

Peoples Gas & North Shore Gas Business Program (Custom Incentives) GPY4 –GPY6 Evaluation Plan

Introduction

The Second Triennial Plan¹ of the Peoples Gas (PGL) and North Shore Gas (NSG) comprehensive Business Program bundles existing programs into paths, and allows all eligible customers to access any of the five paths² as a one-stop-shop based on the customer’s needs. This evaluation plan covers the Gas Program Year 4-6 (GPY4-GPY6) evaluation activities for measures installed and gas savings realized through the Custom Incentives path. The custom applications include any application not covered under the Standard Incentives path. For example, air sealing measures may fall into the Custom Incentive category. PGL/NSG can fund Retro-Commissioning projects on a negotiated \$/therm saved basis as well as C&I New Construction projects under the Custom Incentives path.³ For evaluation planning purpose, the Custom Incentives path together with other non-Standard implemented projects are referred to as the “C&I Custom Program”.

The Custom Incentives path provides incentives on a custom basis. Custom incentives are based on the lesser of a buy down to a 1 year payback, \$1.60 per therm saved during the first year, or the full incremental cost. PGL/NSG may revise eligible measures and incentives as driven by current market conditions, changes to codes and standards, technology, evaluation results, and program management knowledge. Typical market sectors for this program include larger customers in light and heavy manufacturing, steel and metal working, plastics compounding and processing, hospitals, food processing, hotels, commercial laundry and other process heating intensive businesses. The program is implemented by Franklin Energy Services (FES) with trade ally engagement and technical support for program delivery and marketing.

The GPY4 evaluation of the C&I Custom Program will continue gross impact, net impact and process evaluation activities that were conducted from GPY1 through GPY3, with adjustments to reflect any changes to program elements in GPY4 since the beginning of Plan 2 cycle, and the introduction of Business Program into paths. The GPY4 verified net impact evaluation approach will apply the Net-to-Gross (NTG) ratio approved through Illinois Stakeholder Advisory Group (SAG) consensus. In GPY4, the evaluation team will conduct NTG research through interviews with program participant customers and trade allies to determine free ridership and spillover to inform NTG recommendations for GPY6 and beyond. The NTG survey will include additional process questions to elicit feedback on participants’ satisfaction and suggestions for program improvement.

Evaluation Research Topics

The key evaluation objectives for the C&I Custom Program for GPY4 are to: (1) quantify gross and net savings impacts from the program, and (2) to determine key process-related program strengths and weaknesses and identify ways in which the program can be improved.

¹ Peoples Gas/North Shore Gas Energy Efficiency Plan for the Second Triennial Plan period of June 1, 2014 – May 31, 2017 (known as —Plan 2)

² The comprehensive business program paths include – Direct Install, Engineering Assistance, Standard Incentives, Custom Incentives, and Gas Optimization.

³ Second Triennial EEP Compliance Filing.pdf

The evaluation team has identified the following key topics for evaluation research in GPY4:

Impact Evaluation:

1. What are the program’s verified gross savings, using field measurement and verification (M&V) and engineering research to estimate savings?
2. What are the program’s verified net savings?
3. What is the researched value for Net-to-Gross (NTG) ratio?
4. What are the results and findings from field data collection?

Process Evaluation and Other Research Topics:

The following research questions will be investigated during GPY4 surveys to determine the key process strengths and weaknesses.

1. Has the program been successful in recruiting additional participants? In what ways can the program increase customer participation? Are customers satisfied with the program?
2. How can the program outreach and marketing strategies be improved to increase program participation from the middle sized market or customers (60K to 500K therms)?
3. Are trade allies satisfied with the program? In what ways can the program increase trade ally participation? How can training opportunities (e.g. Focus group discussion) be better to increase trade ally participation?

Evaluation Approach

Data Collection, Methods, and Sample Sizes

Table 1 below summarizes data collection methods, data sources, and timing to answer the evaluation research questions.

Table 1. Core Data Collection Activities

What	Who	Target Completes	When	Comments
In Depth Interviews	Program Management	2-3	March 2015-2017	Interview program staff and IC staff
On-site M&V Audit	Participating Customers	10	May – Aug 2015	Gross savings verification research
Engineering File Review	Participating Customers	10	Mar – July 2015	Review sample of projects files with custom inputs
Telephone Survey	Participating Customers	<=40	May – Aug 2015	FR, SO, Process
Telephone Survey	Influential Trade Allies Triggered by Customer Responses	2-10	May – Aug 2015	Net, Process
Telephone Survey	Trade Ally	<=20	May – Aug 2015	SO and Process

Gross Impact Evaluation

The GPY4 gross savings impacts approach will involve engineering review of project documentation at the measure-level for a sample of projects to verify participation and tracking system entries, check documentation of invoiced quantities and installed measure characteristics, and confirm compliance with eligibility. We will conduct on-site M&V of measure-level savings on a subset of 10 projects sites selected from the GPY4 population of completed projects to estimate site-specific savings, in addition to engineering desk review of 10 projects files. The sample of 20 on-sites and file reviews drawn is expected to achieve a 90/10 confidence level and relative precision at the program level.

On-site measurement and verification will include participant interviews, baseline assessment, installed equipment verification, and performance measurement. Measurement may include spot measurements, run-time hour data logging, and review of participant energy management system trend data. The engineering analysis methods and degree of monitoring will vary from project to project, depending on the complexity of the measures, the size of the associated savings, the potential to revise input assumptions, and the availability and reliability of existing data. The evaluators will contact the implementers prior to conducting site visits to ensure that the evaluation team has all correct and relevant information.

An analysis plan will be developed for each project selected for on-site data collection. Each plan will explain the general gross impact approach used (including monitoring plans), provide an analysis of the current inputs (based on the application and other available sources at that time), and identify sources that will be used to verify data or obtain newly identified inputs for the ex post gross impact approach. The measure-level verified gross realization rates will be extrapolated to the program population using a ratio estimation method to yield ex post evaluation-adjusted gross energy savings.

Net Impact Evaluation

The GPY4 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 GPY4 Business Program. The deemed NTG value by program path is 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
Custom Incentives	PGL & NSG	0.68	0.78

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

GPY4 NTG Research Approach

The evaluation will conduct NTG research through interviews with GPY4 program participant customers and trade allies to determine free ridership and spillover to inform NTG recommendations for GPY6 and beyond. The research will provide an adjustment for free ridership (the portion of impact that would have occurred even without the program) and spillover (the portion of impact that occurred outside of the program, but would not have occurred in the absence of the program).

Participant free ridership will be calculated using an algorithm approach based on survey self-report data. The analysis will rely on interview results from at least 40 participant customers who installed custom measures and received custom incentives. Projects will be stratified at the tracking record level using the population ex ante gross therm savings. Strata will be defined by project size, based on ex-ante gross energy savings boundaries that place about one-third of program-level savings into large, medium and small stratum. Project-level free ridership values will be determined by weighting with the ex ante gross annual therm savings sampled for each project stratum and extrapolating to the population, targeting a 90/10 level of confidence and relative precision at the program level.

The existence of participating trade ally spillover will be examined using survey self-report data. The evaluation team will attempt a census call on all trade ally participants in the gross impact sample until we complete the required sample design of at least 20 respondents. The trade allies and other contractors will be asked about their total sales of custom projects. This number will be used to calculate an overall increase in the sales of program qualifying projects. Spillover will be calculated from the sales of qualifying projects that do not receive an incentive from PGL/NSG multiplied by the program influence scoring from the survey responses.

In an effort to facilitate survey efforts and ensure a timely completion, the evaluation team will conduct both the participant and trade ally surveys concurrently. Program influence on participating customers through interviews with trade allies will be conducted in GPY4 if triggered by customer NTG responses for the largest projects, or with contacts identified for multiple smaller projects. The C&I Custom Program NTG ratio will be calculated using the following algorithm.

$$NTGR = 1 - Participant\ Free\ Ridership + Participant\ Spillover + Trade\ Ally\ Spillover$$

Process Evaluation

The GPY4 process evaluation activities for the C&I Custom Program will involve interviews with program staff and the implementation contractor staff to verify information about marketing and outreach strategies made in GPY4 that impacted customer and trade ally participation and satisfaction. The NTG research survey scheduled for GPY4 will include a set of process questions to provide feedback from participant customers and trade allies about satisfaction with the program, barriers to participation and suggestions for improvement. Details of the proposed process questions are provided in the Evaluation Research Topics section above.

Evaluation Schedule

Table 3 below provides the schedule for the GPY4 evaluation of the C&I Custom 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	March 20, 2015	May 22, 2015
Final Evaluation Plan to PGL/NSG		
In-depth Interview with Program Staff	March 1, 2015	April 1, 2015
Early Data Review	May 1, 2015	May 31, 2015
Final Data Delivery	June 1, 2015	July 1, 2015
Participant NTG/Process Survey	May 1, 2015	August 30, 2015
Trade Ally SO/Process Survey	May 1, 2015	August 30, 2015
On-Site M&V Audit	May 1, 2015	August 30, 2015
Engineering File Review	May 1, 2015	August 30, 2015
Gross and Net savings Verification	June 1, 2015	September 15, 2015
Internal Report for Review	September 15, 2015	September 30, 2015
Draft Report to PGL/NSG and SAG	October 1, 2015	October 15, 2015
Draft Comments in 10 Business Days	October 15, 2015	October 30, 2015
Final Report to PGL/NSG and SAG	November 1, 2015	November 15, 2015

Three Year Evaluation Plan

We have prepared a *proposed* three year evaluation plan summary to identify tasks (Table 4) and allocate budgets by year on a preliminary basis. Program Years 5 and 6 are subject to change based upon future detail and needs of the portfolio. Final activities and allocations will be determined annually as program circumstances are better known. Gas Program Year (GPY) refers to the year of participation that will be researched, not the time that the research will occur. Table 4 presents the three year evaluation plan summary to identify tasks by year on a preliminary basis.

Table 4. Three Year Evaluation Plan Summary for C&I Custom Program

Activity	GPY4	GPY5	GPY6
Gross Impact Approach	Engineering File Review/ On-site M&V	Engineering File Review/ On-site M&V	Engineering File Review/ On-site M&V
Gross Sampling Frequency	One Time	Two Waves	One Time
Net Impact Approach	Deemed Value	Deemed Value	Deemed Value from GPY4 Research
NTG Research Approach	GPY4 Participants	None	None
NTG Research Timing	One Time, GPY4 participants	None	None
Telephone Survey	FR, SO, Process (≤40 interviews)	None	None
Process Research Approach/Timing	One Time, GPY4 Participants	None	None
Program Manager and Implementer Interviews/ Review Materials	Yes	Yes	Yes
Participating Trade Ally Survey	SO, Process (≤20 interviews)	None	None