



Memorandum

To: Peoples Gas (PGL) and North Shore Gas (NSG)

Cc: Elizabeth Horne, ICC Staff;
Celia Johnson, Illinois Stakeholder Advisory Group

From: Charles Ampong, Yeab Lakew, Ensar Biscevic, Laura Agapay-Read, Guidehouse,
Mike Frischmann, George Frymire, EcoMetric

Date: September 14, 2026

Re: PGL and NSG 2025 Verified Energy Savings and Cost Effectiveness Summary

This memo provides background material to support Guidehouse's summary reporting of verified energy savings and cost-effectiveness results for the Peoples Gas (PGL) and North Shore Gas (NSG) energy efficiency program portfolios for Gas Program Year 2025.¹ The memo presents a summary of results followed by an explanation of methodology, inputs, and assumptions. Separately, Guidehouse provides brief annual summary reporting for each program year of the Plan 4 portfolio cycle, 2022 through 2025, and will produce a final report summarizing the combined results for the four program years after the final 2025 summary reporting.

Summary of Results

Table 1 and Table 2 provide summaries of verified net energy savings achieved in 2025 and the cost-effectiveness test summaries. This includes commercial and industrial (C&I) and public sector (PS) programs, residential and income qualified (IQ) programs. The Total Resource Cost (TRC) Test and Program Administrator Cost Test (PACT) results are presented with and without non-energy impacts (NEI).

Table 1. PGL 2025 Verified Energy Savings and Cost Effectiveness Test Results

Program	Verified Net Savings (Therms)	TRC Test (w/ NEI)	TRC Test (w/o NEI)	PACT Test (w/ NEI)	PACT Test (w/o NEI)
C&I and PS Joint New Construction	41,859	18.1	10.8	35.6	8.1
C&I and PS Retro-Commissioning	218,374	23.5	5.9	5.2	5.2
C&I & PS Prescriptive	2,834,104	5.5	1.6	1.4	1.2
C&I & PS Custom	178,159	11.2	2.8	2.4	2.4

¹ Gas Program Year 2025 began January 1, 2025, and ended December 31, 2025.

PGL and NSG 2025 Verified Energy Savings and Cost Effectiveness Summary

September 14, 2026

Page 2 of 9

Program	Verified Net Savings (Therms)	TRC Test (w/ NEI)	TRC Test (w/o NEI)	PACT Test (w/ NEI)	PACT Test (w/o NEI)
C&I & PS Gas Optimization	202,796	6.3	1.6	1.2	1.2
Small and Midsize Business	679,505	3.3	0.9	0.8	0.7
Commercial Food Service (CFS)	20,482	2.1	0.5	0.7	0.7
Business Sector & Public Sector Total	4,175,278	5.6	1.7	1.4	1.2
Community Joint Kits	407,886	16.4	5.6	4.4	2.8
Elementary Education Kits (IQ EEE)	178,656	8.8	4.8	4.7	1.3
Income Qualified Multi-Family	1,630,266	3.9	1.2	0.9	0.7
Public Housing Energy Savings	9,173	0.3	0.1	0.1	0.1
Income Qualified Single Family	335,927	1.8	0.5	0.4	0.3
Income Qualified (IQ) Total	2,561,909	3.8	1.3	1.0	0.7
Elementary Education Kits (EEE)	106,869	7.9	4.0	3.9	1.3
Home Energy Rebates	256,458	4.3	1.2	1.4	1.2
Multi-Family Energy Savings	1,036,112	7.8	2.9	2.5	1.4
Home Energy Savings - Home Energy Assessment	38,845	4.0	1.7	1.4	0.6
Epic Savers Kit (ESK)	0	-	-	-	-
Residential Total	1,438,284	6.3	2.3	2.2	1.3
Portfolio Total	8,175,471	4.6	1.5	1.2	0.9
Portfolio Total without IQ	5,613,562	5.4	1.7	1.5	1.1

Note: Totals may be rounded.

Source: Evaluation Research

Table 2. NSG 2025 Verified Energy Savings and Cost Effectiveness Test Results

Program	Verified Net Savings (Therms)	TRC Test (w/ NEI)	TRC Test (w/o NEI)	PACT Test (w/ NEI)	PACT Test (w/o NEI)
C&I and PS Joint New Construction	0	-	-	-	-
C&I and PS Retro-Commissioning	5,291	10.4	3.0	4.6	4.6
C&I & PS Prescriptive	830,117	7.8	2.5	2.6	2.2
C&I & PS Custom	256,531	6.7	1.9	2.8	2.8
C&I & PS Gas Optimization	0	-	-	-	-
Small and Midsize Business	188,592	6.7	2.1	1.9	1.6
Commercial Food Service (CFS)	4,933	2.1	0.6	0.9	0.8
Total Business Sector	1,285,464	6.8	2.1	2.4	2.1
Community Joint Kits	65,983	18.2	6.8	5.1	3.4

Program	Verified Net Savings (Therms)	TRC Test (w/ NEI)	TRC Test (w/o NEI)	PACT Test (w/ NEI)	PACT Test (w/o NEI)
Income Qualified Single Family	21,032	1.1	0.4	0.3	0.2
Public Housing Energy Savings	1,117	0.2	0.1	0.1	0.1
Elementary Education Kits (IQ EEE)	22,264	6.0	3.3	2.9	0.9
Income Qualified Multi-Family	32,982	2.1	0.6	0.4	0.4
Income Qualified (IQ) Total	143,378	3.1	1.1	0.8	0.6
Elementary Education Kits (EEE)	41,513	8.4	4.4	4.1	1.4
Home Energy Rebates	202,187	7.5	2.2	3.1	3.0
Multi-Family Energy Savings	15,105	1.7	0.5	0.9	0.8
Home Energy Savings – Home Energy Assessment	9,326	6.3	2.9	2.4	1.1
Epic Savers Kit (ESK)	73,173	5.3	1.8	1.5	1.2
Residential Subtotal	341,305	6.3	2.1	2.5	2.0
Portfolio Total	1,770,146	5.4	1.8	1.8	1.5
Portfolio Total without IQ	1,626,768	6.2	2.0	2.2	1.9

*Note: Totals may be rounded.
Source: Evaluation Research*

The summary reporting is presented in two spreadsheet attachments with seven tabs for each utility:

- Tab 1 and 2: Verified Program Energy Savings, Other Impacts, and Cost Summary
- Tab 3: High Impact Measures
- Tab 4 and Tab 5: TRC Cost-Effectiveness Results – Plan 4 Avoided Costs²
- Tab 6 and Tab 7: PACT Cost-Effectiveness Results – Plan 4 Avoided Costs

Key background information on each attachment tab follows.

Tab 1: Verified Program Energy Savings, Other Impacts, and Cost Summary

Tab 1 provides a summary of the components of verified therm savings and utility program costs for the 2025 program portfolio. Results for Residential, Business and Public Sector, and Income

² Application pursuant to Section 8-104 of the Public Utilities Act for Consent to and Approval of an Energy Efficiency Plan, Case Details for ICC Docket P2021-0159 available at <https://www.icc.illinois.gov/docket/P2021-0159>.

Qualified are subtotaled separately. For all joint and coordinated programs³ with ComEd, the interactive energy effects (resulting in negative gas savings) due to ComEd's electricity saving measures are not included in the reported verified natural gas savings.⁴ Tab 1 also reports water savings and greenhouse gas (GHG) reductions.⁵

Tab 2: High Impact Measures

Tab 2 provides energy savings results for High Impact Measures (HIM) for the 2025 portfolio.

- Savings shown are verified gross therms.
- The Illinois Technical Reference Manual Version 14.0 (TRM v14) places some common-area multi-family measures in the C&I sector. For 2025, Guidehouse grouped common-area measures for Multi-Family, Public Housing, and Affordable Housing New Construction with the residential sector.
- The HIM savings summary is rolled up by measure and sector, without reference to program, to show the importance of individual measure technologies to the overall portfolio.

Tab 3 and Tab 4: TRC Cost-Effectiveness Results

Tab 3 and Tab 4 provide TRC cost-effectiveness results for the 2025 PGL and NSG portfolios. Results are provided by program and sector (Residential, Business and Public Sector, and Income Qualified). The portfolio-level TRC is provided with and without the Income Qualified programs. Tab 3 provides program and portfolio-level TRC with all NEI benefits including water, electricity savings, additional quantifiable benefits (AQB)⁶, and carbon adders. Tab 4 provides program- and portfolio-level TRC without the AQB and carbon benefits, and with the measure-level water and electricity benefits, as defined in the Illinois Technical Reference Manual (IL TRM). Portfolio-level TRC is provided with and without the Income Qualified programs. The TRC benefits leverage the avoided costs from the Plan 4 filing, updated with actual costs through 2025.

Tab 5 and Tab 6: PACT Cost-Effectiveness Results

Tab 5 and Tab 6 provide PACT cost-effectiveness results for the 2025 PGL and NSG portfolios. Tab 5 provides program and portfolio-level PACT with measure-specific NEIs (i.e., water and electricity benefits), as defined in the Illinois TRM. The PACT does not include other societal benefits (i.e., AQB and carbon adders). Tab 6 provides program and portfolio-level PACT without NEI estimates.

³ Joint programs are jointly designed and delivered by ComEd and PGL NSG to provide an integrated customer offering and require shared savings, cost, and evaluation attribution. Coordinated programs are utility-specific programs that remain separately administered but are aligned across utilities through common implementation, evaluation, and reporting practices to ensure consistent treatment of electric and gas impacts.

⁴ https://www.ilsag.info/wp-content/uploads/IL_EE_Policy_Manual_Version_3.0_Final_11-3-2023.pdf (Section 7.7 on Heating Penalties).

⁵ GHG reductions reported in metric tons CO₂, based on EPA calculators available at <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>.

⁶ Additional Quantifiable Benefits (AQBs) are monetized, non-energy societal benefits resulting from programs that are not captured in traditional avoided energy, capacity, or T&D benefits.

Portfolio-level PACT is provided with and without the Income Qualified programs. The PACT benefits leverage the avoided costs from the Plan 4 filing, updated with actual costs through 2025.

Cost-Effectiveness Methodology

As part of the evaluation of PGL and NSG energy efficiency programs for Gas Program Year 2025, Guidehouse performed benefit-cost calculations with data provided by PGL and NSG, and Guidehouse evaluated program results, referencing the Illinois TRM or Guidehouse research. The focus of this review is on the basis and calculations used to conduct the Illinois TRC test. The Illinois TRC test is defined in 220 ILCS 5/8-104(b)⁷ as follows:

“Cost-effective” means that the measures satisfy the total resource cost test which, for purposes of this Section, means a standard that is met if, for an investment in energy efficiency, the benefit-cost ratio is greater than one. The benefit-cost ratio is the ratio of the net present value of the total benefits of the measures to the net present value of the total costs as calculated over the lifetime of the measures. The total resource cost test compares the sum of avoided natural gas utility costs, representing the benefits that accrue to the system and the participant in the delivery of those efficiency measures, as well as other quantifiable societal benefits, including avoided electric utility costs, to the sum of all incremental costs of end use measures (including both utility and participant contributions), plus costs to administer, deliver, and evaluate each demand-side measure, to quantify the net savings obtained by substituting demand-side measures for supply resources. In calculating avoided costs, reasonable estimates shall be included for financial costs likely to be imposed by future regulation of emissions of greenhouse gases. The low-income programs described in item (4) of subsection (f) of this Section shall not be required to meet the total resource cost test.

The Illinois TRC test differs from a traditional TRC test in its requirement to include a reasonable estimate of the financial costs associated with future regulations and legislation on the emissions of greenhouse gases (GHG). Additional benefits included in the calculation are the societal NEI and water savings. This difference adds a benefit to investments in efficiency programs that typically are included in the Societal Cost Test in other jurisdictions.

In contrast, the PACT approaches cost-effectiveness from the perspective of the utility as program administrator and determines the ratio of the energy supply costs avoided by the utility to the overhead and cost outlays that the utility incurred to implement energy efficiency programs. Since the PACT is primarily focused on utility outlays, incentives paid by the utility to either participants or third-party implementers are included in the calculation, rather than incremental or participant costs. Additionally, since societal NEIs accrue to society rather than to the utility implementing the energy efficiency programs, those benefits are not included in the PACT formula, but water and electricity benefits defined in the Illinois TRM are included in the PACT formula.

⁷ Public Utilities Act, Illinois Compiled Statutes maintained by the Legislative Reference Bureau, <http://www.ilga.gov/legislation/ilcs/fulltext.asp?DocName=022000050K8-104>.

Incremental Measure Cost Approach

Incremental measure cost is the difference between the cost of the efficient measure and the cost of the most relevant baseline measure that would have been installed (if any) in the absence of the efficiency program. The Illinois Energy Efficiency Policy Manual⁸ instructs that installation costs (material and labor) and Operations and Maintenance (O&M) costs shall be included if there is a difference between the efficient measure and the baseline measure. In cases where the efficient measure has a significantly shorter or longer life than the relevant baseline measure, the avoided baseline replacement measure costs should be accounted for in the TRC analysis. The incremental cost input in the TRC analysis is not reduced by the amount of any incentives.

Data Assumptions in the Cost-Effectiveness Calculations

Guidehouse identified the following data points in Table 1 for conducting the Illinois TRC test. The data are divided into generic and program-specific categories. The program-specific data points are further subdivided into those (1) provided by the utility, (2) are a result of evaluation activities, and (3) from multiple sources.

Table 1. Data Points Needed to Conduct the Illinois TRC Test

Category	Data Point	Source
Generic	• Avoided Natural Gas Costs: Plan 3 and Plan 4	PGL and NSG / ComEd
	• Avoided Electricity Costs	
	• Loss Factor (Unaccounted-for-Gas Factor)	
	• Plan 3 Non-Energy Benefits (NEBs) Adder	
	• Plan 4 Non-Energy Impacts Additional Quantifiable Benefit	
	• Weighted Average Cost of Capital	
Generic	• Societal Discount Rate	Illinois TRM ⁹ and Energy Efficiency Stakeholders Advisory Group
	• Greenhouse Gas (GHG) Adder	
Program Specific	• Verified Participants / Measure Count	Final Evaluation Reports ¹⁰
	• Verified Gross and Net Energy Savings	
	• Realization Rate	
	• Net-to-Gross Ratio	
	• Non-Incentive Costs	PGL and NSG
	• Utility Incentive Costs	
	• Incremental Measure Costs	PGL and NSG / Guidehouse Evaluation / Illinois TRM / Other
	• Measure Life	
	• Water Savings in Gallons and Avoided Water Costs	
	• Electric Savings in kWh and Avoided kWh Costs	

⁸ Illinois Energy Efficiency Policy Manual, available at: <https://www.ilsag.info/policy/>

⁹ Illinois Statewide Technical Reference Manual (Illinois TRM). Available at: <https://www.ilsag.info/technical-reference-manual/>

¹⁰ Evaluation documents are available at: <https://www.ilsag.info/evaluation-documents/final-evaluation-reports/>

Source: Evaluation Research

Guidehouse used the following generic data points in the cost-effectiveness calculations for all programs and the portfolio.

- For the TRC, a discount rate of 2.40% was applied based on guidance in Illinois TRM version 13.0.
- For the PACT, the discount rate was a weighted average cost of capital (WACC) for PGL (6.31%) and NSG (6.70%).
- Natural gas avoided costs are based on Plan 4 values provided by PGL and NSG. Actual avoided costs were used in 2025. The loss factor was 1.0276 for PGL and 1.0080 for NSG.

The following points are noted for the program-specific data used in the cost-benefit calculations.

Benefits

- Energy saving benefits represent natural gas only, from final evaluation verified results from 2025.
- A GHG adder of \$0.31 per therm is included starting in 2025 and escalating thereafter. Additional Quantifiable Benefits (AQB) are included based on research conducted by Guidehouse.¹¹
- For all joint and coordinated programs with ComEd, the interactive energy effects (resulting in negative gas savings) and costs due to electricity saving measures were not included in the analysis. The impact of electric interactive savings effects and costs are analyzed separately and presented in a joint electric-gas TRC memo. Coordinated or joint programs in the 2025 Energy Efficiency Portfolio (EEP) include:

Table 2. Summary of Coordinated or Jointly Implemented 2025 EEP Programs

Program	ComEd	PGL and NSG
Income Qualified Programs, except LIHEAP Kits	√	√
Home Energy Savings - Home Energy Assessment	√	√
Multi-Family Retrofit	√	√
Elementary Energy Education	√	√
Coordinated Retro-Commissioning	√	√
Coordinated Non-Residential New Construction	√	√
Commercial Food Service	√	√

Source: Evaluation Research

- For programs that are not joint with ComEd, some measures implemented by PGL and NSG have electricity savings that are not claimed by ComEd. These electricity savings are

¹¹ Guidehouse Societal NEI Estimates for the Illinois Stakeholder Advisory Group, October 1, 2024.

credited to the gas company in the TRC cost-effectiveness calculation as an “Other Benefit.” Most electric benefits are generated from thermostats rebated or installed through non-joint offerings, demand-controlled ventilation, non-joint kits, and weatherization measures. In 2025, PGL and NSG claimed electrification savings from thermostats and weatherization measures. The impact of this benefit in the 2025 TRC calculation result is small, increasing total benefits by 0.5% for PGL and 0.4% for NSG.

- For early replacement measures, Guidehouse calculated the savings for the remaining life of the existing equipment and the savings for the remaining measure life per the dual baseline algorithms deemed in the TRM. Dual baseline adjustments are only accounted for in the TRC analysis but not included in the programs or portfolio summary impacts reports as those reports only list the first-year savings for each measure for PGL NSG annual savings targets. The dual baseline adjustment has a minor positive impact on the PGL and NSG TRC results.¹²
- Guidehouse also included secondary benefits from water saving measures. Water saving benefits from water saving measures rely upon the Illinois TRM to estimate gallons of water saved per device. Water avoided costs were estimated using Guidehouse assumptions developed for PGL and NSG based on secondary research. Water savings account for 8% (PGL) and 5% (NSG) of TRC benefits and increase the benefits and TRC for programs that include water saving measures prominently, such as kit and direct installation programs for the residential sector, and steam traps for the non-residential sector.

Costs

- Incentives and non-incentive program costs were provided by PGL and NSG. For some programs, incentive amounts are tracked by program path, while non-incentive costs are tracked and bundled to include multiple paths. The analysis presents results at the program path level by allocating bundled costs based on weighting by ex ante annual gross therm savings. While this approach may distort the costs and TRCs for individual program paths, the sector level costs and TRCs will be accurately represented.
- For joint programs with ComEd, the measure costs are the PGL and NSG share of full incremental costs. Incentives and non-incentive costs are the PGL and NSG share of costs.
- For incremental measure costs, in cases where PGL and NSG do not provide the installation costs or the data is not tracked, the analysis uses the Illinois TRM and other sources. Professional judgment was used for reviewing and identifying the appropriate incremental measure costs. For Illinois Home Weatherization Assistance Program (IHWAP) offerings, incremental measure costs are twice the utility incentive.
- For coordinated kit, new construction, and retrocommissioning programs, Guidehouse leveraged measure- or project-level incremental measure costs from ComEd and PGL and NSG project information to determine actual costs for 2025 measures or projects.
- Excess incentives are the amount that incentives are greater than estimated incremental measure costs and, if present, should be added to non-incentive costs. Since incremental

¹² Future avoided costs result in lower net incremental costs, thus improving the TRC score.

measure costs are estimated using the Illinois TRM, planning, and secondary research, the estimates may not include all relevant and up-to-date installation and equipment costs for some programs. Guidehouse set incremental measure costs to be not less than incentives for programs (twice the incentive for IHWAP) if incentives were greater than the initial incremental measure cost estimate. Incentives are allocated to C&I and Public Sector programs by gross therms. Some programs appear to have excess incentives; however, overall incremental measure costs values are greater than overall incentives for C&I and PS programs prior to allocating.

- For early replacement measures, Guidehouse used the full measure installation cost for the first year incremental measure cost and calculated future avoided costs per the Illinois TRM. Future avoided replacement costs reduce net incremental costs for retrofit measures by a total of \$0.13¹³ million for the PGL portfolio and \$0.09 million for NSG.

¹³ Value in 2025 dollars. Deferred replacement costs were discounted using the societal discount rate.