To: Nicor Gas

CC: Elizabeth Horne, David Brightwell; ICC Staff
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From: Christopher Frye, Alexis Hamilton; Guidehouse

Date: September 27, 2023

Re: Nicor Gas Home Energy Savings Program (including Advanced Thermostat) 2022-2023 Free Ridership and Spillover Net-to-Gross Research Results – Final

1. Executive Summary

The Nicor Gas Home Energy Savings (HES) Program net-to-gross (NTG) research asked free ridership (FR) and spillover (SO) questions in two surveys. The free ridership survey was offered to recent participants of the Nicor Gas Energy Efficiency Program from the second half of PY2022 through the first quarter of PY2023, and the spillover survey was offered to participants from PY2021 and PY2022, allowing time for spillover to develop.

Free ridership research results include the following measures (some installed directly and some virtually): door sweep, hot water pipe insulation, weatherstripping, programmable thermostat, thermostat education, and advanced thermostat. Free ridership is deemed zero for faucet aerators and low-flow showerheads by the TRM. Rebated weatherization measures will be researched next season. Appendix A details the value to be used for measures that were not researched this season.

For both surveys, Guidehouse crafted questions following the algorithm prescribed in the TRM[1] and, for the free ridership survey, questions following an alternative algorithm that was described in Guidehouse's memo to the Illinois Stakeholder Advisory Group (SAG).[2] The surveys were fielded by Guidehouse.

The results will inform Guidehouse's September 2023 recommendations to SAG about NTG values to be used for this program in PY2024. Table 1 summarizes the FR and SO (participant) 2023 research findings. The spillover result applies to all program measures (except advanced thermostat[3]).

[1] Illinois Statewide Technical Reference Manual for Energy Efficiency Version 11.0.

[2] Guidehouse's memo, SAG Deviation Memo for Res FR 2023-05-10, describes the alternative protocols and the motivations for the deviations from the TRM.

[3] As described in Section 5.3.3 of Volume 4 of the TRM, consumption data analysis with matching to nonparticipants (which was used to estimate savings of residential advanced thermostat heating in the TRM) measures all changes in participant usage regardless of whether the changes are rebated by a program.

These results will inform Guidehouse's September 2023 recommendations to SAG of NTG values to be used for these measures in PY2024.

Table 1. Net-to-Gross Research Results for Nicor Gas HES 2023

Strata	Free Ridership	Participant Spillover	NTG Ratio
No Cost, Direct Install and Virtual Assessment	0.10*	0.17**	1.07
Advanced Thermostat	0.08***	-	0.96

Source: Evaluation team research

Note: Note: * Includes only door sweep, hot water pipe insulation, programmable thermostat, thermostat education, weatherstripping. ** Participant spillover applies to all measures in the program, excluding advanced thermostat. *** As noted in Section 5.3.16 of Volume 3 of the TRM, the savings estimate for residential advanced thermostat heating is based on a consumption data analysis with matching to nonparticipants and is therefore net with respect to participant spillover and between net and gross with respect to free ridership. Like all consumption data analyses, it is gross with respect to nonparticipant spillover. Thus, Guidehouse recommends NTG = 1 – FR/2 + NPSO for this measure. For more detail, see Section 5.2 in Volume 4 of the TRM.

2. Free Ridership and Spillover Survey Disposition

For CY2023, the Guidehouse evaluation team conducted web surveys with participants of the Nicor Gas Home Energy Savings (HES) program. The free ridership survey was shared with customers who participated from October 2022 through March 2023. The spillover survey was shared with participants from April 2021 through September 2022. Free ridership and spillover data were collected using a census approach with online surveys sent to participant email addresses. A $10 incentive gift card was offered to survey-confirmed respondents to complete the survey. Two reminder emails were sent to all FR and SO survey recipients to increase participation in the survey.

For free ridership, the target number of completes for Nicor Gas HES no cost direct install measures was 350 (approximately 5% of the estimated number of participants) and 63 for advanced thermostats. The target number of completes for the HES online spillover survey was 300 (approximately 5% of the estimated number of participants). Guidehouse created the samples for FR and SO from the list of HES participants who had viable email addresses and had participated within the respective timelines for free ridership and spillover.

For free ridership, the evaluation team distributed 1,672 personalized online surveys to Nicor Gas customers who had received any qualifying direct install measures during the specified time frame through Nicor Gas' Home Energy Savings (HES) program. Of those, 169 participants took the free ridership survey for no cost direct install measures, and 70 participants had purchased an advanced thermostat through the program and took the FR survey. Of the 169 no cost direct install respondents, 139 provided complete data for the FR analysis; among the 70 advanced thermostat respondents, 56 provided complete data for the FR analysis.

For spillover, the sample contained 4,675 participants; 658 took the survey, and 644 completed the survey. Table 2 reports survey representation for free ridership and spillover question batteries for the Nicor Gas Home Energy Savings program.

Table 2. Free Ridership and Spillover Decision Maker Survey Disposition

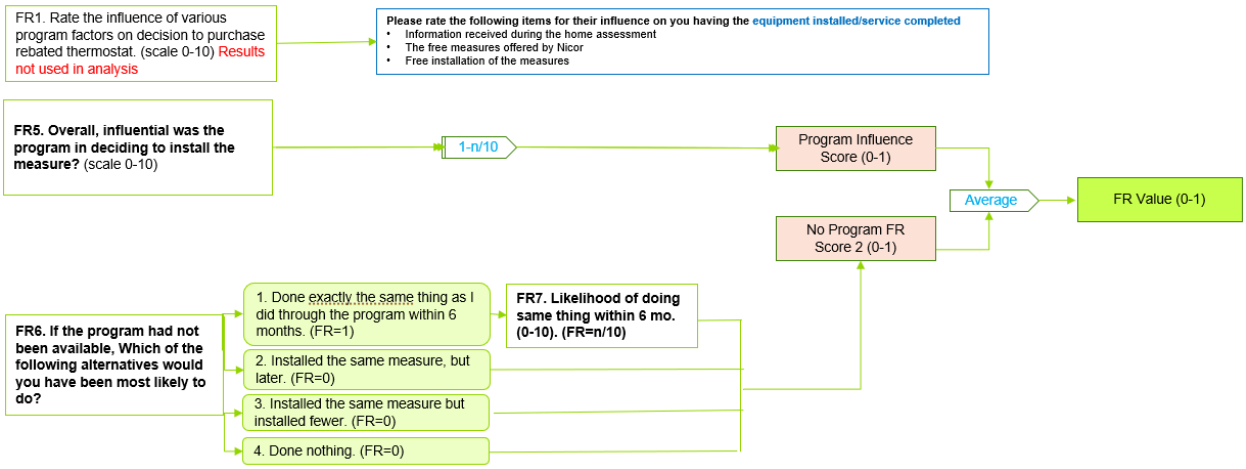
Online Survey Fielding	Population	Sample	Target Completes	Actual Completes	Analyzed Completes	Response Rate
No Cost, Direct Install and Virtual Assessment – Free Ridership*	~7,000	1,672	350	158	139	9%
– Spillover*	~6,000	4,675	300	658	644	14%
Advanced Thermostat		303	63	61	56	20%

Source: Evaluation team research
Note: * Both free ridership and spillover samples were a census attempt. Response rate based on actual completes relative to total sample.

3. Free Ridership and Spillover Protocols

For free ridership, the evaluation team applied a protocol that deviates from the TRM and is described in Guidehouse's May, 5, 2023 memo to SAG[4]. For No Cost, Direct Install measures, this algorithm is depicted in Figure 1, and for spillover, the evaluation team applied the relevant protocol from the Illinois TRM version 11, depicted in Figure 3. The alternative free ridership algorithm used for advanced thermostat is depicted in Figure 2.[5]

Figure 1. Alternative Residential Direct Install (Free Measures) Free Ridership Algorithm

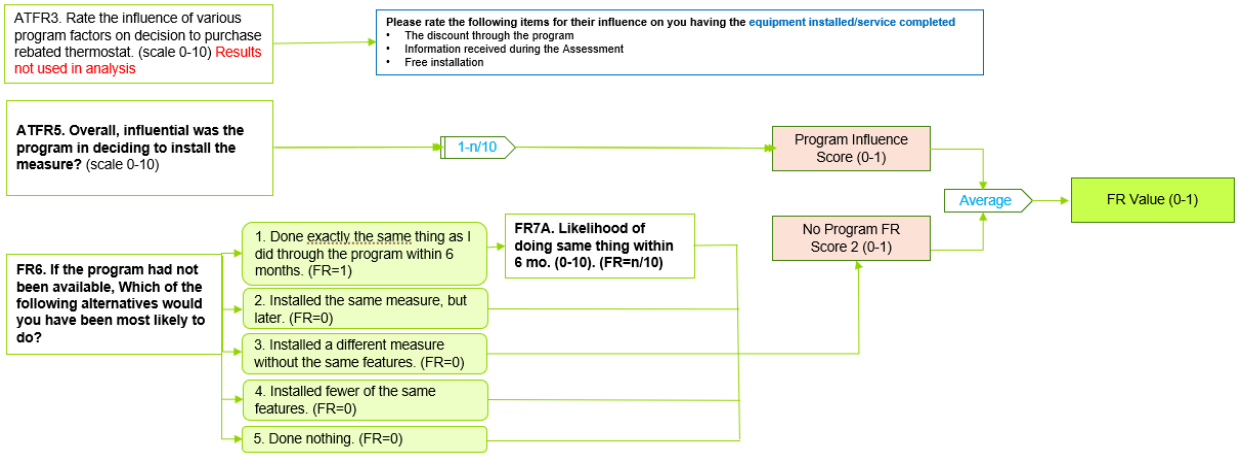


Source: SAG Deviation Memo for Res FR 2023-05-10

[4] SAG Deviation Memo for Res FR 2023-05-10.

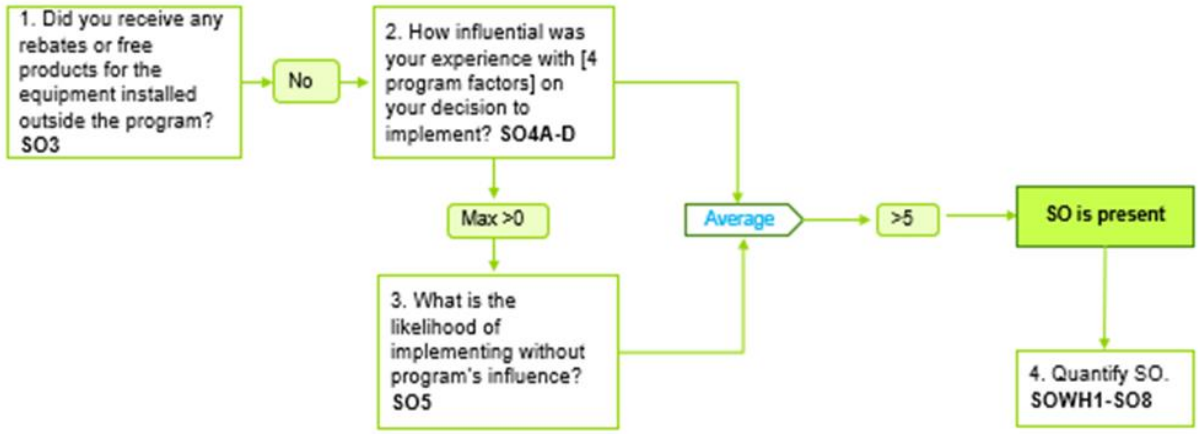
[5] Although the Nicor Gas Advanced Thermostat free ridership surveys included questions for both the TRM FR algorithm and the alternative FR algorithm, this NTG results memo presents the results of the alternative algorithm. See also SAG Deviation Memo for Res FR - Test Results 2023-09-08-002 which describes the way the evaluation team tested the TRM and alternative algorithms. The team found that the alternative protocol more frequently matched verbatim responses than did the established TRM protocol.

Figure 2. Alternative Advanced Thermostat Free Ridership Algorithm



Source: SAG Deviation Memo for Res FR 2023-05-10

Figure 3. TRM Residential Direct Install Spillover Algorithm



Source: 2022 Illinois TRM Version 11.0, Volume 4.

4. Detailed NTG Results

This section details the survey results including the results of the consistency check analysis of free ridership responses.

4.1 Free Ridership Consistency Check Analysis

In the process of performing the consistency check analysis, the evaluation team followed a specific protocol to review inconsistent responses.[6] When a respondent's Program Influence (PI) and (No Program) NP scores are inconsistent with each other, the evaluation flags the responses for a consistency check. Inconsistent PI and NP scores indicate either high program influence and high likelihood of purchasing a measure without a rebate, or low program influence and low likelihood of making the purchase without a rebate. Two evaluators

[6] 2022 Illinois TRM Version 11.0, Volume 4, Section 4.4.1.1.3.

independently review each flagged respondent's PI and NP score and compare these to their verbatim response to the following question for all measures, excluding Advanced Thermostat:

> *Overall, how influential was the Nicor Gas program – including receiving the free items, assessment of your home, and installation assistance -- in your decision to install the free <measure>?*

For Advanced Thermostat:

> *Please describe in your own words any impact that the [program] and $[discount amount] had on your decision to purchase the thermostat?*

The evaluator then determines whether the verbatim 1) reflects the PI and NP score and requires no adjustment to the FR value; 2) reflects only one of the two scores, requiring omitting the inconsistent score to calculate the FR; and 3) does not answer the question, indicating the respondent failed to address the question and removing the respondent from the analyzed sample.

Among the 139 completed surveys for no cost direct install measures, 28 required consistency checks; among the 56 completed surveys for advanced thermostats, eight required consistency checks. For each measure group, three responses were evaluated to provide insufficient information to resolve the consistency check. Thus. the free ridership analysis for no cost direct install measures is based on 136 responses, and the analysis for advanced thermostats is based on 53 responses. Table 3 provides a numerical breakdown of the free ridership surveys that triggered consistency check analysis and the resulting adjustments.

Table 3. Free Ridership Consistency Check Adjustments

Adjustment	No Cost, Direct Install and Virtual Assessment	Advanced Thermostat
Evaluated to require no Exclusion	0	1
Evaluated to Exclude NP Score	23	4
Evaluated to Exclude PI Score	2	0
Excluded after evaluation	3	3

Source: Evaluation team research

4.2 Free Ridership Component Scores

As detailed in Figure 1, FR was calculated based on averaging two component scores, the program influence (PI) score and the no program (NP) score, shown in Table 4.

Table 4. Free Ridership Component Scores

Strata	Average Program Influence Score	Average No Program Score	Free Ridership
No Cost, Direct Install and Virtual Assessment	0.12	0.10	0.10
Advanced Thermostat	0.08	0.07	0.08

Source: Evaluation team research

Note: Component scores for PI and NP exclude inconsistent responses.

4.3 Spillover Estimation

Excluding Advanced Thermostat, as outlined in the TRM, Guidehouse attributes a respondent's savings from non-rebated energy efficiency improvements to the Home Energy Savings Program if the following condition is met – the respondent's average of Attribution Score 1 and (10 minus Attribution Score 2) must exceed 5.0.

Of the 658 spillover survey respondents, 566 indicated that they received energy-savings products from Nicor Gas, with 414 indicating that participating in the Home Energy Savings Program influenced them to install additional energy efficient equipment. For 142 of the 414 spillover candidates, Guidehouse determined that the average of their two attribution scores was greater than 5.0 and that they installed equipment with gas savings that were quantifiable. The spillover improvements included water heaters, faucet aerators, showerheads, thermostats, water temperature setback, ENERGY Star dishwashers and clothes washers, gas boilers and weatherization measures like duct sealing and insulation, air sealing and wall/attic insulation.

Guidehouse cross-referenced HES program participation data and determined that 34 respondents stated at least one of the SO measures they purchased was the same measure(s) that were provided by the program. These measures included faucet aerators, showerheads, thermostats, door sweeps, and weatherstripping. For 14 of those 34, there was only one SO measure, and it was the same measure provided by the program. Guidehouse did not count the savings for measures which respondents received through the program towards the SO therm savings.

Table 5 outlines energy efficiency improvements that respondents made that were influenced but not rebated by the program and how the improvements contributed to total program spillover. The spillover rates were calculated by dividing the Therms spillover by the Home Energy Savings Program savings for the 658 respondents that completed the spillover survey.

Table 5. Spillover Research Results by Measure

Measure	Measures Contributing to Spillover	Spillover Therms	Spillover Rate for Therms
Water Heater	6	383	1.58%
Faucet Aerators	13	173	0.71%
Low Flow Showerheads	13	205	0.84%
Water Temperature Setback	67	234	0.97%
Domestic Hot Water Pipe Insulation	14	203	0.84%
Reduce Water Temperature for Clothes Washer and Dishwasher	49	149	0.61%
ENERGY Star Clothes Washer	14	108	0.45%
ENERGY Star Dishwasher	7	4	0.02%
High Efficiency Gas Furnace	4	705	2.91%
High Efficiency Gas Boiler	0	0	0.00%
Programmable/Smart Thermostat	11	798	3.29%
Furnace Tune-up	28	704	2.90%
Duct Sealing	20	53	0.22%
Duct Insulation	7	106	0.44%
Air Sealing	0	0	0.00%
Wall/Attic Insulation	10	60	0.25%
Weatherstripping	7	107	0.44%
Others	5	189	0.78%
Total	**275**	**4,182**	**17.25%**

Source: Guidehouse CY2022 Home Energy Savings Program Spillover Survey data, program tracking data, and Guidehouse team analysis, see .

Note: Totals may not sum due to rounding.

The quantity of measures does not equal the number of respondents because individual respondents may have completed multiple SO measures.

About 19% of the savings were achieved by the installation of Programmable/Smart Thermostats by 11 respondents,17% by the installation of High Efficiency Furnaces by 4 respondents, 17% by completing furnace tune-ups by 28 respondents, with the next highest at 9% from installing a new Water Heater by 6 respondents, and the remainder savings was achieved by the installation of the remaining measures.

4.4 Free Ridership and Spillover to Create Program Net-to-Gross Ratio

Table 6 details the free ridership calculated for no cost, direct install, and virtual assessment measures, and the program spillover rate. To calculate the Net-to-Gross ratio, the free ridership was subtracted from 1 and the resulting number was adding to the spillover rate, producing the NTG ratio (1 – FR + PSO = NTGR)[7].

[7] For advanced thermostat, NTG = 1 – FR/2 + NPSO (nonparticipant spillover).

Table 6. Free Ridership and Participant Spillover for Nicor Gas HES Program

Strata	Free Ridership	Participant Spillover	NTG Ratio
No Cost, Direct Install and Virtual Assessment	0.10*	0.17**	1.07
Advanced Thermostat	0.08***	-	0.96

Source: Evaluation team research

Note: * Includes only door sweep, hot water pipe insulation, programmable thermostat, thermostat education, weatherstripping. ** Participant spillover applies to all measures in the program, excluding advanced thermostat. *** As noted in Section 5.3.16 of Volume 3 of the TRM, the savings estimate for residential advanced thermostat heating is based on a consumption data analysis with matching to nonparticipants and is therefore net with respect to participant spillover and between net and gross with respect to free ridership. Like all consumption data analyses, it is gross with respect to nonparticipant spillover. Thus, Guidehouse recommends NTG = 1 – FR/2 + NPSO for this measure. For more detail, see Section 5.2 in Volume 4 of the TRM.

Confidence and Precision Analysis

The free ridership value for no cost, direct install, and virtual assessment measures, and for advanced thermostat, along with precision estimate, are shown in Table 7.

Table 7. Free Ridership and Relative Precision at 90% Confidence Level

Measure Installed	Free Ridership	Relative Precision (%)
No Cost, Direct Install and Virtual Assessment	0.10	2%
Advanced Thermostat	0.08	4%

Source: Evaluation team research

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Appendix A. *Nicor Home Energy Savings Program NTG History*

Table A-1. Nicor Gas Home Energy Savings Program NTG History

Nicor Gas Home Energy Savings Program	
GPY1	**Overall NTG** 0.86 **Overall Free ridership** 0.15 **Overall Spillover** 0.01 **Method:** Customer self-reports. 54 full-participant (direct install and weatherization measures) surveys completed from a population of 1,081 audits and 320 full-participants.
GPY2	**Overall NTG** 0.86 **Overall Free ridership** N/A **Overall Spillover** N/A **Method:** SAG deemed NTG ratio.
GPY3	**Overall NTG** 0.86 **Overall Free ridership** N/A **Overall Spillover** N/A **Method:** SAG deemed NTG ratio.
GPY4	**Overall NTG** 0.86 **Overall Free ridership** N/A **Overall Spillover** N/A **Method:** NTG values for GPY4 were deemed using values from GPY3 and reported in Table 14 of the Nicor Gas filed Energy Efficiency Plan for GPY4-GPY6.
GPY5	**Overall NTG** 1.05 **Overall Free ridership** 9% **Overall Spillover** 14% **Method:** Documented in the GPY2 Home Energy Savings evaluation report. Free ridership values from GPY1 full-participant research, and updated spillover values based on GPY2 full participant (n=104) and assessment-only participant surveys (n=68). The evaluation also used trade ally free ridership and spillover feedback that was combined with participant results.
GPY6	**Overall NTG** 1.05 **Overall Free ridership** 9% **Overall Spillover** 14% **Method:** No change to values from GPY5. Program NTG value of 1.05 may be used for a Deep (comprehensive energy efficiency) Home Energy Assessment retrofit pilot/program.

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2018 (GPY7)

All Measures Except Faucet Aerators:

NTG: 1.05 ; **Free Ridership:** 0.09 ; **Participant Spillover:** 0.14

Faucet Aerators:

NTG: 1.14 ; **Free Ridership:** 0.00 ; **Participant Spillover:** 0.14

Method: For measures except faucet aerators: No new research; retained GPY6 final value. As in GPY6, the program NTG value of 1.05 may be used for a Deep (comprehensive energy efficiency) Home Energy Assessment retrofit pilot/program. For faucet aerators: TRM version 6.0 specifies that the free ridership for faucet aerators be set at zero when estimating gross savings using the TRM specified baseline average water flow rate. Spillover value represents SAG Consensus for GPY6.

2019

Navigant provides measure-level NTG recommendations for CY2019 applying the findings of recent HES NTG research and TRM v7.0 specifications in the table below. 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.

Program Path	Measure	FR	PSO	NTG	FR 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	0.22	0.07	0.85	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 the table above 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

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data regression analysis with an experimental design that does not require NTG adjustment.

3. 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 alone. ICC Staff suggestion with SAG consensus was combining the Nicor Gas (12 responses) and PG & NSG (21 responses) survey question results for the re-programming t-stat value (combined 33 responses average FR=0.34), and then take an average of those results and the water heater temp setback results (FR = 0.09) (SAG consensus). Final FR=0.22

2020

Navigant provides measure-level NTG recommendations for CY2020 applying the findings of recent NTG research and TRM v8.0 specifications in the table below.

Program Path	Measure	FR	PSO	NTG	FR 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	0.22	0.07	0.85	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 adding Attic Insulation	NA	NA	NA	2
	Air Sealing without adding Attic Insulation	0.24	0.07	0.83	4
	Wall, Basement Sidewall, Floor Above Crawlspace, Rim/Band Joist	0.22	0.07	0.85	4
	Duct Sealing	0.14	0.07	0.93	4

Source: The participant spillover value of 0.07 is from the HES spillover survey Navigant conducted with 100 GPY6 participants that participated in the program between June 2016 and July 2017. The source and explanation for the measure-level free ridership values referenced in the table above are as follows:

Free Ridership Sources

1. Illinois TRM version 8.0 specifies that faucet aerators and showerheads should have free ridership set at zero when estimating gross savings using the Residential Section of the TRM specified baseline average water flow rate. Faucet aerators and showerheads may receive a spillover adjustment.
2. All scenarios of Air Sealing plus added Attic Insulation installed in the same project (whether or not additional measures are 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 8.0, Section 5.6.1 (Air Sealing)

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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. 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. Navigant research of free ridership from a telephone survey administered to ComEd EPY9/GPY6 and CY2018 Weatherization Rebates Program participants that were joint with PGL, NSG and Nicor Gas. Navigant conducted the net-to-gross (NTG) research in Fall 2018 with EPY9/GPY6 and CY2018 participants and in Spring 2019 with only CY2018 duct sealing participants. Analyzed completes: Attic Insulation (61), Air Sealing (68), Duct Sealing (79). Wall insulation FR is a weighted average value, applied to other insulation measures. Survey was fuel neutral and used TRM v7.0 protocols. Navigant recommended updating older gas research with these newer joint values, described in Navigant memo to ComEd July 19, 2019.
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 alone. ICC Staff suggestion with SAG consensus was combining the Nicor Gas (12 responses) and PG & NSG (21 responses) survey question results for the re-programming t-stat value (combined 33 responses average FR=0.34), and then take an average of those results and the water heater temp setback results (FR = 0.09) (SAG consensus). Final FR=0.22

2021, 2022

Guidehouse provides measure-level NTG recommendations for CY2021 applying the findings of recent NTG research and TRM v8.0 specifications in the table below.

Program Path	Measure	FR	PSO	NTG	FR 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	0.22	0.07	0.85	5
	Hot Water Pipe Insulation	0.08	0.07	0.99	3
	Water Heater Temp Setback	0.09	0.07	0.98	3
Weatherization	Air Sealing (A) plus adding Attic Insulation (B)	0.12 (A) 0.11 (B)	0	0.88 (A) 0.89 (B)	2
	Air Sealing without adding Attic Insulation	0.24	0.07	0.83	4
	Wall, Basement Sidewall, Floor Above Crawlspace, Rim/Band Joist	0.22	0.07	0.85	4
	Duct Sealing	0.14	0.07	0.93	4

Source: The participant spillover value of 0.07 is from the HES spillover survey Navigant conducted with 100 GPY6 participants that participated in the program between June 2016 and

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July 2017. The source and explanation for the measure-level free ridership values referenced in the table above are as follows:

Free Ridership Sources

1. The IL TRM specifies that the free ridership for showerheads and aerators be set at zero when estimating gross savings using a baseline average flow rate that includes the effect of existing low flow fixtures. Faucet aerators and showerheads may receive a spillover adjustment.
2. Applies only in scenarios where air sealing and attic insulation are installed at the same time, and only if the savings for natural gas heating are estimated using the Illinois TRM, 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 by Navigant (2018). The savings adjustment factor is based on a consumption data analysis using matching to non-participants. The values are therefore between net and gross with respect to free ridership. Like all consumption data analyses, they are net with respect to participant spillover and gross with respect to non-participant spillover. For more detail, see Table 5-3 in Volume 4 of the IL-TRM. Consistent with Section 7.2 of the Illinois EE Policy Manual, applicable net-to-gross adjustments to the savings will be determined as part of the annual SAG net-to-gross process. Considering the guidance of TRM Table 5.3, the evaluators recommend a NTG that is 1 minus 50% of the researched free ridership rate plus non-participant spillover.
3. 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. Navigant research of free ridership from a telephone survey administered to ComEd EPY9/GPY6 and CY2018 Weatherization Rebates Program participants that were joint with PGL, NSG and Nicor Gas. Navigant conducted the net-to-gross (NTG) research in Fall 2018 with EPY9/GPY6 and CY2018 participants and in Spring 2019 with only CY2018 duct sealing participants. Analyzed completes: Attic Insulation (61), Air Sealing (68), Duct Sealing (79). Wall insulation FR is a weighted average value, applied to other insulation measures. Survey was fuel neutral and used TRM v7.0 protocols. Navigant recommended updating older gas research with these newer joint values, described in Navigant memo to ComEd July 19, 2019.
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 alone. ICC Staff suggestion with SAG consensus was combining the Nicor Gas (12 responses) and PG & NSG (21 responses) survey question results for the re-programming t-stat value (combined 33 responses average FR=0.34), and then take an average of those results and the water heater temp setback results (FR = 0.09) (SAG consensus). Final FR=0.22

Leave-Behind Kit. NTG=0.99: Leave Behind Kits are a new offering of self-install measures. Evaluator recommendation is a free ridership of 0.08 for those measures, matching the findings for pipe insulation, and a program-level spillover value of 0.07.

Advanced thermostats. NTG=0.90: Evaluator recommendation for all non-income eligible programs.

Source: Nicor Gas Energy Efficiency Programs History of NTG Values for GPY1 through 2021 Updated to include NTG Values for 2022 September 30, 2021