

Gas Optimization Program Impact Evaluation Report

Energy Efficiency Plan: Program Year 2025

(01/01/2025-12/31/2025)

Prepared for:

Peoples Gas and North Shore Gas

PEOPLES GAS® | NORTH SHORE GAS®

Final

May 27, 2026

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1 Introduction

This report presents the results of the impact evaluation of the Peoples Gas (PGL) and North Shore Gas (NSG) 2025 Gas Optimization program. North Shore Gas (NSG) program did not have implementation projects with savings in 2025. This report presents a summary of the energy impacts for the total PGL program and broken out by relevant measure and program structure details. The appendices present the impact analysis methodology and the inputs for cost effectiveness analysis. Program year 2025 covers January 1 to December 31, 2025.

2 Program Description

The Gas Optimization program provides a technical assessment service where energy advisors and contracted engineering firms review commercial, industrial, and public sector facilities for operation and maintenance issues that, if corrected, often provide short payback projects. In addition to identifying low-cost and no-cost measures that can be implemented by the customer, Gas Optimization studies also identify capital improvement projects. Incentives to complete recommended improvements include reimbursement for the cost of the technical assessment, rebates, and program implementation support. Projects identified through the Gas Optimization program include Boiler Combustion Control, HVAC Space Conditioning Control, and other energy saving measures. The program does not offer prescribed measures.

The PGL Gas Optimization program had 7 participants in 2025 and completed 8 projects, as shown in Table 1.

Table 1. 2025 Volumetric Summary for PGL

Participation	Private	Public	Total
Participants *	5	2	7
Installed Projects †	5	3	8
Measure Types Installed ‡	4	2	5

* Participants are defined as unique work order IDs

† Installed Projects are defined as unique retrofit for each participant

‡ Total Measure Types Installed is less than the sum of private and public due to the same Measure Types in different building sectors.

Source: Peoples Gas tracking data and evaluation team analysis.

3 Program Savings Detail

Table 2 summarizes the energy savings the PGL Gas Optimization program achieved in 2025, indicating which savings occurred in disadvantaged community (DAC) areas.

Table 2. 2025 Annual Energy Savings Summary for PGL

Program Category	Ex Ante Gross Savings (Therms)	Verified Gross RR*	Verified Gross Savings (Therms)	NTG†	Verified Net Savings (Therms)
Private, Non-Disadvantaged Communities	145,647	94%	136,640	0.94	128,441
Private, Non-DAC Subtotal	145,647	94%	136,640	0.94	128,441
Private, Disadvantaged Communities	32,816	100%	32,816	1.00	32,816
Private, DAC Subtotal	32,816	100%	32,816	1.00	32,816
Public, Non-Disadvantaged Communities	9,946	96%	9,521	0.94	8,950
Public, Non-DAC Subtotal	9,946	96%	9,521	0.94	8,950
Public, Disadvantaged Communities	32,589	100%	32,589	1.00	32,589
Public, DAC Subtotal	32,589	100%	32,589	1.00	32,589
Total	220,998	96%	211,565		202,796

* Realization Rate (RR) is the ratio of verified gross savings to ex ante gross savings, based on evaluation research findings.

† NTG, (Net to Gross) is the deemed value available on the SAG website: <https://www.ilsag.info/evaluator-ntg-recommendations-for-2025>. Projects in DAC areas are assigned an NTG of 1.0.

Source: Evaluation team analysis.

4 Program Savings by Measure

Table 3 presents the custom measures processed through the PGL Gas Optimization program in 2025. The realization rate (RR) is the ratio of verified gross savings to ex ante gross savings, based on evaluation research findings for a sample of completed projects. Realization rate findings for individual sampled projects are provided in the Appendix. Boiler Combustion Controls and Boiler Condensate Recovery measures contributed the most savings.

Table 3. 2025 Annual Energy Savings by Measure for PGL

Program Category	Savings Category	Ex Ante Gross Savings (Therms)	Verified Gross RR*	Verified Gross Savings (Therms)	NTG†	Verified Net Savings (Therms)
Private	Boiler Blowdown Reduction	32,816	100%	32,816	1.00	32,816

Program Category	Savings Category	Ex Ante Gross Savings (Therms)	Verified Gross RR*	Verified Gross Savings (Therms)	NTG†	Verified Net Savings (Therms)
	Boiler Combustion Controls	58,508	89%	51,941	0.94	48,825
	Boiler Condensate Recovery	47,287	98%	46,547	0.94	43,754
	Others	39,852	96%	38,151	0.94	35,862
	Space Conditioning Controls	32,589	100%	32,589	1.00	32,589
	Others	9,946	96%	9,521	0.94	8,950
Total		220,998	96%	211,565		202,796

* Realization Rate (RR) is the ratio (simple average) of verified gross savings to ex ante gross savings, based on evaluation research findings.

† NTG is the deemed value available on the SAG website: <https://www.ilsag.info/evaluator-ntg-recommendations-for-2025/>.

Projects in DAC are assigned an NTG of 1.0.

Source: Evaluation team analysis.

5 Impact Analysis Findings and Recommendations

5.1 Impact Parameter Estimates

As a custom program, there are no common parameters across projects.

5.2 Findings and Recommendations

The evaluation findings and recommendations are presented below. The detailed realization rates and evaluation findings for individual sampled projects are provided in Appendix A.

Finding 1. In WO-6043950 a Boiler Combustion Controls project, the evaluation team found that the ex ante savings was estimated using a regression approach with a relatively weak correlation ($R^2 = 0.618$) and low savings relative to total usage (less than 10%), making it difficult to distinguish savings from data variability. Additionally, the evaluation found that a baseline outlier month significantly reduced production and skewed results. As a result, the evaluation team included additional baseline data and examined scenarios both with and without the outlier to ensure a more stable analysis. The evaluation removed the outlier and calculated a verified gross RR of 89%.

Recommendation 1. The evaluation team recommends that regression-based savings methods be applied only where model fit is sufficiently strong and savings are distinguishable from data variability, and that baseline data be screened for outliers and supplemented where necessary to ensure robust and reliable results.

Appendix A. Impact Analysis Methodology

The evaluation selected a simple random sample of five projects from a total of eight projects for review, as shown in Table 4.

Table 4. Profile of Gross Impact Sample for Gas Optimization Projects

Population Summary					Sample Summary		
Program	Sampling Strata	Number of Projects (N)	Ex Ante Gross Savings (Therms)	Percent of Ex Ante Gross	Sample Size (n)	Ex Ante Gross Savings (Therms)	Sampled % of Population (% Therms)
PGL Gas Optimization	N/A	8	220,998	100%	5	211,565	96%

Source: Evaluation team analysis.

Engineering Review of Project Files

For each selected project, the evaluation did an in-depth application review to assess the engineering methods, parameters and assumptions used to generate all ex ante impact estimates. For each measure in the sampled project, evaluation engineers estimated ex post gross savings based on their review of documentation and engineering analysis.

To support this review, evaluation team reviewed project documentation in electronic format for each sampled project. Documentation included some or all scanned files of hardcopy application forms and supporting documentation from the applicant (invoices, measure specification sheets, and vendor proposals), pre-inspection reports and photos, post inspection reports and photos, and calculation spreadsheets.

Realization Rate Calculation and Roll-up

The Gas Optimization program population was small (8 total projects), so stratification was not necessary. We evaluated a sample of five projects that represented a substantial share of total program savings as shown in Table 4. The evaluation calculated a weighted RR of 96%, which was applied to the other three projects that were not sampled.

Table 5 provides a summary of verification results and adjustments for the PGL sampled Gas Optimization projects.

Table 5. Sample Gross Realization Rates and Summary of Adjustments

Project ID	Measure	Realization Rate	Comments
WO-5336065	Boiler Blowdown Reduction	100%	
WO-6658577	Space Conditioning Controls	100%	
WO-6043950	Boiler Combustion Controls	89%	Updated regression analysis
WO-7121873	Boiler Condensate Recovery	100%	
WO-6567468	Space Conditioning Controls	100%	

Source: Evaluation team analysis

Appendix B. Program Specific Inputs for the Illinois TRC

Table 6 shows the Total Resource Cost (TRC) cost-effectiveness analysis inputs available at the time of producing this impact evaluation report. Additional required cost data (e.g., measure costs, program level incentive and non-incentive costs) are not included in this table and will be provided to the evaluation team later. Guidehouse will include annual and lifetime water savings and greenhouse gas reductions in the end of year summary report.

Table 6. Verified Cost Effectiveness Inputs – PGL

Program Category	Savings Category	DAC Project	Units	Quantity	Effective Useful Life	Early Replacement Flag†	Ex Ante Gross Savings (Therms)	Verified Gross Savings (Therms)	Verified Net Savings (Therms)
Private	Boiler Blowdown Reduction	TRUE	Project	1	20.0	NO	32,816	32,816	32,816
	Boiler Combustion Controls	FALSE	Project	1	20.0	NO	58,508	51,941	48,825
	Boiler Condensate Recovery	FALSE	Project	2	20.0	NO	47,287	46,547	43,754
	Others	FALSE	Project	1	20.0	NO	39,852	38,151	35,862
Public	Space Conditioning Controls	TRUE	Project	2	20.0	NO	32,589	32,589	32,589
	Others	FALSE	Project	1	20.0	NO	9,946	9,521	8,950
Total or Weighted Average					20.0		220,998	211,565	202,796

Source: Evaluation team analysis.