



To: Nicor Gas, Elizabeth Horne, David Brightwell, ICC
CC: Laura Agapay-Read, Jeff Erickson, Guidehouse
From: Celina Aguilar, Guidehouse; Kumar Chittory, Verdant
Date: August 25, 2025
Re: Nicor Gas Custom Incentives NTG Survey Research Results

1. Executive Summary

This memo presents the results of the surveys conducted by Guidehouse, focusing on both free ridership (FR) and spillover (SO) for the 2024 Nicor Gas Custom Incentives program. Guidehouse designed the surveys in accordance with the Illinois Technical Resource Manual (TRM) version 13.0 (v13.0). The surveys were conducted from April 2025 to June 2025.

These results will inform Guidehouse’s September 2025 recommendations to the Illinois Stakeholder Advisory Group (SAG) SAG of net-to-gross (NTG) values to be used for this program in PY2026.

Guidehouse surveyed commercial customers who participated in the Nicor Gas Custom Incentive program between January 1, 2024, and December 31, 2024, for free ridership and those who participated between January 1, 2023, and December 31, 2023, for spillover¹. Table 1 summarizes the Custom Incentives program FR and SO research findings.

Table 1. Net-to-Gross Research Results for Custom Incentives Program

Program Name	Participant Free Ridership	Participant Spillover	NTG Ratio
Custom Incentives	0.37	0.00	0.63

Source: Evaluation Team Analysis

Among participants, free ridership is driven by a combination of high Program Influence scores and varying No-Program (counterfactual) scores across respondents. None of the four respondents who completed a spillover survey reported undertaking high-efficiency improvements with Measure Attribution scores that met the threshold for spillover.

Guidehouse conducted NTG studies for this program in previous portfolio cycles, with proposed NTG values ranging from 0.53 to 0.84. APPENDIX A lists more information on the NTG history of the program.

¹ All participant samples excluded participants in disadvantaged communities as savings for those participants have deemed NTG values as described in the Energy Efficiency Policy Manual Section 7.4.

2. Survey Disposition

Table 2 below summarizes completed interviews and the corresponding representation of program savings across participant free ridership and participant spillover.

Table 2. Participant Survey Disposition

	Population	Sample	Target Completes	Analyzed Completes	Share of Program Savings Represented by Analyzed Completes
Participant Free Ridership	111	61*	22	11	31%
Participant Spillover	63	63	23	4	NA

* The sample design for the participant free ridership survey excluded the smallest projects, those with savings less than 15,000 therms, as their savings-weighted result would have had negligible impact on the program free ridership; others in the population had opted out of emails or had email addresses that bounced back our outreach emails.

Source: Evaluation Team Analysis

2.1 Participant Free Ridership and Spillover Surveys

For participant surveys, the evaluation team conducted a combination of telephone interviews and web surveys with key decision-makers. To enhance recruitment, the evaluation team requested Nicor Gas to send follow-up emails to customers with projects with higher savings. Following this outreach, the evaluation team contacted participants to schedule interviews and offered a web survey option. The evaluation team was able to complete 11 participant surveys that represented 31% of the total population savings. For the spillover analysis, four online surveys were completed.

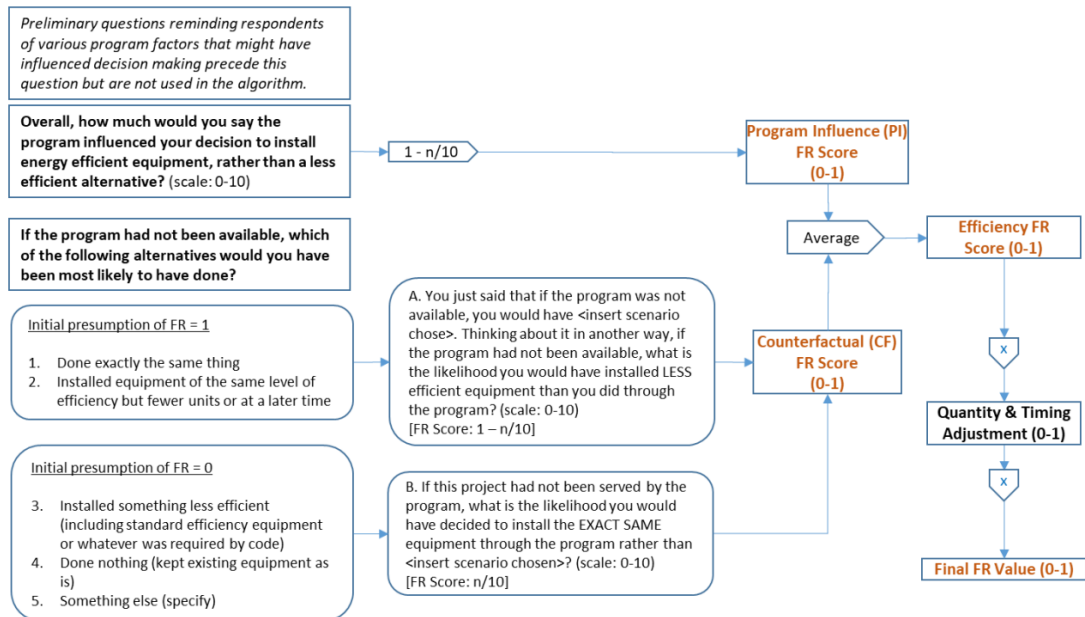
3. Free Ridership and Spillover Protocols

The evaluation team applied the relevant free ridership and spillover protocols from Illinois TRM v13.0 as described below.

3.1 Participant Free Ridership

The evaluation team applied the Core Non-Residential algorithm to calculate participant free ridership, as shown in Figure 1. The diagram is sourced directly from the Illinois TRM v13.0.

Figure 1. Core Non-Residential Participant Free Ridership Protocol



Source: 2025 Illinois TRM v13.0, Volume 4 (page 45). 2025 Illinois TRM

The Quantity and Timing adjustment shown in the NTG algorithm above is calculated using the equations from Illinois TRM v13.0 (page 1656 of Compiled version).

$$3\text{-year Time Horizon Timing Adjustment} = 1 - (\text{Number of Months Expedited} - 6) / 30$$

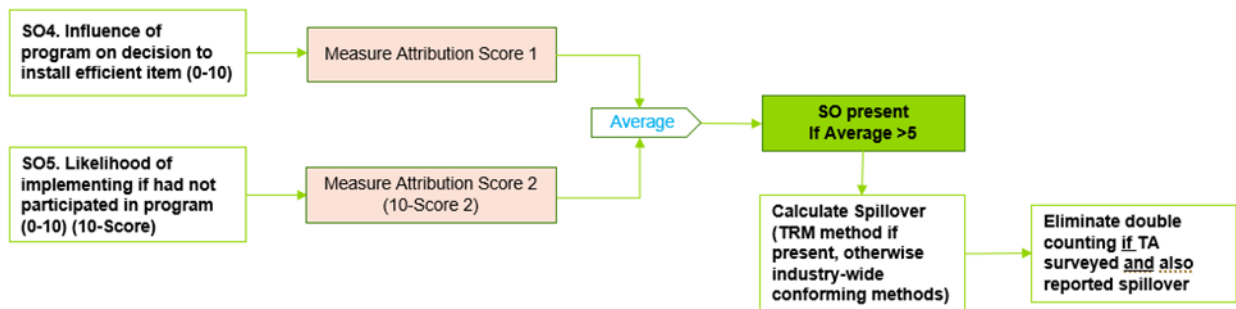
$$Q\&T \text{ Adjustment} = (\% \text{ Not Installed at Same Time} * \text{Timing Adjustment}) + \% \text{ Installed at Same Time}$$

Source: [IL-TRM-Version-13.0-Volumes-1-4-Compiled-Final.pdf](#)

3.2 Participant Spillover

The evaluation team applied the Core Non-Residential protocol for calculating participant spillover based on the Illinois TRM v13.0 Attachment A section 3.1.2. Figure 2 depicts the general technique for determining the presence of spillover and methods for its calculation.

Figure 2. Core Non-Residential Participant Spillover Protocol



Source: Guidehouse designed this depiction of the algorithm based on the content from the 2025 Illinois TRM Version 13.0, Volume 4, Attachment A, Sections 3.1.2 and 3.1.3, from pages 49-52 and pages 52-56 respectively.

4. Participant Free Ridership Results

The evaluation team calculated FR estimates for the Custom Incentives Program participants using the data collected via the participant surveys and applied the protocols described above. Table 3 below presents the FR estimate and relative precision of the estimate for participants.

Table 3. Survey Disposition

Population	Free Ridership	Relative Precision* @ 90% CI
Participant	0.37	0.18

* The analysis estimates relative precision at the 90 percent confidence level by calculating the standard error of the NTGR mean and adjusting for the total population size."

Source: Evaluation team analysis

4.1 Free Ridership Consistency Check Analysis

The evaluation team checked for consistency in participant responses. Respondents were asked to describe in their own words any influence that the Nicor Gas Custom Incentives Program had on their decision to implement measures at their facilities.

According to the IL TRM v13.0, Volume 4, Section 3.1.1.1, a consistency check is triggered when either of the following conditions is met:

- 1) The Program Influence FR Score is greater than 0.7 AND the Counterfactual FR Score is less than 0.3.

OR

- 2) The Program Influence FR Score is less than 0.3 AND the Counterfactual FR Score is greater than 0.7.

Out of the 11 participant surveys, six respondents triggered consistency checks. As a result, the evaluation team conducted further quality reviews of the Program Influence scores, Counterfactual Scores, and open-ended responses. In five of the six cases, the evaluation team determined that no changes to the original scores were indicated after reviewing the data and open-ended responses. For the sixth case, the evaluation team followed up with the participant to gather additional information. In that follow-up, the participant confirmed their original responses, thus no update to the original responses was necessary or made.

4.2 Participant Spillover Results

Four participants reported potential spillover, but none of the respondents who completed a spillover survey reported undertaking high-efficiency improvements that would qualify as spillover. Therefore, there is no spillover for this program.

5. Final NTG Results and Recommendations

The final NTG value is calculated as 1 – free ridership + spillover, using savings-weighted FR values from participants and the formula below. While four participants reported potential spillover, none of

them qualified for spillover. As such, participant spillover is considered zero for the 2024 Custom Incentives program.

$$NTG = 1 - \text{Participant Free Ridership} + \text{Participant Spillover}$$

The final, combined components of the NTG are shown in Table 4. Guidehouse conducted NTG studies for this program in previous portfolio cycles, with researched NTG values ranging from 0.53 to 0.84.

Table 4. Free Ridership and Participant Spillover for Custom Incentives Program

Measure	Free Ridership	Participant Spillover	NTG
All Measures	0.37	0.00	0.63

Source: Evaluation team analysis

APPENDIX A. Custom Incentives Program NTG History

	Custom Incentives Program
GPY1	<p>NTG: 0.53 Free ridership: 47% Spillover: 0% Method: Customer self-report: 11 surveys completed from a population of 28. Standard Rigor approach. Trade allies called for 3 participants and their responses factored into the customer free ridership calculation.</p>
GPY2	<p>NTG: 0.72 Free ridership: 28% Spillover: 0% Method: Evaluation research consisting of GPY2 participating customer self-reports. Free ridership of 28% and participant spillover of 0% from 16 participating customer NTG interviews completed from a population of 73 projects. Standard Rigor approach.</p>
GPY3	<p>NTG: 0.73 Free ridership: 27% Spillover: 0% Method: Evaluation research consisting of 7 participating GPY3 customer self-reports, with the program level estimate based on combining samples and populations from GPY2 and GPY3. Standard Rigor approach.</p>
GPY4	<p>NTG: 0.53 Free ridership: 47% Spillover: 0% Method: NTG values for GPY4 were deemed using values from GPY1 and reported in Table 14 of the Nicor Gas filed Energy Efficiency Plan for GPY4-GPY6.</p>
GPY5	<p>NTG: 0.73 Free ridership: 27% Spillover: 0% Method: Values from GPY3 evaluation research.</p>
GPY6	<p>NTG: 0.73 Free ridership: 27% Spillover: 0% Method: Values from GPY3 evaluation research.</p>
2018	<p>NTG: 0.79 Free ridership: 0.21 Spillover: 0.00 Non-Participant Spillover: 0.00 Method: Participant free ridership and participant spillover are from GPY5 survey research that produced a free ridership of 0.21 based on 14 interviews (90/12) and no spillover, applying TRM v6.0 NTG methodologies. Interviews with 8 trade allies did not find evidence of PSO or NPSO. The GPY5 research applied the TRM v6.0 NTG algorithms.</p>

	Custom Incentives Program
2019	<p>NTG: 0.79 Free ridership: 0.21 Spillover: 0.00 Method: No new research. FR based on responses from GPY5 participants, TRM v6 PSO based on responses from GPY5 participants, TRM v6. NPSO: Eight GPY5 trade ally interviews found no PSO or NPSO.</p>
2020	<p>NTG: 0.79 Free ridership: 0.21 Spillover: 0.00 Method: No new research. FR based on responses from GPY5 participants, TRM v6 PSO based on responses from GPY5 participants, TRM v6. NPSO: Eight GPY5 trade ally interviews found no PSO or NPSO.</p>
2021	<p>NTG: 0.79 Free ridership: 0.21 Spillover: 0.00 Method: No new research. FR based on responses from GPY5 participants, TRM v6 PSO based on responses from GPY5 participants, TRM v6. NPSO: Eight GPY5 trade ally interviews found no PSO or NPSO.</p>
2022-2025	<p>NTG: 0.84 Free ridership: 0.20 Spillover: 0.04 Non-Participant Spillover: 0.00 Method: FR based on 2021 research: 11 completed survey responses of 2020 participants from population of 41 unique participant contacts, accounting for 53% of program savings. Spillover based on responses from one of 14 participants that responded to SO questions (values determined from customer follow-up). No PSO or NPSO found from eight GPY5 Trade Ally interviews.</p>

Source : <https://www.ilsag.info/policy/net-to-gross-framework/>