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From: Christy Zook, Peter Vigilante, Mike Freed, Navigant

CC: Kevin Grabner, Laura Agapay-Read, Randy Gunn, Navigant

Date: September 6, 2018 (First Draft)
 (Interim Update, September 13, 2018)
 (Second Revision September 19, 2018)

Re: Net-to-Gross Research Results from GPY6 and CY2018 for the Nicor Gas Home Energy Savings Program

This memo presents our free ridership and spillover research results for the GPY6 and CY2018 Nicor Gas Home Energy Savings (HES) Program using the Illinois TRM version 6.0 methodologies.¹ The net-to-gross (NTG) surveys were fielded in Summer 2018. Navigant conducted telephone surveys with 100 GPY6 participants that participated in the program between June 2016 and July 2017 to assess spillover as well as 213 GPY6 and CY2018 participants that participated in the program between August 2017 and June 2018 to assess free ridership. The GPY6 and CY2018 participant free ridership and spillover results provide updated findings relative to prior NTG research for this program which was conducted in GPY1 and GPY2.

Table 1 below provides a summary of the Home Energy Savings Program GPY6 and CY2018 participant free ridership findings. Navigant estimated free ridership for each program measure, excluding advanced thermostats². Together the researched measures comprise almost 90 percent of the GPY6 evaluated program savings. In total, 213 free ridership interviews were completed with GPY6 and CY2018 Nicor Gas participants. Participant free ridership scores were averaged to yield a measure-level free ridership estimate. The spillover survey with 100 GPY6 participants resulted in an estimate of 0.07 for the population participant spillover.

Illinois TRM version 7.0³ specifies that faucet aerators and showerheads should have free ridership set at zero when estimating gross savings using the TRM specified baseline average water flow rate. Faucet aerators and showerheads may receive a spillover adjustment. All scenarios of Air Sealing plus Attic Insulation installed in the same project (with or without additional measures installed in the same project) use a 72 percent savings adjustment factor defined in TRM version 7.0 and receive no further free ridership or spillover adjustment. The free ridership values shown in Table 1 for these measures are for reporting survey findings only.

The direct installation and weatherization program paths include measures that require a free ridership and spillover adjustment, and others that do not. In Appendix 2, Navigant provides measure-level NTG recommendations for CY2019 applying the findings of this HES NTG research and TRM v7.0 specifications.

¹ Illinois Statewide Technical Reference Manual for Energy Efficiency, Version 6.0, Volume 4: Cross-Cutting Measures and Attachments, effective January 1st, 2018.

² Advanced thermostats were excluded from this NTG research as the TRM-derived savings estimates for advanced thermostats installed through the program are net savings and do not receive further free ridership or spillover adjustment.

³ Illinois Statewide Technical Reference Manual for Energy Efficiency, Version 7.0, effective January 1st, 2019.

Table 1. Participant Free Ridership (FR) Results (GPY6 and CY2018 Participants)

Program Path	Measure	Population Weights FR	Participant Average FR Score	Analyzed Completes†
Direct Install (DI)	Showerhead‡	0.22	0.12	83
	Kitchen Aerator‡	0.02	0.22	21
	Bathroom Aerator‡	0.01	0.10	63
	Programmable Thermostat	0.13	0.26	29
	Re-Programming Thermostat	0.11	0.44	12
	Hot Water Pipe Insulation	0.02	0.08	19
	Water Heater Temperature Setback	0.01	0.09	18
Weatherization	Attic Insulation§	0.19	0.31	42
	Wall Insulation	0.01	0.25	1
	Basement/Sidewall Insulation	0.01	0.25	2
	Air Sealing§	0.24	0.25	36
	Duct Sealing	0.03	0.35	1

Source: Navigant analysis of data from a CATI surveys conducted with Nicor Gas GPY6 and CY2018 Home Energy Savings Program participants.

† Analyzed Completes provides the interview count used to develop the free ridership estimates. Analyzed Completes excludes responses that failed consistency checks or lacked required data (discussed in Appendix 1 below).

‡ TRM version 7.0 specifies that the free ridership for faucet aerators and showerheads be set at zero when estimating gross savings using the TRM specific baseline average water flow rate. The free ridership values shown here are for reporting survey findings only.

§ All scenarios of Air Sealing plus Attic Insulation installed in the same project (with or without additional measures installed in the same project) use a 72 percent savings adjustment factor defined in TRM version 7.0 and receive no further free ridership or spillover adjustment.

For comparison, the GPY6 deemed net to gross value is presented below.

Table 2. GPY6 Deemed NTG Values

Measure Category	FR	SO	NTG
Overall HES Program	0.09	0.14	1.05

Source: Nicor Gas Energy Efficiency Programs Summary of Deemed NTG Values for GPY1 through GPY7 Updated to include Final NTG Values for GPY7. March 1, 2017.

These values are based on evaluation research conducted in GPY1 and GPY2. Statewide NTG protocols were not established when the research was conducted in GPY1 and GPY2.

Free Ridership and Spillover Research Data Collection

The free ridership research was conducted using a customer self-report approach through a computer-assisted telephone interviewing (CATI) survey with 213 participants from a census of 3,582 Nicor Gas GPY6 and CY2018 participants. The spillover research was also conducted using a customer self-report approach through a CATI survey with 100 participants from a random sample of 4,643 GPY6 participants.

The counts for the completed participant interviews and sample design are outlined in Table 3. Participants that installed multiple measures were interviewed for up to two measures, and the 213 free ridership interviews covered 362 installed measures. After reviewing the response data, Navigant excluded 35 measure installations from the free ridership sample because of failed consistency checks or lack of required data to conduct the free ridership analysis. The free ridership was estimated from the remaining 327 measure installation responses. A detailed discussion of Navigant’s analysis of responses that triggered the free ridership consistency checks as well as survey sample disposition are provided in Appendix 1 at the end of this memo. All 100 spillover interviews were included in the spillover analysis.

Table 3. Free Ridership and Spillover Research Decision Maker Survey Disposition

NTG Component	Measure	Number of Usable Contacts	Target Completes	Measure Installations Covered by Completed Interviews*	Excluded from the Analysis	Analyzed Completes†
Free Ridership						
	Showerhead	655	70	90	7	83
	Kitchen Aerator	294	70	23	2	21
	Bathroom Aerator	547	70	67	4	63
	Programmable Thermostat	395	70	31	2	29
	Re-Programming Thermostat	257	70	16	4	12
	Hot Water Pipe Insulation	354	70	24	5	19
	Water Heater Temperature Setback	241	70	18	0	18
	Attic Insulation	380	70	45	3	42
	Wall Insulation	42	42	1	0	1
	Basement/Sidewall Insulation	17	17	3	1	2
	Air Sealing	356	70	42	6	36
	Duct Sealing	44	44	2	1	1
	Overall Population	3,582	733	362	35	327
Spillover		4,643	100			100

Source: Navigant analysis of data from CATI surveys conducted with GPY6 and CY2018 Nicor Gas Home Energy Savings program participants.

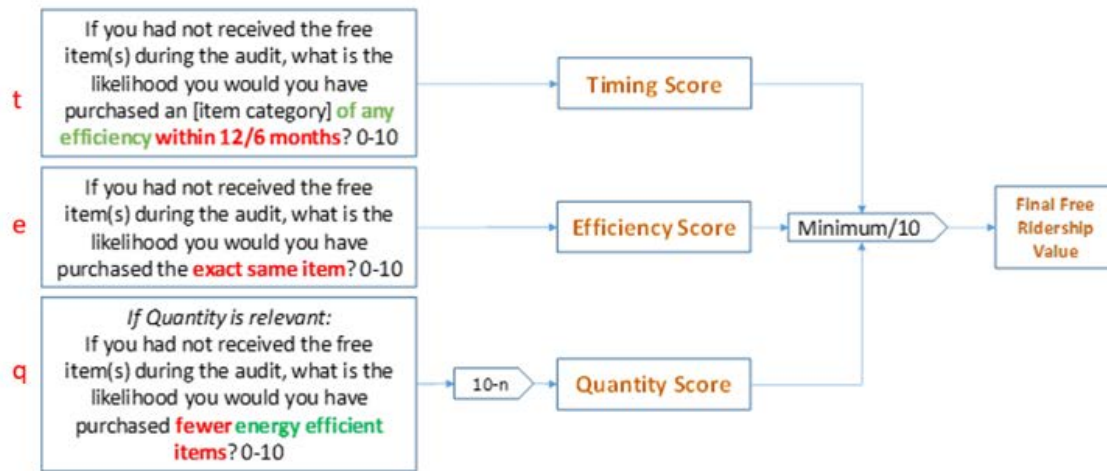
*The call center completed free ridership interviews 213 participants. Participants that installed multiple measures were interviewed for up to two measures, and each measure installation is counted in the 362 total.

† Analyzed Completes provides the interview count used to develop the free ridership and spillover estimates. Analyzed Completes excludes responses that failed consistency checks or lacked required data (discussed in the Appendix below).

Free Ridership Estimates Using Algorithms in the TRM Version 6.0

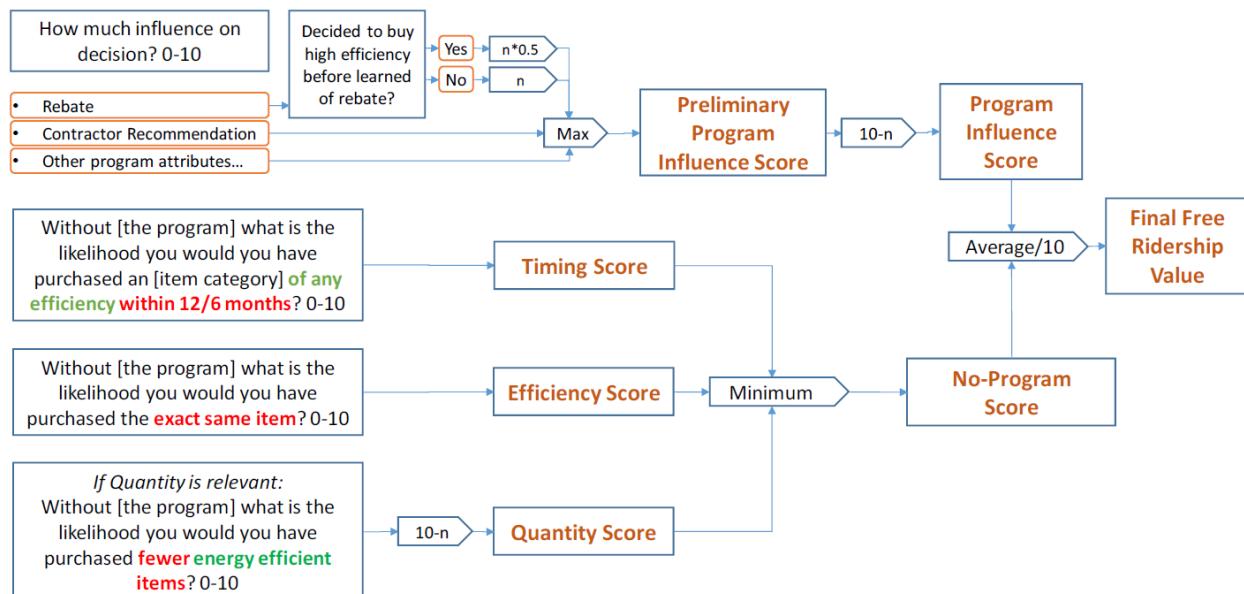
The following diagrams describes the IL TRM v6.0 free ridership algorithms for residential single-family home energy audit programs (protocol 4.5) and residential prescriptive rebate with no audit programs (protocol 4.4).

Figure 1. Residential Single-Family Home Energy Audit Free Ridership – No Cost Measures



Source: Illinois TRM Version 6, Volume 4. Cross-Cutting Measures and Attachments, final February 8, 2017, effective January 1st, 2018.

Figure 2. Residential Prescriptive Rebate (With No Audit) Free Ridership



Source: Illinois TRM Version 6, Volume 4. Cross-Cutting Measures and Attachments, final February 8, 2017, effective January 1st, 2018.

Navigant applied the free ridership algorithms from the Prescriptive Rebate (With No Audit) Protocol and the Single-Family Home Energy Audit Protocol in the IL TRM version 6.0 document.⁴ Free ridership estimates for the direct install measures were calculated using the algorithm for no cost measures shown in Figure 1 above, and free ridership estimates for air sealing and insulation measures were calculated using the algorithm for prescriptive measures shown in Figure 2 above.

⁴ The referenced TRM document can be accessed here: http://ilsagfiles.org/SAG_files/Technical_Reference_Manual/Version_6/Final/IL-TRM_Effective_010118_v6.0_Vol_4_X-Cutting_Measures_and_Attach_020817_Final.pdf.

Participant Spillover Estimation

The respondents were asked in the telephone survey if they had installed any additional natural gas saving measures to reduce energy consumption since participating in the Home Energy Savings Program. Navigant included 19 questions to identify spillover candidates and estimate savings.⁵ These questions addressed three general aspects, paraphrased below:

1. Since participating in the program, did you make additional energy efficiency improvements that were not rebated by a utility program?
2. How much influence did your participation in the program have on your making additional energy efficiency improvements?
 - a. On a zero to ten scale, where zero is not at all important and ten is extremely important, how important was your participation in the Home Energy Savings program on your decision to make additional energy efficiency improvements outside of a utility program? [Attribution Score 1.]
 - b. If you had not participated in the Home Energy Savings program, how likely is that you would have made additional energy efficiency improvements? Please use a zero to ten scale, where zero means that you definitely would not have made additional energy efficiency improvements and ten means that you definitely would have made them? [Attribution Score 2.]
3. What were details of the energy efficiency improvements (equipment, efficiency level, quantity, etc.)?

The evaluation attributed spillover to the Home Energy Savings Program if the following condition is met: the average of Attribution Score 1 and (10 minus Attribution Score 2) must exceed 5.0.⁶ Of the 100 survey respondents, 33 reported that they installed additional energy efficient equipment, and 21 of them indicated that participating in the Home Energy Savings Program influenced them to make these additional purchases. Navigant determined that 17 of those 21 had spillover averaged attribution scores greater than five. Five of those 17 installed natural gas measures, but only four installed equipment with quantifiable natural gas savings,⁷ which included an advanced thermostat, programmable thermostat, high efficiency gas water heater, and high efficiency furnace as shown in Table 4 below.

Table 4. Distribution of Reported Energy Savings by Respondent

Participant	Measure Installed	Spillover therms	Proportion of Total Spillover therms
Respondent 1	Advanced Thermostat	74.37	24%
Respondent 2	Programmable Thermostat	62.31	20%
Respondent 3	High Efficiency Gas Water Heater	12.99	4%
Respondent 4	High Efficiency Furnace	158.37	51%
Overall Population		308.04	100%

Source: Navigant analysis of data from CATI spillover telephone surveys conducted with GPY6 Home Energy Savings Program participants

⁵ Respondents do not answer all 19 questions – follow-up questions are skipped depending on earlier responses.

⁶ The spillover methodology is guided by NTG protocols in the Illinois TRM Version 6, Volume 4. Cross-Cutting Measures and Attachments, final February 8, 2017, effective January 1st, 2018.

⁷ Electric-saving spillover actions are not credited to the natural gas spillover.

Together, the therm savings from these improvements amounted to seven percent of program savings for the 100 respondents. Because the 100 were selected as a simple random sample, their spillover savings rate is representative of the population of GPY6 program participants.

APPENDIX 1 Detailed Free Ridership Analysis

Free Ridership Sample Disposition and Consistency Check Analysis

Of the 362 measure installations captured in the raw interview data, 25 measure installations were excluded from the free ridership calculation due to non-response on required free ridership scoring data.

Of the remaining responses, 62 (41 direct install and 21 air sealing and insulation) triggered consistency checks. These respondents answered questions indicating that the program was both highly influential and inconsequential to their decision to install a measure through the program. The consistency check methodology involved having two independent reviewers examine these respondents' numeric responses and their responses to open-ended probing questions which were triggered by their inconsistent numeric responses. Responses were excluded from the free ridership calculation if both reviewers found that the open-ended response was inconsistent with the numeric responses. This resulted in a total of 10 (six direct install and four air sealing and insulation) measure installations excluded due to inconclusive influence explanations (10 exclusions total out of 62 consistency checks).

As summarized in the tables below, Navigant's survey of 213 free ridership participants covered 362 measure installations (269 direct install and 93 air sealing and insulation measures), of which 35 (24 direct install and 11 air sealing and insulation measures) were excluded for missing or inconsistent data. Navigant's recommended free ridership estimates are based on the remaining 327 responses (362 minus 35).

Table 5. Free Ridership Survey Disposition for Direct Install Measures

Measure Response Disposition	Showerhead	Kitchen Aerator	Bathroom Aerator	Pgm. T-stat	RePgm. T-stat	Pipe Insulation	Water Heater Temp. Setback	Total
Measure installations covered by interviews	90	23	67	31	16	24	18	269
Excluded: Non-response	4	2	4	1	4	3	0	18
Excluded: Triggered and Failed Consistency Check	3	0	0	1	0	2	0	6
Total of Excluded Responses	7	2	4	2	4	5	0	24
Analyzed Sample	83	21	63	29	12	19	18	245
Included in Analyzed Sample: Triggered and Passed Consistency Check	14	2	5	8	4	2	0	35

Source: Navigant analysis of data from CATI surveys conducted with GPY6 and CY2018 Nicor Gas Home Energy Savings Program participants.

Table 6. Free Ridership Survey Disposition for Air Sealing and Insulation Measures

Measure Response Disposition	Attic Insulation	Wall Insulation	Basement Insulation	Air Sealing	Duct Sealing	Total
Measure installations covered by interviews	45	1	3	42	2	93
Excluded: Non-response	0	0	1	5	1	7
Excluded: Triggered and Failed Consistency Check	3	0	0	1	0	4
Total of Excluded Responses	3	0	1	6	1	11
Analyzed Sample	42	1	2	36	1	82
Included in Analyzed Sample: Triggered and Passed Consistency Check	8	0	0	8	1	17

Source: Navigant analysis of data from CATI surveys conducted with GPY6 and CY2018 Nicor Gas Home Energy Savings Program participants.

Table 7 below shows free ridership results for each measure with and without excluded responses from the consistency check analysis.

Table 7. Free Ridership with and without Consistency Check Exclusions

Program Path	Measure	Participant Average FR Score (with Consistency Check Exclusions)	Participant Average FR Score (without Consistency Check Exclusions)
Direct Install	Showerhead	0.12	0.15
	Kitchen Aerator	0.22	0.22
	Bathroom Aerator	0.10	0.10
	Programmable Thermostat	0.26	0.26
	Re-Programming Thermostat	0.44	0.44
	Hot Water Pipe Insulation	0.08	0.14
	Water Heater Temperature Setback	0.09	0.09
Weatherization	Attic Insulation	0.31	0.33
	Wall Insulation	0.25	0.25
	Basement/Sidewall Insulation	0.25	0.25
	Air Sealing	0.25	0.25
	Duct Sealing	0.35	0.35

Source: Navigant analysis of data from CATI surveys conducted with GPY6 and CY2018 Nicor Gas Home Energy Savings Program participants.

Free Ridership Component Scores

To estimate free ridership for direct install measures according to the TRM, the evaluation team took the minimum of three component scores (timing, efficiency, and quantity) and divided it by 10, as shown in Figure 1. Table 8 below shows the average for each component score as well as the average FR score, for each direct install measure.

Table 8. Free Ridership Component Scores for Direct Install Measures

Measure	Participant Average timing (t) score	Participant Average efficiency (e) score	Participant Average quantity (10-q) score	Participant Average FR Score
Showerhead	2.4	1.8	3.8	0.12
Kitchen Aerator	3.3	2.2	3.0	0.22
Bathroom Aerator	1.8	1.5	2.9	0.10
Programmable Thermostat	3.9	3.3	0.0	0.26
Re-Programming Thermostat	6.0	4.9	NA	0.44
Hot Water Pipe Insulation	1.0	2.3	NA	0.08
Water Heater Temperature Setback	2.3	1.4	NA	0.09

Source: Navigant analysis of data from CATI surveys conducted with GPY6 and CY2018 Nicor Gas Home Energy Savings Program participants.

To estimate free ridership for air sealing and insulation measures according to the TRM, the evaluation took the average of the Program Influence score and the No Program score and divided by 10, as shown in Figure 2. Table 9 below shows the average Program Influence and No Program scores as well as the average free ridership score for each air sealing and insulation measure.

Table 9. Free Ridership Component Scores for Air Sealing and Insulation Measures

Measure	Participant Average No Program (NP) Score	Participant Average Program Influence (PI) Score	Participant Average FR Score
Attic Insulation	4.5	1.7	0.31
Wall Insulation	3.0	2.0	0.25
Basement/Sidewall Insulation	4.0	1.0	0.25
Air Sealing	3.7	1.2	0.25
Duct Sealing	7.0	0.0	0.35

Source: Navigant analysis of data from CATI surveys conducted with GPY6 and CY2018 Nicor Gas Home Energy Savings Program participants.

APPENDIX 2 Applying Free Ridership and Spillover Results to the HES Program

The direct installation and weatherization program paths include measures that require a free ridership and spillover adjustment, and others that do not. In Table 10, Navigant provides measure-level NTG recommendations for CY2019 applying the findings of this HES NTG research, TRM v7.0 specifications, and evaluation judgment.

Table 10. Free Ridership and Participant Spillover for HES Program Measures

Program Path	Measure	Free Ridership	Participant Spillover	NTG	Free Ridership Source
Direct Install	Showerhead	0	0.07	1.07	1
	Kitchen Aerator	0	0.07	1.07	1
	Bathroom Aerator	0	0.07	1.07	1
	Programmable Thermostat	0.26	0.07	0.81	3
	Re-Programming Thermostat	0.28	0.07	0.79	5
	Hot Water Pipe Insulation	0.08	0.07	0.99	3
	Water Heater Temperature Setback	0.09	0.07	0.98	3
Weatherization	Air Sealing plus Attic Insulation	NA	NA	NA	2
	Air Sealing without Attic Insulation	0.25	0.07	0.82	4
	Wall Insulation	0.25	0.07	0.82	4
	Basement/Sidewall Insulation	0.25	0.07	0.82	4
	Duct Sealing	0.25	0.07	0.82	4

Source: The participant spillover value of 0.07 is from the HES spillover survey with 100 GPY6 participants.

The source and explanation for the measure-level free ridership values referenced in Table 10 are as follows:

Free Ridership Sources

1. Illinois TRM version 7.0 specifies that faucet aerators and showerheads should have free ridership set at zero when estimating gross savings using the TRM specified baseline average water flow rate. Faucet aerators and showerheads may receive a spillover adjustment.
2. All scenarios of Air Sealing plus Attic Insulation installed in the same project (with or without additional measures installed in the same project) do not receive further free ridership or spillover adjustment. This applies only if the savings for natural gas heating are estimated using the Illinois TRM Version 7.0, Section 5.6.1 (Air Sealing) and Section 5.6.5 (Ceiling/Attic Insulation) adjustment factor of 72% that was derived from air sealing and insulation research. The 72% adjustment factor was derived from a gas consumption data regression analysis with an experimental design that does not require NTG adjustment.

3. As presented in of Table 1 this memo, free ridership is based on a survey of GPY6 and CY2018 participants of the HES program that participated between August 2017 and June 2018.
4. There were too few responses for some of these measures to apply the results from the survey of GPY6 and CY2018 participants at a measure level. Instead, we combined the scores from the 40 weatherization responses (excluding attic insulation which is not installed on a single measure basis) and used the simple average to represent this group of measures.
5. There were too few responses for this measure to use the results from the survey of GPY6 and CY2018 participants of the HES program. We used a free ridership of 0.28 from Navigant survey research on participants of the GPY6 Peoples Gas and North Shore Gas Home Energy Jumpstart Program, *Net-to-Gross Research Results from GPY6 for the Peoples Gas and North Shore Gas Home Energy Jumpstart Program*, Navigant, August 23, 2018 (revised September 13, 2018).

APPENDIX 3 Nicor Gas HES Telephone Spillover Survey Instrument

BG JOB NUMBER: J5112

NICOR GAS HOME ENERGY SAVINGS PROGRAM
ENERGYSMART ASSESSMENT AND ASI PARTICIPANT
TELEPHONE SPILLOVER SURVEY INSTRUMENT
DRAFT
June 8, 2018

[INTRO] Hello, this is _____ from the Blackstone Group calling on behalf of Nicor Gas about your participation in energySMART, a Nicor Gas program. May I please speak with [account_name]? We are calling to ask you some questions about your experience with the Nicor Gas energySMART program. If you qualify for this survey, you will receive a \$25 gift card in appreciation of your time spent with us.

[IF <PROGRAM> = ASI, SAY ASI INTRO, ELSE SAY DI INTRO]

ASI INTRO: According to our records, you participated in the program on [date] when a contractor visited your home and installed some energy-saving improvements. Your responses will help Nicor Gas improve their programs and better serve customers like you.

DI INTRO: According to our records, you participated in the program on [date] when an energy advisor visited your home and installed some energy-saving improvements. Your responses will help Nicor Gas improve their programs and better serve customers like you.

Are you the best person in your household to discuss the program experience with? [IF NOT, ASK TO SPEAK TO THE BEST PERSON; SCHEDULE CALLBACK IF NECESSARY]

This is an anonymous survey where your responses will be combined with other participants' responses and shared with Nicor Gas.

Are you driving a car or doing anything else that requires your focused attention?

(INTERVIEWER: IF RESPONDENT SAYS YES, READ; *Due to safety reasons, we will need to call you back at a more convenient time. Thank you.*)

- 1 YES (SET AS SOFT CALLBACK)
- 2 NO

This survey will take about 8 minutes. Is now a good time? [IF NO, SCHEDULE CALLBACK]

When Customer Opts OUT of Auto-dialed calls:

"Thank you. If you no longer wish to receive autodialed phone calls from Nicor Gas at this phone number, you may contact 888.642.6748 to update your account preferences."

[CONFIRM PARTICIPATION]

[IF <PROGRAM> = ASI, ASK CP0, ELSE ASK CP1]

CP0. Our records indicate that a contractor visited your home on **[date]** and installed **[measure]** measures, is that correct? [IF NO, THANK AND TERMINATE THE CALL]

CPI. Our records indicate that an energy advisor visited your home on **[date]** and installed **[measure]** measures, is that correct? [IF NO, THANK AND TERMINATE THE CALL]

[MARKETING]

M1. How did you first learn about the energySMART Program?

[DO NOT READ, ALLOW MULTIPLE]

1. Air Sealing Insulation contractor
2. Energy advisor
2. Mail from Nicor Gas
3. Advertisement, print
4. Advertisement, billboard
5. Advertisement, radio
6. Advertisement, TV
7. Advertisement, Internet
8. Advertisement, can't recall media
97. Other [OPEN END]

[SPILLOVER QUESTIONS]

SO Intro. Did the program influence you in any way to make additional energy efficiency improvements?

[OPEN ENDED RESPONSE; PROBE WITH "WHAT IMPROVEMENTS?" "WHAT ELSE?"]

SO1. Since you participated in the energySMART Program have you purchased and installed any other energy efficient products through a utility program?

1. YES [GO TO SO2]
2. NO [GO TO SO3]
98. DK [GO TO SO3]
99. REF [GO TO SO3]

SO2. What type of energy efficiency improvements did you make and what utility program did you go through?

[OPEN ENDED RESPONSE]

SO3. Since you participated in the energySMART Program have you purchased and installed any other energy efficient equipment outside a utility program?

1. YES [GO TO SO4]
2. NO [GO TO PROGRAM SATISFACTION SECTION]
98. DK [GO TO PROGRAM SATISFACTION SECTION]
99. REF [GO TO PROGRAM SATISFACTION SECTION]

SO4. How important was your participation in the Nicor Gas energySMART program on your decision to make additional energy efficiency improvements outside of a utility program? Please rate on a scale of 0 to 10, where 10 is **extremely important** and 0 is **not at all important**. [0-10, DK, REF]

SO5. If you had not participated in the program, how likely is it that you would have made additional energy efficiency improvements? Please rate on a scale of 0 to 10, where 0 means you definitely **would not** have made additional energy efficiency improvements and 10 means you **definitely would** have made them, even if you had not participated in the energySMART program. [0-10, DK, REF]

[SPILLOVER SCORE (SS) = {SO4 + {10 - SO5}}/2
IF SS > 5, ASK SO6,
ELSE SKIP TO PROGRAM SATISFACTION SECTION]

SO6. What was the energy-efficient product you installed outside a utility program? [DO NOT READ LIST, CHECK ALL THAT APPLY]

1. AIR SEALING (sealing gaps and cracks in your attic where air can get in and out)
2. BOILER
3. FAUCET AERATORS FOR KITCHEN AND BATH
4. FURNACE
5. HEAT PUMP
6. HOT WATER PIPE INSULATION
7. INSULATION
8. SHOWERHEADS
9. THERMOSTAT
10. WATER HEATER
11. NATURAL GAS WATER HEATER TEMPERATURE SETBACK
- 97 OTHER, SPECIFY _____
98. DK
99. REF

SO7. [IF SO6<13] Did you investigate whether Nicor Gas had any rebates available for the additional energy efficiency improvements you made?

1. Yes
2. No
98. DK
99. REF

SO7a. [IF SO7 = 1] Did you apply for rebates but not receive them?

1. Yes
2. No
98. DK
99. REF

SO7b. [IF SO7 = 2] Why not? [OPEN ENDED, DK, REF]

SO8a. [IF SO6 = 1] What type of air sealing did you install? [PROBE FOR WINDOW SEALING, DOOR SEALING, DUCT SEALING] [OPEN ENDED, DK, REF]

SO8b. [IF SO6 = 1] In what locations did you do air sealing? [OPEN ENDED, DK, REF]

SO9. [IF SO6 = 2] What is the efficiency rating of your new boiler? OR How do you know your model is more efficient than other models? [PROBE FOR WHETHER REPORTING AFUE OR OTHER EFFICIENCY LEVEL OR ENERGY STAR LABEL] [OPEN ENDED, DK, REF]

SO10. [IF SO6 = 3] How many faucet aerators did you install? [OPEN ENDED, DK, REF]

SO11. [IF SO6 = 4] What is the efficiency rating of your new furnace? OR How do you know your model is more efficient than other models? [PROBE FOR WHETHER REPORTING AFUE OR OTHER EFFICIENCY LEVEL OR ENERGY STAR LABEL] [OPEN ENDED, DK, REF]

SO12a. [IF SO6 = 5] What is the efficiency of the heat pump? OR How do you know your model is more efficient than other models? [PROBE FOR WHETHER REPORTING EER, SEER, OR OTHER EFFICIENCY LEVEL] [OPEN ENDED, DK, REF]

SO12b. [IF SO6 = 5] What type of heat pump did you install: air source or ground source/geothermal?

1. AIR SOURCE
2. GROUND SOURCE/GEOTHERMAL
98. DK
99. REF

SO13. [IF SO6 = 6] How many linear feet of hot water pipe insulation did you install? [OPEN ENDED, DK, REF]

SO14a. [IF SO6 = 7] How is your house heated? [PROBE FOR WHETHER ELECTRIC OR NATURAL GAS] [OPEN ENDED, DK, REF]

SO14b. [IF SO6 = 7] In what location was the insulation installed? [OPEN ENDED, DK, REF]

SO14c. [IF SO6 = 7] In what quantities was the insulation installed [PROBE FOR R VALUE, INCHES, OR FEET] [OPEN ENDED, DK, REF]

SO15. [IF SO6 = 8] How many high efficiency showerheads did you install? [OPEN ENDED, DK, REF]

SO16a. [IF SO6 = 9 AND SO14a WAS NOT ASKED] How is your home heated? [PROBE FOR WHETHER ELECTRIC OR NATURAL GAS] [OPEN ENDED, DK, REF]

SO16b. [IF SO6 = 9] Is your thermostat programmed to adjust the temperature at certain times of day?

1. YES
2. NO
98. DK
99. REF

SO16c. [IF SO6 = 9] Is it a "learning" or "smart" thermostat?

1. YES
2. NO
98. DK
99. REF

SO17a. [IF SO6 = 10] Is your water heated using natural gas or electricity? [OPEN ENDED, DK, REF]

SO17b. [IF SO6 = 10] Does it have an ENERGY STAR label? [OPEN ENDED, DK, REF]

SO17c. [IF SO6 = 10] Does your water heater have a tank or is it tankless? [OPEN ENDED, DK, REF]

SO18a. [IF SO6 = 11 and SO17a WAS NOT ASKED] Is your water heated using natural gas or electricity? [OPEN ENDED, DK, REF]

SO18b. [IF SO6 = 11] Did you lower the settings of your water heater?

1. Yes, lowered it
2. No, did not adjust it
98. DK
99. REF

SO18c. [IF SO6 = 11] What was the water heater temperature originally set at? [OPEN ENDED, DK, REF]

SO18d. [IF SO6 = 11] What is the water heater temperature currently set at? [OPEN ENDED, DK, REF]

SO19. [IF SO6 = 97] Can you describe your energy efficiency project? [IF EQUIPMENT, PROBE FOR QUANTITY, MAKE AND MODEL, AND IF IT'S ENERGY EFFICIENT OR ENERGY STAR LABELED] [OPEN ENDED, DK, REF]

[PROGRAM SATISFACTION]

[IF <PROGRAM> = DI, ASK PSDI1, ELSE ASK PSASI1]

PSDI1. On a scale of 0 to 10, where 10 is extremely satisfied and 0 is not at all satisfied, how would you rate your satisfaction with...? [SCALE 0-10; 96=not applicable, 98= Don't know, 99=Refused]

- A. The energy efficient products installed through the program
- B. The amount of effort to participate in the program
- C. The helpfulness of energySMART Assessment
- D. The professionalism of the energy advisor who performed the energy assessment
- E. The energySMART program overall

[ASK IF PSDI1 A, B, C, D, or E <4 or >6]

PSDI2. Could you please explain the reason or reasons behind your rating(s)?

[OPEN ENDED RESPONSE BOX; 98=DK; 99=REF]

PSASI1. On a scale of 0 to 10, where 10 is extremely satisfied and 0 is not at all satisfied, how would you rate your satisfaction with...? [SCALE 0-10; 96=not applicable, 98= Don't know, 99=Refused]

- A. The amount of the rebate/instant discount you received through the program
- B. The amount of effort to participate in the program
- C. The energy efficient improvements installed through the program
- D. The professionalism of the contractor who installed the energy efficiency improvements
- E. Information from the energySMART Assessment
- F. The energySMART program overall

[ASK IF PSASI1 A, B, C, D, E or F <4 or >6]

PSASI2. Could you please explain the reason or reasons behind your rating(s)?

[OPEN ENDED RESPONSE BOX; 98=DK; 99=REF]

PS3. How could the energySMART program be improved?

[OPEN ENDED RESPONSE BOX; 98=DK; 99=REF]

PS4. Are there other efficiency improvement projects that you wish were included in this program? If so, what kind of projects?

[OPEN ENDED RESPONSE BOX; 98=DK; 99=REF]

PS5. What do you think would help more people participate in this program? [OPEN ENDED RESPONSE BOX; 98=DK; 99=REF]

PS6a. What other Nicor Gas programs have you participated in? [OPEN ENDED RESPONSE BOX; 98=DK; 99=REF]

PS6b. What do you think would help customers like you participate in more Nicor Gas programs? [OPEN ENDED RESPONSE BOX; 98=DK; 99=REF]

FINAL1. Thank you for your time and feedback! We will mail you your \$25 gift card within six weeks, or, if you prefer, we can email you a \$25 electronic gift card within 3 weeks.

Would you prefer that we mail or email you, your incentive?

Programming: please display options below:

Mail
Email

If Mail is chosen, please provide an option for customer to input their home address

If email is selected, please display email from sample file and we will ask "Can you confirm the email address we have on file if correct?"

Programming: Display options below

Yes
No

Net-to-Gross Research Results from GPY6 and CY2018 for the Nicor Gas Home Energy Savings Program
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September 19, 2018

If Yes is selected, next screen will be INT99
If No Is selected, please add a screen for respondent to update email address.

[OPEN ENDED RESPONSE BOX - UPDATE ADDRESS OR EMAIL AS NEEDED; 98=DK; 99=REF]

FINAL2. Unfortunately, you do not qualify for this survey. Thank you for your time! [END CALL]

APPENDIX 4 Nicor Gas HES ASI Telephone Free Ridership Survey Instrument

NICOR GAS HOME ENERGY SAVINGS PROGRAM
ENERGYSMART AIR SEALING AND INSULATION PARTICIPANT
TELEPHONE FREE RIDERSHIP SURVEY INSTRUMENT
DRAFT
June 8, 2018

[INTRO] Hello, this is _____ from the Blackstone Group calling on behalf of Nicor Gas about your participation in energySMART, a Nicor Gas program. May I please speak with **[account_name]**? We are calling to ask you some questions about your experience with the Nicor Gas energySMART program. If you qualify for this survey, you will receive a \$25 gift card in appreciation of your time spent with us.

According to our records, you participated in the program on **[date]** when a contractor visited your home and installed some energy-saving improvements. Your responses will help Nicor Gas improve their programs and better serve customers like you.

Are you the best person in your household to discuss the program experience with? **[IF NOT, ASK TO SPEAK TO THE BEST PERSON; SCHEDULE CALLBACK IF NECESSARY]**

This is an anonymous survey where your responses will be combined with other participants' responses and shared with Nicor Gas.

Are you driving a car or doing anything else that requires your focused attention?

(INTERVIEWER: IF RESPONDENT SAYS YES, READ; Due to safety reasons, we will need to call you back at a more convenient time. Thank you.)

- 1 YES (SET AS SOFT CALLBACK)
- 2 NO

This survey will take about 10 minutes. Is now a good time? **[IF NO, SCHEDULE CALLBACK]**

When Customer Opts OUT of Auto-dialed calls:

"Thank you. If you no longer wish to receive autodialed phone calls from Nicor Gas at this phone number, you may contact 888.642.6748 to update your account preferences."

[MARKETING]

M1. How did you first learn about the energySMART Program?

[DO NOT READ, ALLOW MULTIPLE]

- 1. Air Sealing and Insulation contractor
- 2. Energy advisor
- 2. Mail from Nicor Gas
- 3. Advertisement, print
- 4. Advertisement, billboard
- 5. Advertisement, radio
- 6. Advertisement, TV
- 7. Advertisement, Internet
- 8. Advertisement, can't recall media
- 97 Other [OPEN END]

[Free Ridership – Attic Insulation]

[IF <MEASURE> = AI, ASK AI0, ELSE SKIP TO NEXT SECTION]

AI0. Our records indicate that a contractor installed attic insulation in your home and you received a rebate or instant discount for attic insulation through the energySMART program. Is that correct?

1. YES [SKIP TO AI1]
2. NO [SKIP TO NEXT SECTION]
98. DK [SKIP TO NEXT SECTION]
99. REF [SKIP TO NEXT SECTION]

AI1. Before you participated in the energySMART program, had you decided to buy attic insulation or pay someone to install attic insulation in your home?

1. YES
2. NO
98. DK
99. REF

AI2. How influential was the following on your decision to have attic insulation installed in your home?
[THIS QUESTION WILL BE PRESENTED AS A 0-10 SLIDING WIDGET, WITH 0 AND 10 DEFINED AS BELOW]

- 0 - Not at all Influential
- 10 - Extremely Influential
96. Not Applicable
98. DK
- 99 .REF

[ROTATE AI2A-D]

AI2A. The rebate or instant discount you received through the program

AI2B. Information from the energySMART Assessment

AI2C. Information from Nicor Gas

AI2D. Other, please specify:

[RAW PROGRAM INFLUENCE SCORE = RPI = MAX {AI2A, AI2B, AI2C, and AI2D}; RPI IS USED FOR CONSISTENCY CHECK.]

AI3. Without the energySMART program and without the rebate or instant discount, what is the likelihood you would have had **any** attic insulation **at all** installed **within twelve months** of the actual insulation installation?

Please rate on a scale of 0 to 10 where 10 means it is **extremely likely** that you would have purchased **any type** of attic insulation and 0 means it is **not at all likely**. [THIS QUESTION WILL BE PRESENTED AS A 0-10 SLIDING WIDGET, WITH 0 AND 10 DEFINED AS BELOW.]

- 0 - Not at all Likely
- 10 - Extremely Likely

AI4. On the same 0-10 scale, without the energySMART program and without the rebate or instant discount, what is the likelihood you would have had the **exact same thickness (R-value)** of attic insulation installed? [THIS QUESTION WILL BE PRESENTED AS A 0-10 SLIDING WIDGET, WITH 0 AND 10 DEFINED AS BELOW.]

- 0 - Not at all Likely
- 10 - Extremely Likely

[NO-PROGRAM SCORE = NP = MIN {AI3, AI4}; NP IS USED FOR CONSISTENCY CHECK.]

[CCAI1 WILL BE PRESENTED IF ONE OF THE FOLLOWING CASES IS TRUE

1. RPI >= 7 AND NP >= 7
2. RPI <= 3 AND NP <= 3]

CCAI1. In your own words, please describe the influence the energySMART program and the rebate or instant discount had on your decision to install attic insulation in your home.

[OPEN ENDED RESPONSE BOX]

[Free Ridership – Wall Insulation]

[IF <MEASURE> = WI, ASK WI0, ELSE SKIP TO NEXT SECTION]

WI0. Our records indicate that a contractor installed wall insulation in your home and you received a rebate or instant discount for wall insulation through the energySMART program. Is that correct?

1. YES [SKIP TO WI1]
2. NO [SKIP TO NEXT SECTION]
98. DK [SKIP TO NEXT SECTION]
99. REF [SKIP TO NEXT SECTION]

WI1. Before you participated in the energySMART program, had you decided to buy wall insulation or pay someone to install wall insulation in your home?

1. YES
2. NO
98. DK
99. REF

WI2. How influential was the following on your decision to have wall insulation installed in your home?
[THIS QUESTION WILL BE PRESENTED AS A 0-10 SLIDING WIDGET, WITH 0 AND 10 DEFINED AS BELOW]

- 0 - Not at all Influential
- 10 - Extremely Influential
96. Not Applicable
98. DK
99. REF

[ROTATE WI2A-D]

WI2A. The rebate or instant discount you received through the program

WI2B. Information from the energySMART Assessment

WI2C. Information from Nicor Gas

WI2D. Other, please specify:

[RAW PROGRAM INFLUENCE SCORE = RPI = MAX {WI2A, WI2B, WI2C, and WI2D}; RPI IS USED FOR CONSISTENCY CHECK.]

WI3. Without the energySMART program and without the rebate or instant discount, what is the likelihood you would have had **any** wall insulation **at all** installed **within twelve months** of the actual insulation installation?

Please rate on a scale of 0 to 10 where 10 means it is **extremely likely** that you would have purchased **any type** of wall insulation and 0 means it is **not at all likely**. [THIS QUESTION WILL BE PRESENTED AS A 0-10 SLIDING WIDGET, WITH 0 AND 10 DEFINED AS BELOW.]

- 0 - Not at all Likely

10 - Extremely Likely

WI4. On the same 0-10 scale, without the energySMART program and without the rebate or instant discount, what is the likelihood you would have had the **exact same thickness (R-value)** of wall insulation installed? [THIS QUESTION WILL BE PRESENTED AS A 0-10 SLIDING WIDGET, WITH 0 AND 10 DEFINED AS BELOW.]

0 - Not at all Likely

10 - Extremely Likely

[NO-PROGRAM SCORE = NP = MIN {WI3, WI4}; NP IS USED FOR CONSISTENCY CHECK.]

[CCWI1 WILL BE PRESENTED IF ONE OF THE FOLLOWING CASES IS TRUE

1. RPI >= 7 AND NP >= 7

2. RPI <= 3 AND NP <= 3]

CCWI1. In your own words, please describe the influence the energySMART program and the rebate or instant discount had on your decision to install wall insulation in your home.

[OPEN ENDED RESPONSE BOX]

[Free Ridership – Basement or Sidewall Insulation]

[IF <MEASURE> = BS, ASK BSI0, ELSE SKIP TO NEXT SECTION]

BSI0. Our records indicate that a contractor installed basement or sidewall insulation in your home and you received a rebate or instant discount for basement or sidewall insulation through the energySMART program. Is that correct?

1. YES [SKIP TO BSI1]

2. NO [SKIP TO NEXT SECTION]

98. DK [SKIP TO NEXT SECTION]

99. REF [SKIP TO NEXT SECTION]

BSI1. Before you participated in the energySMART program, had you decided to buy basement or sidewall insulation or pay someone to install basement or sidewall insulation in your home?

1. YES

2. NO

98. DK

99. REF

BSI2. How influential was the following on your decision to have basement or sidewall insulation installed in your home? [THIS QUESTION WILL BE PRESENTED AS A 0-10 SLIDING WIDGET, WITH 0 AND 10 DEFINED AS BELOW]

0 - Not at all Influential

10 - Extremely Influential

96. Not Applicable

98. DK

99. REF

[ROTATE BSI2A-D]

BSI2A. The rebate or instant discount you received through the program

BSI2B. Information from the energySMART Assessment

BSI2C. Information from Nicor Gas

BSI2D. Other, please specify:

[RAW PROGRAM INFLUENCE SCORE = RPI = MAX {BSI2A, BSI2B, BSI2C, and BSI2D}; RPI IS USED FOR CONSISTENCY CHECK.]

BSI3. Without the energySMART program and without the rebate or instant discount, what is the likelihood you would have had **any** basement or sidewall insulation **at all** installed **within twelve months** of the actual insulation installation?

Please rate on a scale of 0 to 10 where 10 means it is **extremely likely** that you would have purchased **any type** of basement or sidewall insulation and 0 means it is **not at all likely**. [THIS QUESTION WILL BE PRESENTED AS A 0-10 SLIDING WIDGET, WITH 0 AND 10 DEFINED AS BELOW.]

- 0 - Not at all Likely
- 10 - Extremely Likely

BSI4. On the same 0-10 scale, without the energySMART program and without the rebate or instant discount, what is the likelihood you would have had the **exact same thickness (R-value)** of basement or sidewall insulation installed? [THIS QUESTION WILL BE PRESENTED AS A 0-10 SLIDING WIDGET, WITH 0 AND 10 DEFINED AS BELOW.]

- 0 - Not at all Likely
- 10 - Extremely Likely

[NO-PROGRAM SCORE = NP = MIN {BSI3, BSI4}; NP IS USED FOR CONSISTENCY CHECK.]

[CCBSI1 WILL BE PRESENTED IF ONE OF THE FOLLOWING CASES IS TRUE

1. RPI >= 7 AND NP >= 7
2. RPI <= 3 AND NP <= 3]

CCBSI1. In your own words, please describe the influence the energySMART program and the rebate or instant discount had on your decision to install basement or sidewall insulation in your home.

[OPEN ENDED RESPONSE BOX]

[Free Ridership – Air Sealing]

[IF <MEASURE> = AS, ASK AS0, ELSE SKIP TO NEXT SECTION]

Note that **air sealing** includes sealing gaps and cracks in your wall where air can get in and out. The contractor would have performed **air sealing** in your home before the wall insulation was installed. The contractor would have installed a big red blower door on your home, closed all the windows, and pulled a slight negative pressure to measure the air leakage in your home.

AS0. Our records indicate that a contractor performed air sealing to your home and you received a rebate or instant discount for air sealing through the energySMART program. Is that correct?

1. YES [SKIP TO AS1]
2. NO [SKIP TO NEXT SECTION]
98. DK [SKIP TO NEXT SECTION]
99. REF [SKIP TO NEXT SECTION]

AS1. Before you participated in the energySMART program, had you decided to pay someone to do air sealing to your home?

1. YES
2. NO
98. DK
99. REF

AS2. How influential was the following on your decision to have air sealing done to your home? [THIS QUESTION WILL BE PRESENTED AS A 0-10 SLIDING WIDGET, WITH 0 AND 10 DEFINED AS BELOW]

- 0 - Not at all Influential
- 10 - Extremely Influential
96. Not Applicable
98. DK
99. REF

[ROTATE AS2A-D]

- AS2A. The rebate or instant discount you received through the program
AS2B. Information from the energySMART Assessment
AS2C. Information from Nicor Gas
AS2D. Other, please specify:

[RAW PROGRAM INFLUENCE SCORE = RPI = MAX {AS2A, AS2B, ... AS2D}; RPI IS USED FOR CONSISTENCY CHECK.]

AS3. Without the energySMART program and without the rebate or instant discount, what is the likelihood you would have had **any** air sealing work done **at all within twelve months** of the actual air sealing installation?

Please rate on a scale of 0 to 10 where 10 means it is **extremely likely** that you would have purchased **any type** of air sealing measure and 0 means it is **not at all likely**.

[THIS QUESTION WILL BE PRESENTED AS A 0-10 SLIDING WIDGET, WITH 0 AND 10 DEFINED AS BELOW.]

- 0 - Not at all Likely
- 10 - Extremely Likely

AS4. On the same 0-10 scale, without the energySMART program and without the rebate or instant discount, what is the likelihood you would have had the **exact same professional quality and thoroughness of** air sealing done?

[THIS QUESTION WILL BE PRESENTED AS A 0-10 SLIDING WIDGET, WITH 0 AND 10 DEFINED AS BELOW.]

- 0 - Not at all Likely
- 10 - Extremely Likely

[NO-PROGRAM SCORE = NP = MIN {AS3, AS4}; NP IS USED FOR CONSISTENCY CHECK.]

[CCAS1 WILL BE PRESENTED IF ONE OF THE FOLLOWING CASES IS TRUE

1. RPI >= 7 AND NP >= 7
2. RPI <= 3 AND NP <= 3]

CCAS1. In your own words, please describe the influence the energySMART program and the air sealing rebate or instant discount had on your decision to have air sealing done to your home.

[OPEN ENDED RESPONSE BOX]

[Free Ridership – Duct Sealing]

[IF <MEASURE> = DS, ASK DS0, ELSE SKIP TO NEXT SECTION]

DS0. Our records indicate that a contractor performed duct sealing to your home and you received a rebate or instant discount for duct sealing through the energySMART program. Is that correct?

1. YES [SKIP TO DS1]
2. NO [SKIP TO NEXT SECTION]
98. DK [SKIP TO NEXT SECTION]
99. REF [SKIP TO NEXT SECTION]

DS1. Before you participated in the energySMART program, had you decided to pay someone to do duct sealing to your home?

1. YES
2. NO
98. DK
99. REF

DS2. How influential was the following on your decision to have duct sealing done to your home? [THIS QUESTION WILL BE PRESENTED AS A 0-10 SLIDING WIDGET, WITH 0 AND 10 DEFINED AS BELOW]

- 0 - Not at all Influential
- 10 - Extremely Influential
96. Not Applicable
98. DK
99. REF

[ROTATE DS2A-D]

DS2A. The rebate or instant discount you received through the program

DS2B. Information from the energySMART Assessment

DS2C. Information from Nicor Gas

DS2D. Other, please specify:

[RAW PROGRAM INFLUENCE SCORE = RPI = MAX {DS2A, DS2B, ... DS2D}; RPI IS USED FOR CONSISTENCY CHECK.]

DS3. Without the energySMART program and without the rebate or instant discount, what is the likelihood you would have had **any** duct sealing work done **at all within twelve months** of the actual duct sealing installation?

Please rate on a scale of 0 to 10 where 10 means it is **extremely likely** that you would have purchased **any type** of duct sealing measure and 0 means it is **not at all likely**.

[THIS QUESTION WILL BE PRESENTED AS A 0-10 SLIDING WIDGET, WITH 0 AND 10 DEFINED AS BELOW.]

- 0 - Not at all Likely
- 10 - Extremely Likely

DS4. On the same 0-10 scale, without the energySMART program and without the rebate or instant discount, what is the likelihood you would have had the **exact same professional quality and thoroughness of** duct sealing done?

[THIS QUESTION WILL BE PRESENTED AS A 0-10 SLIDING WIDGET, WITH 0 AND 10 DEFINED AS BELOW.]

0 - Not at all Likely
10 - Extremely Likely

[NO-PROGRAM SCORE = NP = MIN {DS3, DS4}; NP IS USED FOR CONSISTENCY CHECK.]

[CCDS1 WILL BE PRESENTED IF ONE OF THE FOLLOWING CASES IS TRUE

1. RPI >= 7 AND NP >= 7
2. RPI <= 3 AND NP <= 3]

CCDS1. In your own words, please describe the influence the energySMART program and the rebate or instant discount had on your decision to have duct sealing done to your home.

[Program Satisfaction]

PS1. On a scale of 0 to 10, where 10 is **extremely satisfied** and 0 is **not at all satisfied**, how would you rate your satisfaction with...? [SCALE 0-10; 96=Not Applicable, 98=Don't Know, 99=Refused]

- A. The amount of the rebate or instant discount you received through the program
- B. The amount of effort to participate in the program
- C. The energy efficient improvements installed through the program
- D. The professionalism of the contractor who installed the energy efficiency improvements
- E. Information from the energySMART Assessment
- F. The energySMART program overall

[ASK IF PS1 A, B, C, D, E, or F <4 or > 6]

PS2. Could you please explain the reason or reasons behind your rating(s)?

[OPEN ENDED RESPONSE BOX; 98=DK; 99=REF]

PS3. How could the energySMART program be improved?

[OPEN ENDED RESPONSE BOX; 98=DK; 99=REF]

PS4. Are there other efficiency improvement projects that you wish were included in this program? If so, what kind of projects?

[OPEN ENDED RESPONSE BOX; 98=DK; 99=REF]

PS5. What do you think would help more people participate in this program? [OPEN ENDED RESPONSE BOX; 98=DK; 99=REF]

PS6a. What other Nicor Gas programs have you participated in? [OPEN ENDED RESPONSE BOX; 98=DK; 99=REF]

PS6b. What do you think would help customers like you participate in more Nicor Gas programs? [OPEN ENDED RESPONSE BOX; 98=DK; 99=REF]

MI1. If you would like more information about other Nicor Gas energySMART programs and offerings or feel you would like to do more to improve the energy efficiency of your home, please enter your name and email address below, and a Nicor Gas representative will get back to you. Your survey responses will remain confidential and will be reported only anonymously.

[OPEN ENDED RESPONSE BOX]

- A. NAME
- B. EMAIL

FINAL1. Thank you for your time and feedback! We will mail you your \$25 gift card within six weeks, or, if you prefer, we can email you a \$25 electronic gift card within 3 weeks.

[OPEN ENDED RESPONSE BOX - UPDATE ADDRESS OR EMAIL AS NEEDED; 98=DK; 99=REF]

Would you prefer that we mail or email you, your incentive?

Programming: please display options below:

Mail

Email

If Mail is chosen, please provide an option for customer to input their home address

If email is selected, please display email from sample file and we will ask "Can you confirm the email address we have on file if correct?"

Programming: Display options below

Yes

No

If Yes is selected, next screen will be INT99

If No Is selected, please add a screen for respondent to update email address.

APPENDIX 5 Nicor Gas HES Assessment Telephone Free Ridership Survey

NICOR GAS HOME ENERGY SAVINGS PROGRAM
ENERGYSMART ASSESSMENT PARTICIPANT
TELEPHONE FREE RIDERSHIP SURVEY INSTRUMENT
DRAFT
June 8, 2018

[INTRO] Hello, this is _____ from the Blackstone Group calling on behalf of Nicor Gas about your participation in energySMART, a Nicor Gas program. May I please speak with **[account_name]**? We are calling to ask you some questions about your experience with the Nicor Gas energySMART program. If you qualify for this survey, you will receive a \$25 gift card in appreciation of your time spent with us.

According to our records, you participated in the program on **[date]** when an energy advisor visited your home and installed some energy-saving improvements. Your responses will help Nicor Gas improve their programs and better serve customers like you.

Are you the best person in your household to discuss the program experience with? **[IF NOT, ASK TO SPEAK TO THE BEST PERSON; SCHEDULE CALLBACK IF NECESSARY]**

This is an anonymous survey where your responses will be combined with other participants' responses and shared with Nicor Gas.

Are you driving a car or doing anything else that requires your focused attention?

(INTERVIEWER: IF RESPONDENT SAYS YES, READ; Due to safety reasons, we will need to call you back at a more convenient time. Thank you.)

- 1 YES (SET AS SOFT CALLBACK)
- 2 NO

This survey will take about 10 minutes. Is now a good time? **[IF NO, SCHEDULE CALLBACK]**

When Customer Opts OUT of Auto-dialed calls:

"Thank you. If you no longer wish to receive autodialed phone calls from Nicor Gas at this phone number, you may contact 888.642.6748 to update your account preferences."

[MARKETING]

M1. How did you first learn about the energySMART Program?

[DO NOT READ, ALLOW MULTIPLE]

- 3. Energy advisor
- 2. Mail from Nicor Gas
- 3. Advertisement, print
- 4. Advertisement, billboard
- 5. Advertisement, radio
- 6. Advertisement, TV
- 7. Advertisement, Internet
- 8. Advertisement, can't recall media
- 97. Other **[OPEN END]**

[Free Ridership – High Efficiency Showerheads]

IF <MEASURE>=HES, ASK HES0, ELSE SKIP TO NEXT SECTION]

HES0. Our records indicate that an energy advisor installed one or more high efficiency showerheads in your home. Is that correct?

1. YES [SKIP TO HES1]
2. NO [SKIP TO NEXT SECTION]
98. DK [SKIP TO NEXT SECTION]
99. REF [SKIP TO NEXT SECTION]

HES1. Before the assessment, had you purchased any high efficiency showerheads?

1. YES
2. NO
98. DK
99. REF

[HES1 IS USED FOR CONSISTENCY CHECK.]

HES2. If you had not received the free high efficiency showerhead(s) during the assessment, what is the likelihood you would have purchased a showerhead **of any efficiency within six months** of the assessment?

Please rate on a scale of 0 to 10 where 10 means it is **extremely likely** that you would have purchased any type of showerhead and 0 means it is **not at all likely**.

[THIS QUESTION WILL BE PRESENTED AS A 0-10 SLIDING WIDGET, WITH 0 AND 10 DEFINED AS BELOW.]

- 0 - Not at all Likely
- 10 - Extremely Likely
98. DK
99. REF

HES3. On the same 0 to 10 scale, if you had not received the free high efficiency showerhead(s) during the assessment, what is the likelihood you would have purchased **the exact same** high efficiency showerhead?

[THIS QUESTION WILL BE PRESENTED AS A 0-10 SLIDING WIDGET, WITH 0 AND 10 DEFINED AS BELOW.]

- 0 - Not at all Likely
- 10 - Extremely Likely
98. DK
99. REF

[IF <MEASUREQTY>> 1, ASK HES4,
ELSE SKIP TO CCHES1, CCHES2, OR NEXT SECTION]

HES4. Our records show that the energy advisor installed [MEASUREQTY] high efficiency showerheads in your home. If you had not received the free high efficiency showerheads during the assessment, what is the likelihood you would have purchased **fewer (0 or 1)** high efficiency showerheads?

Note that if you would not have purchased any at all, then you would assign 10 because it is extremely likely you would have purchased fewer.

[THIS QUESTION WILL BE PRESENTED AS A 0-10 SLIDING WIDGET, WITH 0 AND 10 DEFINED AS BELOW.]

- 0 - Not at all Likely
- 10 - Extremely Likely
98. DK

99. REF

[NO-PROGRAM SCORE = NP = MIN {HES2, HES3, 10-HES4}; NP IS USED FOR CONSISTENCY CHECK.]

[IF HES1 = 1 AND NP < 7]

CCHES1. Please explain in your own words why you did not purchase additional high efficiency shower heads on your own without the program, given that you had purchased them before receiving the assessment.

[OPEN ENDED RESPONSE BOX]

[IF HES1 = 2 AND NP > 6]

CCHES2. Please explain in your own words why you were likely to purchase high efficiency shower heads on your own without the program, given that you had not purchased them before receiving the assessment.

[OPEN ENDED RESPONSE BOX]

[FREE RIDERSHIP (FR) = MIN {HES2, HES3, 10-HES4} / 10

[Free Ridership – Bathroom Aerators]

IF <MEASURE>=BA, ASK BA0, ELSE SKIP TO NEXT SECTION]

BA0. Our records indicate that an energy advisor installed one or more faucet aerators in your bathroom. Is that correct?

1. YES [SKIP TO BA1]
2. NO [SKIP TO NEXT SECTION]
98. DK [SKIP TO NEXT SECTION]
99. REF [SKIP TO NEXT SECTION]

BA1. Before the assessment, had you purchased any faucet aerators?

1. YES
2. NO
98. DK
99. REF

[BA1 IS USED FOR CONSISTENCY CHECK]

BA2. If you had not received the free bathroom faucet aerator(s) during the assessment, what is the likelihood you would have purchased any type of bathroom faucet aerator **within six months** of the assessment?

Please rate on a scale of 0 to 10 where 10 means it is **extremely likely** that you would have purchased any type of bathroom faucet aerator and 0 means it is **not at all likely**. [0 to 10, DK, REF]

BA3. On the same 0 to 10 scale, if you had not received the free bathroom faucet aerator(s) during the assessment, what is the likelihood you would have purchased **the exact same** bathroom faucet aerator(s)? [0 to 10, DK, REF]

[IF <MEASUREQTY>> 1, ASK BA4,
ELSE SKIP TO CCBA1, CCBA2, OR NEXT SECTION]

BA4. Our records show that the energy advisor installed [MEASUREQTY] bathroom faucet aerators in your home. If you had not received the free bathroom faucet aerators during the assessment, what is the likelihood you would have purchased **fewer (0 or 1)** bathroom faucet aerators?

[0 to 10, DK, REF] [IF NECESSARY, EXPLAIN THAT IF THEY WOULD NOT HAVE PURCHASED ANY AT ALL, THEN 10 EXTREMELY LIKELY THEY WOULD HAVE PURCHASED FEWER]

[NO-PROGRAM SCORE = NP = MIN {BA2, BA3, 10-BA4}; NP IS USED FOR CONSISTENCY CHECK.]

[IF BA1 = 1 AND NP < 7]

CCBA1. Please explain in your own words why you did not purchase additional bathroom faucet aerators on your own without the program, given that you had purchased them before receiving the assessment.
[OPEN ENDED RESPONSE BOX]

[IF BA1 = 2 AND NP > 6]

CCBA2. Please explain in your own words why you were likely to purchase bathroom faucet aerators on your own without the program, given that you had not purchased them before receiving the assessment.
[OPEN ENDED RESPONSE BOX]

[FREE RIDERSHIP (FR) = MIN {BA2, BA3, 10-BA4} / 10

[Free Ridership – Kitchen Aerators]

IF <MEASURE>=KA, ASK KA0, ELSE SKIP TO NEXT SECTION]

KA0. Our records indicate that an energy advisor installed one or more faucet aerators in your kitchen. Is that correct?

1. YES [SKIP TO KA1]
2. NO [SKIP TO NEXT SECTION]
98. DK [SKIP TO NEXT SECTION]
99. REF [SKIP TO NEXT SECTION]

KA1. Before the assessment, had you purchased any faucet aerators?

1. YES
2. NO
98. DK
99. REF

[KA1 IS USED FOR CONSISTENCY CHECK]

KA2. If you had not received the free kitchen faucet aerator(s) during the assessment, what is the likelihood you would have purchased any type of kitchen faucet aerator **within six months** of the assessment?

Please rate on a scale of 0 to 10 where 10 means it is **extremely likely** that you would have purchased any type of kitchen faucet aerator and 0 means it is **not at all likely**. [0 to 10, DK, REF]

KA3. On the same 0 to 10 scale, if you had not received the free kitchen faucet aerator(s) during the assessment, what is the likelihood you would have purchased **the exact same** kitchen faucet aerator(s)?
[0 to 10, DK, REF]

[IF <MEASUREQTY>> 1, ASK KA4,
ELSE SKIP TO CCKA1, CCKA2, OR NEXT SECTION]

KA4. Our records show that the energy advisor installed [MEASUREQTY] kitchen faucet aerators in your home. If you had not received the free kitchen faucet aerators during the assessment, what is the likelihood you would have purchased **fewer (0 or 1)** kitchen faucet aerators?

[0 to 10, DK, REF] [IF NECESSARY, EXPLAIN THAT IF THEY WOULD NOT HAVE PURCHASED ANY AT ALL, THEN 10 EXTREMELY LIKELY THEY WOULD HAVE PURCHASED FEWER]

[NO-PROGRAM SCORE = NP = MIN {KA2, KA3, 10-KA4}; NP IS USED FOR CONSISTENCY CHECK.]

[IF KA1 = 1 AND NP < 7]

CCKA1. Please explain in your own words why you did not purchase additional kitchen faucet aerators on your own without the program, given that you had purchased them before receiving the assessment.

[OPEN ENDED RESPONSE BOX]

[IF KA1 = 2 AND NP > 6]

CCKA2. Please explain in your own words why you were likely to purchase kitchen faucet aerators on your own without the program, given that you had not purchased them before receiving the assessment.

[OPEN ENDED RESPONSE BOX]

[FREE RIDERSHIP (FR) = MIN {KA2, KA3, 10-KA4} / 10

[Free Ridership – Programmable Thermostats]

IF <MEASURE>=PT, ASK PT0, ELSE SKIP TO NEXT SECTION]

PT0. Our records indicate that an energy advisor installed one or more programmable thermostats in your home. Is that correct?

1. YES [SKIP TO PT1]
2. NO [SKIP TO NEXT SECTION]
98. DK [SKIP TO NEXT SECTION]
99. REF [SKIP TO NEXT SECTION]

PT1. Before the assessment, had you purchased any programmable thermostats?

1. YES
2. NO
98. DK
99. REF

[PT1 IS USED FOR CONSISTENCY CHECK]

PT2. If you had not received the free programmable thermostat(s) during the assessment, what is the likelihood you would have purchased any type of thermostat **within six months** of the assessment?

Please rate on a scale of 0 to 10 where 10 means it is **extremely likely** that you would have purchased any type of thermostat and 0 means it is **not at all likely**. [0 to 10, DK, REF]

PT3. On the same 0 to 10 scale, if you had not received the free programmable thermostat(s) during the assessment, what is the likelihood you would have purchased **the exact same** programmable thermostat(s)? [0 to 10, DK, REF]

PT4. Our records show that the energy advisor installed [MEASUREQTY] programmable thermostats in your home. If you had not received the free programmable thermostats during the assessment, what is the likelihood you would have purchased **fewer (0 or 1)** programmable thermostats?

[0 to 10, DK, REF] [IF NECESSARY, EXPLAIN THAT IF THEY WOULD NOT HAVE PURCHASED ANY AT ALL, THEN 10 EXTREMELY LIKELY THEY WOULD HAVE PURCHASED FEWER]

[NO-PROGRAM SCORE = NP = MIN {PT2, PT3, 10-PT4}; NP IS USED FOR CONSISTENCY CHECK.]

[IF PT1 = 1 AND NP < 7]

CCPT1. Please explain in your own words why you did not purchase additional programmable thermostats on your own without the program, given that you had purchased them before receiving the assessment. [OPEN ENDED RESPONSE BOX]

[IF PT1 = 2 AND NP > 6]

CCPT2. Please explain in your own words why you were likely to purchase programmable thermostats on your own without the program, given that you had not purchased them before receiving the assessment. [OPEN ENDED RESPONSE BOX]

[FREE RIDERSHIP (FR) = MIN {PT2, PT3, 10-PT4} / 10

[Free Ridership – Reprogrammable Thermostats]

IF <MEASURE>=REPT, ASK REPT0, ELSE SKIP TO NEXT SECTION]

REPT0. Our records indicate that an energy advisor reprogrammed your existing programmable thermostat(s) in your home. Is that correct?

1. YES [SKIP TO REPT1]
2. NO [SKIP TO NEXT SECTION]
98. DK [SKIP TO NEXT SECTION]
99. REF [SKIP TO NEXT SECTION]

REPT1. Before the assessment, had you programmed your existing thermostat?

- 1 YES
2. NO
- 98 DK
- 99 REF

[REPT1 IS USED FOR CONSISTENCY CHECK]

REPT2. If the energy advisor had not reprogrammed your thermostat(s) during the assessment, what is the likelihood you would have reprogrammed your thermostat **within six months** of the assessment?

Please rate on a scale of 0 to 10 where 10 means it is **extremely likely** that you would have reprogrammed your thermostat and 0 means it is **not at all likely**. [0 to 10, DK, REF]

REPT3. On the same 0 to 10 scale, if the energy advisor had not reprogrammed your thermostat(s) during the assessment, what is the likelihood you would have reprogrammed your thermostat(s) to **the exact same** time and temperature settings? [0 to 10, DK, REF]

REPT4. Our records show that the energy advisor reprogrammed [MEASUREQTY] existing programmable thermostats in your home. If the energy advisor had not reprogrammed your existing thermostats during the assessment, what is the likelihood you would have reprogrammed **fewer (0 or 1)** of your existing programmable thermostats?

[0 to 10, DK, REF] [IF NECESSARY, EXPLAIN THAT IF THEY WOULD NOT HAVE REPROGRAMMED ANY AT ALL, THEN 10 EXTREMELY LIKELY THEY WOULD HAVE REPROGRAMMED FEWER]

[NO-PROGRAM SCORE = NP = MIN {REPT2, REPT3, 10-REPT4}; NP IS USED FOR CONSISTENCY CHECK.]

[IF REPT1 = 1 AND NP < 7]

CCREPT1. Please explain in your own words why you did not adjust your existing programmable thermostat on your own without the program. [OPEN ENDED RESPONSE BOX]

[IF REPT1 = 2 AND NP > 6]

CCREPT2. Please explain in your own words why you were likely to adjust your existing programmable thermostat on your own without the program, given that you had not adjusted your existing programmable thermostat before receiving the assessment. [OPEN ENDED RESPONSE BOX]

[FREE RIDERSHIP (FR) = MIN {REPT2, REPT3, 10-REPT4} / 10

[Free Ridership – Hot Water Pipe Insulation]

IF <MEASURE>=HWP, ASK HWP0, ELSE SKIP TO NEXT SECTION]

HWP0. Our records indicate that an energy advisor installed hot water pipe insulation in your home. Is that correct?

1. YES [SKIP TO HWP1]
2. NO [SKIP TO NEXT SECTION]
98. DK [SKIP TO NEXT SECTION]
99. REF [SKIP TO NEXT SECTION]

HWP1. Before the assessment, had you purchased any hot water pipe insulation?

1. YES
2. NO
98. DK
99. REF

[HWP1 IS USED FOR CONSISTENCY CHECK]

HWP2. If you had not received the free hot water pipe insulation during the assessment, what is the likelihood you would have purchased **any type of** hot water pipe insulation **within six months** of the assessment?

Please rate on a scale of 0 to 10 where 10 means it is **extremely likely** that you would have purchased **any type of** hot water pipe insulation and 0 means it is **not at all likely**. [0 to 10, DK, REF]

HWP3. On the same 0 to 10 scale, if you had not received the free hot water pipe insulation during the assessment, what is the likelihood you would have purchased **the exact same** hot water pipe insulation? [0 to 10, DK, REF]

[NO-PROGRAM SCORE = NP = MIN {HWP2, HWP3}; NP IS USED FOR CONSISTENCY CHECK.]

[IF HWP1 = 1 AND NP < 7]

CCHWP1. Please explain in your own words why you did not purchase additional hot water pipe insulation on your own without the program, given that you had purchased it before receiving the assessment. [OPEN ENDED RESPONSE BOX]

[IF HWP1 = 2 AND NP > 6]

CCHWP2. Please explain in your own words why you were likely to purchase hot water pipe insulation on your own without the program, given that you had not purchased it before receiving the assessment. [OPEN ENDED RESPONSE BOX]

[FREE RIDERSHIP (FR) = MIN {HWP2, HWP3} / 10

[Free Ridership – Water Heater Temperature Setback]

IF <MEASURE>=WHTS, ASK WHTS0, ELSE SKIP TO NEXT SECTION]

WHTS0. Our records indicate that an energy advisor lowered the temperature of your water heater in your home. Is that correct?

- 3. YES [SKIP TO WHTS1]
- 4. NO [SKIP TO NEXT SECTION]
- 98. DK [SKIP TO NEXT SECTION]
- 99. REF [SKIP TO NEXT SECTION]

WHTS1. Before the assessment, had you lowered the temperature of your water heater?

- 1 YES
- 2. NO
- 98 DK
- 99 REF

[WHTS1 IS USED FOR CONSISTENCY CHECK]

WHTS2. If the energy advisor had not lowered the temperature of your water heater during the assessment, what is the likelihood you would have lowered the temperature of your water heater **within six months** of the assessment?

Please rate on a scale of 0 to 10 where 10 means it is **extremely likely** that you would have lowered the temperature of your water heater and 0 means it is **not at all likely**. [0 to 10, DK, REF]

WHTS3. On the same 0 to 10 scale, if the energy advisor had not lowered the temperature of your water heater during the assessment, what is the likelihood you would have lowered the temperature of your water heater to **the exact same** temperature settings? [0 to 10, DK, REF]

[NO-PROGRAM SCORE = NP = MIN {WHTS2, WHTS3}; NP IS USED FOR CONSISTENCY CHECK.]

[IF WHTS1 = 1 AND NP < 7]

CCWHTS1. Please explain in your own words why you did not adjust the temperature of your water heater on your own without the program. [OPEN ENDED RESPONSE BOX]

[IF WHTS1 = 2 AND NP > 6]

CCWHTS2. Please explain in your own words why you were likely to adjust the temperature of your water heater on your own without the program, given that you had not adjusted the temperature of your water heater before receiving the assessment. [OPEN ENDED RESPONSE BOX]

[FREE RIDERSHIP (FR) = MIN {WHTS2, WHTS3} / 10

[Program Satisfaction]

PS1. On a scale of 0 to 10, where 10 is **extremely satisfied** and 0 is **not at all satisfied**, how would you rate your satisfaction with...? [SCALE 0-10; 96=Not Applicable, 98=Don't Know, 99=Refused]

- A. The energy efficient products installed through the program
- B. The amount of effort to participate in the program
- C. The helpfulness of the energySMART Assessment
- D. The professionalism of the energy advisor who performed the energy assessment
- E. The energySMART program overall

[ASK IF PS1 A, B, C, D, or E <4 or > 6]

PS2. Could you please explain the reason or reasons behind your rating(s)?

[OPEN ENDED RESPONSE BOX; 98=DK; 99=REF]

PS3. How could the energySMART program be improved?

[OPEN ENDED RESPONSE BOX; 98=DK; 99=REF]

PS4. Are there other efficiency improvement projects that you wish were included in this program? If so, what kind of projects?

[OPEN ENDED RESPONSE BOX; 98=DK; 99=REF]

PS5. What do you think would help more people participate in this program? [OPEN ENDED RESPONSE BOX; 98=DK; 99=REF]

PS6a. What other Nicor Gas programs have you participated in? [OPEN ENDED RESPONSE BOX; 98=DK; 99=REF]

PS6b. What do you think would help customers like you participate in more Nicor Gas programs? [OPEN ENDED RESPONSE BOX; 98=DK; 99=REF]

MI1. If you would like more information about other Nicor Gas energySMART programs and offerings or feel you would like to do more to improve the energy efficiency of your home, please enter your name and email address below, and a Nicor Gas representative will get back to you. Your survey responses will remain confidential and will be reported only anonymously.

[OPEN ENDED RESPONSE BOX]

- C. NAME
- D. EMAIL

FINAL1. Thank you for your time and feedback! We will mail you your \$25 gift card within six weeks, or, if you prefer, we can email you a \$25 electronic gift card within 3 weeks.

[OPEN ENDED RESPONSE BOX - UPDATE ADDRESS OR EMAIL AS NEEDED; 98=DK; 99=REF]

Would you prefer that we mail or email you your incentive?

Programming: please display options below:

Mail
Email

If Mail is chosen, please provide an option for customer to input their home address

If email is selected, please display email from sample file and we will ask "Can you confirm the email address we have on file if correct?"

Programming: Display options below

Yes
No

If Yes is selected, next screen will be INT99

If No Is selected, please add a screen for respondent to update email address.