

Home Energy Rebate Program GPY4-GPY6 Evaluation Plan

Introduction

The primary objectives of the evaluation of the Home Energy Rebate Program (HER) are to: (1) determine gross and net program savings and (2) examine the effectiveness of program processes in achieving savings.

In GPY4, the HER program offers rebates for attic insulation and energy efficient HVAC and water heating equipment for Peoples Gas and North Shore Gas customers. Beginning in January of GPY4, the HER program added air and duct sealing to the weatherization rebate offerings. In GPY5, the program will increase the emphasis the weatherization measures, including working collaboratively with Illinois Home Performance and Building Performance Institute contractors to promote weatherization rebates.

Evaluation Research Topics

The evaluation team has identified the following key topics for evaluation research:

Impact Evaluation:

1. What is the program's verified gross savings?
2. What is the program's verified net savings?
3. What is the researched value for Net-to-Gross (NTG) ratio?
4. What updates are recommended for the Illinois Technical Reference Manual (TRM)?

Process Evaluation and Other Research Topics:

1. How did customers become aware of the program? What marketing strategies could boost program awareness? Are customers satisfied with the program?
2. What role did trade allies play in recruiting and enrolling residential applicants and how can this be improved? Are trade allies satisfied with the program?
3. What opportunities exist for program improvement?

Evaluation Approach

The GPY4-PY6 evaluations will include an annual "engineering desk review" of the program tracking database to determine the program's verified gross savings and then applying previously approved net-to-gross values to determine verified net savings. The GPY5 evaluation will conduct real-time participant surveys to estimate free-ridership values, including the weatherization measures that were not included in previous surveys. The GPY6 evaluation will consist of end-of-year participant and trade ally telephone surveys intended to inform a process evaluation of the revised program activities. These surveys may also include spillover analysis questions.

Data Collection, Methods, and Sample Sizes

Table 1 below summarizes data collection methods, data sources, timing, and targeted sample sizes that will be used to answer the evaluation research questions.

Table 1. Core Data Collection Activities

What	Who	Target Completes	When	Comments
In Depth Interviews	Program Management	1-2	March 2015-2017	Interview program staff and IC staff
Paper and Web Surveys	Participating Customers	120 +	July 2015 – June 2016	FR, Process
Telephone Interviews	Participating Trade Allies	25	September-October 2017	Process
Telephone Survey	Participating Customers	75	September-October 2017	SO, Process

Gross Impact Evaluation

The gross impact evaluation’s foundation in each year will be a review of program tracking data that substantiates the type and quantity of measures installed. Navigant will perform independent verification of the program tracking database and determine the level of input completeness, outliers, missing values, and potentially missing variables. If necessary, the Navigant team will include recommendations for additional fields to be added to the tracking system for use in the impact evaluation effort as well as program process monitoring.

For measures covered by the TRM, verified gross savings are calculated for each participant using appropriate TRM algorithms and customer-specific data collected in the tracking system, or, (where required by the TRM or for measures not yet in the TRM, supplemented by additional research), and then summed across participants to calculate program totals. To be eligible, a TRM measure must meet the physical, operational, and baseline characteristics as defined in the applicable version of the Illinois TRM. Verification that measures were installed and that savings calculations applied the TRM appropriately may involve participant telephone interviews or engineering review of project files for a sample of participants.

Net Impact Evaluation

The GPY4/5 net impact evaluation will apply the Net-to-Gross (NTG) ratio accepted by Illinois Stakeholders Advisory Group (SAG) consensus to estimate the verified net savings for the PGL/NSG HER Program. The deemed NTG values are provided in Table 2.

Table 2. PGL/NSG Deemed NTG Values for GPY4 & GPY5

Program Path/Measure	Utility	GPY4 Deemed NTG Value	GPY5 Deemed NTG Value
All Measures	PGL	0.82	0.81
All Measures	NSG	0.80	0.81

Source: PGL-NSG Final GPY5 Consensus NTG Values 2015-03-01.xlsx

NTG Research Approach

There will be no NTG research conducted in GPY4. The evaluation will conduct NTG research in GPY5 (free-ridership) and GPY6 (spillover) to inform NTG recommendations for the future.

The NTG analysis will use the data collected from the participant paper and on-line surveys. This survey is intended to collect “real-time” free-ridership values. Spillover information will not be collected at this time, because it is unlikely that participants would have had time to purchase and install any additional measures. Spillover information may be collected during GPY6 participant end-of-year telephone surveys if a value is not set through secondary research. All program participants will receive information about participating in the real-time surveys.

Process Evaluation

Because there were no major changes to the program structures between GPY3 and GPY4 for equipment rebates, and weatherization was expanded mid-PY4, Navigant will not repeat the process evaluation activities conducted for previous years. The majority of the process evaluation will be conducted during the GPY6 evaluation, because of the changes the program will be undergoing in GPY4 and GPY5. The process analysis will include a synthesis of both qualitative and quantitative data collected during the program implementer interview, participant surveys, and trade ally surveys.

Evaluation Schedule

Table 3 below provides the schedule for the GPY4 evaluation of the HER program. Adjustments will be made as needed as program year evaluation activities begin.

Table 3. GPY4 Evaluation Schedule

Activity/Deliverables	Plan Start	Completion/Delivery
Draft Evaluation Plan to PGL/NSG	April 1, 2015	May 22, 2015
Final Evaluation Plan to PGL/NSG		
Sampling Data Available	May 1, 2015	May 31, 2015
Final Data Delivery	June 1, 2015	July 1, 2015
PY5 Participant Survey In-Field	July 1, 2015	June 1, 2016
Internal Report for Review (Gross Impact)	October 1, 2015	October 15, 2015
Draft Report to PGL/NSG and SAG	October 16, 2015	October 30, 2015
Draft Comments in 10 Business Days	November 2, 2015	November 13, 2015
Final Report to PGL/NSG and SAG	November 16, 2015	November 30, 2015

Three Year Evaluation Plan

We have prepared a three year evaluation plan summary to identify tasks (Table 4) and allocate budgets by year on a preliminary basis. Final activities and allocations will be determined annually as program circumstances are better known. Program Year (PY) refers to the year of participation that will be researched, not the time that the research will occur.

Table 4. Three Year Evaluation Plan Summary for <Program/Path>

Activity	GPY4	GPY5	GPY6
Gross Impact Approach	Engineering File Review	Engineering File Review	Engineering File Review
Gross Sampling Frequency	One Time	One Time	One Time
Net Impact Approach	Deemed Value	Deemed Value	Deemed Value
NTG Research Approach	None	Participant Survey, Real Time	None
NTG Research Timing	None	Real Time, GPY5 Participants	None
Program Manager and Implementer Interviews/ Review Materials	Yes	Yes	Yes
Decision Maker Survey	None	FR	SO, Process
Trade Ally Survey	None	None	Process