889. Don't Know
999. Refused

[ASK CACSO5 – CACQuanNP_A IF CSR CONTACT TYPE = NONPART]

CAC

CACSO5 Before you learned about the CSR program, what percentage of your customer purchased high efficiency CAC units, meaning those with 14.5 SEER ratings or above? [PROBE FOR PERCENTAGE]
RECORD PERCENTAGE
889. Don't Know
999. Refused

CACSO6 Since you've learned about the CSR program, has the percentage of your customer who purchased high efficiency CAC units (those with 14.5 SEER ratings or above) increased, decreased, or remained the same?
4. INCREASED FREQUENCY
5. DECREASED FREQUENCY
6. REMAINED THE SAME [SKIP TO CACQuanNP]
889. Don't Know
999. Refused

CACSO7 Since you've learned about the CSR program, what percentage of your customers purchased high efficiency CAC units (those with 14.5 SEER ratings or above)? [PROBE FOR PERCENTAGE]

RECORD PERCENTAGE
889. Don't Know
999. Refused

CONSISTENCY CHECK:
[ASK IF CACSO6 = 1 AND CACSO7 < CACSO6] or [ASK IF CACSO6 = 2 AND CACSO7 > CACSO6]
CACConCh I noticed that you stated that your high efficiency CAC sales have been higher/lower since you learned about the program, but the percentage of sales that you gave was lower/higher after you learned about the program. These responses seem to contradict each other; can you help me understand this? [REPEAT QUESTIONS CACSO5 – CACSO7 AS NECCESARY]

[ASK IF CACSO6 = 1]
CACSO8 On a scale from zero to five, where zero is not at all influential and five is very influential, how influential was learning about the CSR program on increasing the percentage of your customer who purchased high efficiency CAC units (those with 14.5 SEER ratings or above)?

RECORD RATING
889. Don't Know
999. Refused

CACQuanNP About how many CAC units did you sell in the past year? I'm asking about all CAC units, not just high efficiency ones. [IF NECESSARY] All answers given will remain confidential.
RECORD QUANTITY
889. Don't Know
999. Refused

[PROBE FOR QUANTITY IF NECESSARY]
CACQuanNP_A Was it…
7. Fewer than 10
8. Between 10 and 25
9. Between 25 and 50
10. Between 50 and 100
11. Between 100 and 250
12. More than 250
889. Don't Know
999. Refused

PRICE MATCHING
PM1 In your best estimate, approximately what percentage of your customers are aware of the Residential Prescriptive Rebate program?
RECORD PERCENTAGE
889. Don't Know
999. Refused

PM2 Using a zero to five scale, where zero is not at all knowledgeable and five is highly knowledgeable, how knowledgeable are your customers about the program?

RECORD RATING

889. Don't Know

999. Refused

PM3 Have you ever had to lower your sales price on a furnace to match the program rebate, without submitting a program application for a rebate?

3. Yes [ASK PM4]

4. No

889. Don't Know

999. Refused

PM4 Why did you not submit a rebate for these units?

RECORD VERBATIM

889. Don't Know

999. Refused

[ASK PM5 – PM8 IF CSR CONTACT TYPE = PART OR NONPART]

PM5 In your best estimate, approximately what percentage of your customers are aware of the CSR program?

RECORD PERCENTAGE

889. Don't Know

999. Refused

PM6 Using a zero to five scale, where zero is not at all knowledgeable and five is highly knowledgeable, how knowledgeable are you customers about the CSR program?

RECORD RATING

889. Don't Know

999. Refused

PM7 Have you ever had to lower your sales price on a CAC unit to match the program rebate, without submitting a program application for a rebate?

3. Yes [ASK PM8]

4. No

889. Don't Know

999. Refused

PM8 Why did you not submit a rebate for these units?

RECORD VERBATIM

889. Don't Know

999. Refused

PROCESS SECTION

Barriers to participation

B1 Earlier you stated that approximately <PERCENT EFFIC> percent of your sales since you <participated in/learned about> the program were for energy efficiency furnaces, but you did not submit rebates for these units. Can you explain why you chose not to? [DO NOT READ, ACCEPT UP TO 3]

11. Customers not interested
12. Paper work was too burdensome
13. Did not have enough information about the program
14. Insufficient financial incentive
15. Personal dissatisfaction with prior RPR program participation
16. Personal dissatisfaction with prior North Shore/Peoples Gas program participation
17. Personal dissatisfaction with other utility program participation
18. Customer dissatisfaction with prior RPR program participation
19. Customer dissatisfaction with prior North Shore/Peoples Gas program participation
20. Customer dissatisfaction with prior other utility program participation

777. OTHER – RECORD VERBATIM
889. Don't Know
999. Refused

[IF B1 = 1]

B1a Do you know why your customers were not interested in participating?

RECORD VERBATIM
889. Don't Know
999. Refused

[IF B1 = 5, 6, 7 ASK B1b and B1c]

B1b Do you remember what program it was?

RECORD VERBATIM
889. Don't Know
999. Refused

B1c Can you describe how you were dissatisfied with your experience?

RECORD VERBATIM
889. Don't Know
999. Refused

[IF B1 = 8, 9, 10 ASK B1d and B1e]

B1d Did your customer mention what program it was?

RECORD VERBATIM
889. Don't Know
999. Refused

B1e Do you know why your customer was dissatisfied with their experience?
RECORD VERBATIM
889. Don't Know
999. Refused

B2 Do you have any recommendations for changes that can be made to the program to increase participation by contractors like yourself?
RECORD VERBATIM
889. Don't Know
999. Refused

B3 If the utilities were to offer a rebate directly to you, the trade ally, to subsidize the sale of a high efficiency furnace, would you be more likely to participate in the program, less likely to participate in the program, or neither more or less likely to participate?
4. More Likely
5. Less Likely
6. Neither
889. Don't Know
999. Refused

B4 If the utilities were to offer a rebate directly to its trade allies to subsidize the sale of high efficiency furnaces, what affect would this have on the price that your customers pay for a high efficiency unit? Would you
4. Lower the price of HE furnaces across the board for all customers by the full amount of the incentive
5. Use the incentive money to decrease the cost of HE furnaces only as necessary to sell more units
6. Sell the all HE furnaces at the same price and retain the incentive money
889. Don't Know
999. Refused

INSTALLATION PRACTICES/EARLY REPLACEMENT SECTION

Now I'd like to ask you a few questions about your general installation practices.

D1 When you install HVAC equipment, about what percent of the time do you typically…
[READ EACH AND RECORD % FOR EACH, 777 FOR DO NOT SELL CAC UNITS, 888 FOR DON'T KNOW AND 999 FOR REFUSED]
A Perform a load calculation to determine proper equipment sizing?
B Measure for and adjust the airflow level?
C Charge the refrigerant to the manufacturer's recommended sub-cooling value?
D Check the quality of the duct sealing of associated ducts?
E Perform duct sealing as part of the HVAC installation?

D2 About how often do you recommend replacing both heating and cooling equipment when a customer decides to replace one or the other? Would you say always, most of the time, sometimes, or never?
1. Always

2. Most of the time
3. Sometimes
4. Never [SKIP TO INFO]
888. Don't know
999. Refused

D3 What are the main reasons you would recommend replacing both units at the same time? [DO NOT READ, UP TO 3 MULTIPLE RESPONSES ALLOWED]

7. Sell more units
8. More cost effective for the customer
9. To ensure system compatibility
10. The other unit is close to failing
11. Units are a similar age
12. To convert them to a type of unit we sell and maintain
777. Other [SPECIFY]
888. Don't know
999. Refused

D4 About what percentage of the time do your customers follow through on this recommendation?

RECORD PERCENTAGE
889. Don't Know
999. Refused

D5 In your opinion, what is the primary reason customers do not follow through on the recommendation to replace both units at the same time? [DO NOT READ LIST; RECORD ONE ANSWER]

5. Do not wish to pay the upfront costs
6. Cannot afford to incur upfront costs at this time
7. Believe the other unit is in good enough shape/will last longer
8. Moving soon
778. Other [SPECIFY]
888. Don't Know
999. Refused

[ASK ALL]

INFO Would you like to receive additional information about the Program or be contacted by a North Shore or Peoples Gas representative to hear more about the benefits of the program?

5. YES – RECEIVE INFO
6. YES – CONTACT
7. YES – RECEIVE INFO AND CONTACT
8. NO
889. Don't Know
999. Refused

[INSERT STANDARD THANK YOU AND SIGN OFF]