



**To:** Peoples Gas and North Shore Gas

**From:** Cherlyn Seruto, Jan Harris, Guidehouse

**CC:** Kevin Grabner, Stu Slote, Laura Agapay-Read, Guidehouse  
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**Date:** August 27, 2021

**Re:** Peoples Gas and North Shore Gas 2019-2020 Gas Optimization Participant Net-to-Gross Survey Results

## Executive Summary

This memo summarizes findings from primary net-to-gross (NTG) research undertaken by Guidehouse on the Gas Optimization Program delivered by Peoples Gas (PGL) and North Shore Gas (NSG) and using the Illinois TRM version 9.0 methodologies. This research is based on an on-line and telephone survey fielded in June of 2021 with program participants from 2019 and 2020. The survey focused on determining free ridership (FR) and spillover (SO) components of NTG.

Table 1 provides a summary of the Gas Optimization Program free ridership and spillover research findings.

**Table 1. Net-to-Gross Research Results for Gas Optimization Program**

Participant Free Ridership	Participant Spillover	Relative Precision @90% CI
0.06	0.00	4%

*Source: Guidehouse primary NTG research and analysis with 2019 and 2020 Gas Optimization Program participants.*

These results will inform Guidehouse's September 2021 recommendations to SAG of NTG values to be used for this program in 2022.

## Research Methodology

Guidehouse conducted this research through a participant self-report telephone survey, with a census of program participants from 2019 and 2020 with energy savings claimed. There were 15 unique contact persons representing 11 accounts because some participating accounts had multiple sites with separate contacts. Verbal responses to open ended queries during interviews support free ridership and spillover values found through analysis of quantitative responses.

**Table 2. NTG Decision Maker Research Representation**

Participant Representation	Population	Sample	Completes	Share of 2019-2020 Program Savings Represented by Analyzed Completes
Contact Names	15	Census	5	79%
Account Names	11	Census	4	

Source: Guidehouse research and analysis.

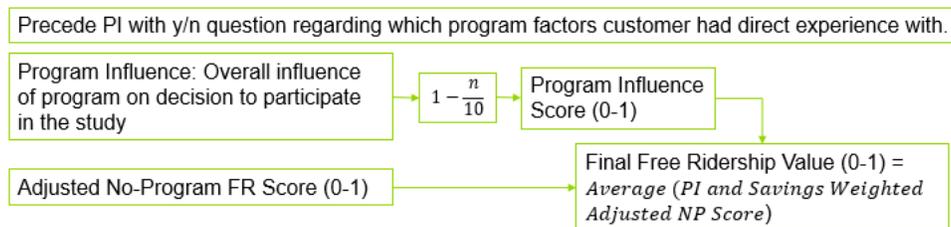
## Free Ridership and Spillover Protocols

The evaluation team applied the Study-Based free ridership protocol algorithm recently developed from the Illinois TRM by the Stakeholder Advisory Group (SAG) NTG Working Group, which is based on TRM v9.0 Study-Based Free Ridership Score Option #2, with updates based on SAG NTG Working Group consensus in 2020. Spillover research followed TRM v9.0 section 3.2.1 “Core Participant Spillover Protocol”.

### Participant Free Ridership Estimation

The following diagrams describe the SAG NTG Working Group algorithm that Guidehouse used to calculate the free ridership for the Gas Optimization Program.

**Figure 1. Gas Optimization Free Ridership – Overview**



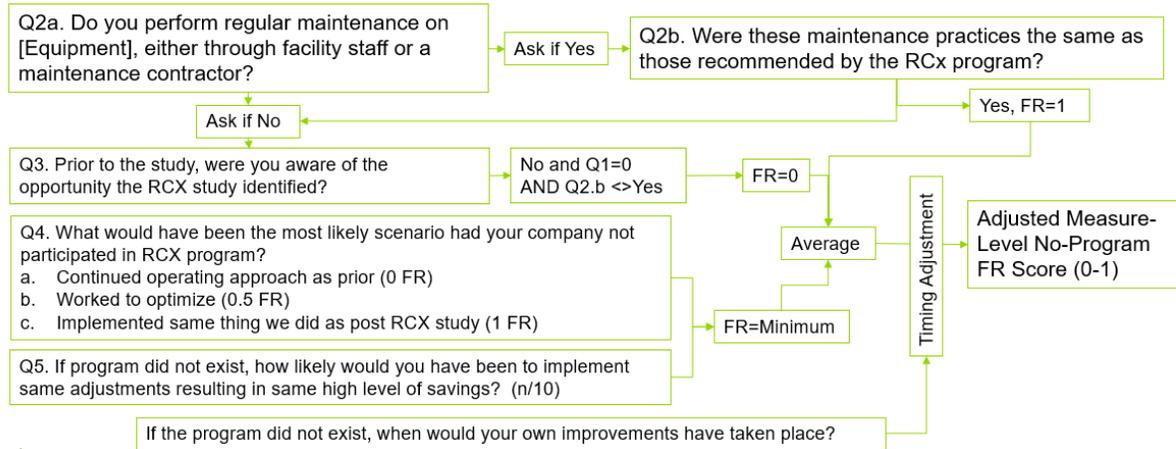
Source: Guidehouse adjustment of TRM v9.0 Study-Based Free Ridership Score Overview (TRM V9 Figure 3.4, page 59), with updates based on Illinois SAG NTG Working Group consensus in 2020.

### Figure 2. Gas Optimization Program Free Ridership – Measure Level No-Program FR Score

Adjusted No-Program FR Score:

Q1. If the program had not been available, what is the likelihood that you would have conducted the study on your own?

For each measure group:



Source: Guidehouse adjustment of TRM v9.0 Study-Based Free Ridership Score Option #2 (TRM v9 figure 3.5, page 60), with question wording updates based on Illinois SAG NTG Working Group consensus in 2020

The TRM protocol requires the free ridership analysis to include an average of a Program Influence (PI) Score and an Adjusted No-Program (NP) free ridership score. This adjustment is determined by querying the decision maker about 1) the likelihood of conducting the study on their own had the program not been available and 2) how they addressed various implemented measures or actions prior to participating in the program. Results of our free ridership calculations using these sub-components (prior to savings weighting) are shown in Table 3.

**Table 3. Average Free Ridership Sub-component Results (unweighted)**

Average PI Score	Adjusted NP Score
0.02	0.30

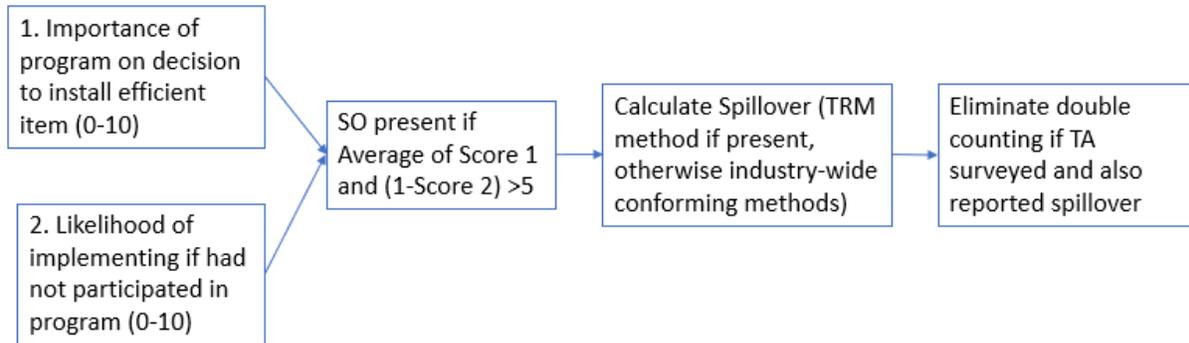
Source: Guidehouse research and analysis.

Two respondents had a PI score of zero, and an Adjusted NP score that indicated a non-zero free ridership value. Upon reviewing the open-ended responses to two questions: “Why did you decide to optimize this facility” and “What were the main factors that kept you from performing a Gas Optimization study before this project”, we determined the PI score was more representative of their free-ridership level and dropped the adjusted NP score for these two respondents. Each indicated in their open ended response that they decided to optimize the facility due to the program influence, and that the program was the reason they performed the study in the first place. For the remaining three respondents, their open-ended comments did not conflict with their resulting PI and Adjusted NP scores therefore the evaluation team made no manual adjustments to their participant level FR score.

## Participant Spillover Estimation

Guidehouse calculated spillover based on TRM v9.0 Section 3.2.1, Core Non-Residential Participant Spillover Protocol, using the method summarized in Figure 3 below.

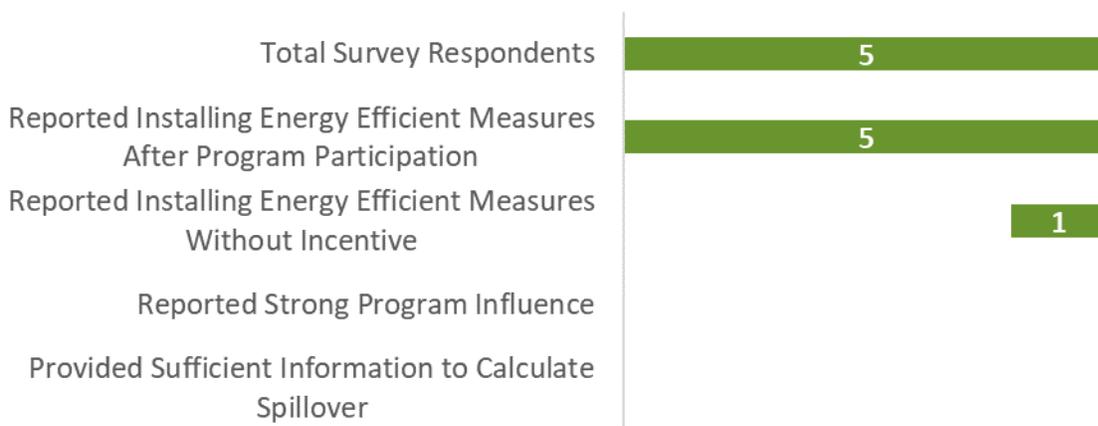
**Figure 3. TRM v9.0 Section 3.2.1 Core Non-Residential Participant Spillover Protocol**



Source: Guidehouse Representation of TRM v9.0 Core Non-Residential Participant Spillover Protocol

Of the five survey respondents, all five stated they completed energy efficiency upgrades past their program participation event, however only one of the five stated they did so without a rebate. This one potential spillover respondent did not pass the program influence criteria per the TRM, therefore there is no quantifiable spillover for the program during this research cycle. The flow of responses through the spillover criteria is shown in Figure 4 below.

**Figure 4 Spillover Qualification Diagram**



Source: Guidehouse primary NTG research and analysis with 2019 and 2020 Gas Optimization Program participants.

## Final NTG Results and Recommendations

Table 4 summarizes Guidehouse's recommendations for the Gas Optimization program NTG.

**Table 4. Summary of NTG Research Results for the Gas Optimization Program**

Free Ridership	Participant Spillover	Net to Gross
0.06	0.00	0.94

*Source: Guidehouse primary NTG research and analysis with 2019 and 2020 Gas Optimization Program participants.*

The current deemed NTG for 2021 is 0.91, based on a survey of 7 participants from GPY6 (2016-2017).