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|  | Energy Education Outreach Impact Evaluation ReportEnergy Efficiency Plan: Program Year 2024 (1/1/2024-12/31/2024) |
|  | Prepared for:Peoples Gas and North Shore GasDRAFT**March 20, 2025** |
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Table of Contents

[Introduction 2](#_Toc192789119)

[Program Description 2](#_Toc192789120)

[Program Savings Detail 4](#_Toc192789121)

[Program Savings by Measure 5](#_Toc192789122)

[Impact Analysis Findings and Recommendations 8](#_Toc192789123)

[Impact Parameter Estimates 8](#_Toc192789124)

[Findings and Recommendations 11](#_Toc192789125)

[Appendix B. Program Specific Inputs for the Illinois TRC 13](#_Toc192789126)

List of Tables, Figures, and Equations

[Table 1. 2024 Volumetric Summary for PGL 2](#_Toc192789127)

[Table 2. 2024 Installed Measure Quantities for PGL 2](#_Toc192789128)

[Table 3. 2024 Volumetric Summary for NSG 4](#_Toc192789129)

[Table 4. 2024 Installed Measure Quantities for NSG 4](#_Toc192789130)

[Table 5. 2024 Annual Energy Savings Summary for PGL 5](#_Toc192789131)

[Table 6. 2024 Annual Energy Savings Summary for NSG 5](#_Toc192789132)

[Table 7. 2024 Annual Energy Savings by Measure for PGL 6](#_Toc192789133)

[Table 8. 2024 Annual Energy Savings by Measure for NSG 8](#_Toc192789134)

[Table 9. Verified Gross Savings Parameters 8](#_Toc192789135)

[Table A ‑1. Impact Parameters 12](#_Toc193290539)

# Introduction

This report presents the results of the impact evaluation of the Peoples Gas (PGL) and North Shore Gas (NSG) 2024 Energy Education Outreach Kits (EEO Kits) programs. It presents a summary of the energy impacts for the total program and broken out by relevant measure and program structure details. The appendix presents the impact analysis methodology. Program year 2024 covers January 1, 2024, through December 31, 2024.

# Program Description

The EEO Kits program is offered jointly to schools served by PGL or NSG and ComEd. PGL and NSG claimed all the gas savings while ComEd claimed all the electricity savings from kits sent to the joint utility customers. The EEO Kits program has three paths, namely the Market Rate and Income Eligible, and School Interns Kits.

The PGL program had 18,338 participants in 2024 and completed 165,342 projects as shown in the following table.

Table 1. 2024 Volumetric Summary for PGL

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Participation | Market Rate | Income Eligible | School Interns Kit | Total |
| Participants \* | 6,170 | 12,138 | 30 | 18,338 |
| Installed Projects † | 55,530 | 109,242 | 570 | 165,342 |

\* Participants are the quantity of kits distributed

† Distributed Measures is the total quantity of measures distributed in the kits

Source: Peoples Gas tracking data and evaluation team analysis.

Table 2 summarizes the installed measure quantities that are the basis for verified energy savings.

Table 2. 2024 Installed Measure Quantities for PGL

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Program Category | Program Path | Measure | Quantity Unit | Installed Quantity |
| EEO Kits | Market Rate | Window Insulation Kit (5-pack) | Each | 6,170 |
|  |  | Low Flow Showerheads  | Each | 6,170 |
|  |  | Closed Foam Weatherstripping (17' Roll) | Each | 6,170 |
|  |  | Self-Adhesive Door Sweep | Each | 6,170 |
|  |  | Shower Timer | Each | 6,170 |
|  |  | Low Flow Aerators (Bathroom) | Each | 12,340 |
|  |  | Low Flow Aerators (Kitchen)  | Each | 6,170 |
|  |  | Temperature Setback Card | Each | 6,170 |
| EEO Kits | Income Eligible | Window Insulation Kit (5-pack) | Each | 12,138 |
|  |  | Low Flow Showerheads  | Each | 12,138 |
|  |  | Closed Foam Weatherstripping (17' Roll) | Each | 12,138 |
|  |  | Self-Adhesive Door Sweep | Each | 12,138 |
|  |  | Shower Timer | Each | 12,138 |
|  |  | Low Flow Aerators (Bathroom) | Each | 24,276 |
|  |  | Low Flow Aerators (Kitchen)  | Each | 12,138 |
|  |  | Temperature Setback Card | Each | 12,138 |
| EEO Kits | School Interns Kit | Window Insulation Kit | Each | 30 |
|   |   | Rope Caulk (30') | Each | 30 |
|   |   | Low-Flow Showerhead (1.5 GPM) | Each | 30 |
|   |   | V-Seal Weatherstripping Roll (17') | Each | 30 |
|   |   | Closed-Cell Foam Weatherstripping (17' Roll) | Each | 30 |
|   |   | Self-Adhesive Door Sweep | Each | 30 |
|   |   | Shower Timer | Each | 30 |
|   |   | Bathroom Aerator (1 GPM) | Each | 60 |
|   |   | Outlet Gasket | Each | 120 |
|   |   | Switch Gasket | Each | 120 |
|   |   | Kitchen Aerator (1.5 GPM) | Each | 30 |
|  |   | Temperature Setback Card | Each | 30 |

Source: Peoples Gas tracking data and evaluation team analysis.

The NSG program had 2,318 participants in 2024 and completed 20,862 projects as shown in the following table.

Table 3. 2024 Volumetric Summary for NSG

|  |  |  |  |
| --- | --- | --- | --- |
| Participation | Market Rate | Income Eligible | Total |
| Participants \* | 1,589 | 729 | 2,318 |
| Installed Projects † | 14,301 | 6,561 | 20,862 |

\* Participants are the quantity of kits distributed

† Distributed Measures is the total quantity of measures distributed in the kits

Source: North Shore Gas tracking data and evaluation team analysis.

Table 4 summarizes the installed measure quantities that are the basis for verified energy savings.

Table 4. 2024 Installed Measure Quantities for NSG

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Program Category | Program Path | Measure | Quantity Unit | Installed Quantity |
| EEO Kits | Market Rate | Window Insulation Kit (5-pack) | Each | 1589 |
|  |  | Low Flow Showerheads  | Each | 1589 |
|  |  | Closed Foam Weatherstripping (17' Roll) | Each | 1589 |
|  |  | Self-Adhesive Door Sweep | Each | 1589 |
|  |  | Shower Timer | Each | 1589 |
|  |  | Low Flow Aerators (Bathroom) | Each | 3178 |
|  |  | Low Flow Aerators (Kitchen)  | Each | 1589 |
|  |  | Temperature Setback Card | Each | 1589 |
| EEO Kits | Income Eligible | Window Insulation Kit (5-pack) | Each | 729 |
|  |  | Low Flow Showerheads  | Each | 729 |
|  |  | Closed Foam Weatherstripping (17' Roll) | Each | 729 |
|  |  | Self-Adhesive Door Sweep | Each | 729 |
|  |  | Shower Timer | Each | 729 |
|  |  | Low Flow Aerators (Bathroom) | Each | 1458 |
|  |  | Low Flow Aerators (Kitchen)  | Each | 729 |
|  |  | Temperature Setback Card | Each | 729 |

Source: North Shore Gas tracking data and evaluation team analysis

# Program Savings Detail

Table 5 summarizes the energy savings the PGL EEO Kits Program achieved by the Market Rate, Income Eligible and School Interns Kit path in 2024.

Table 5. 2024 Annual Energy Savings Summary for PGL

| **Program Category** | **Program Path** | **Ex Ante Gross Savings (Therms)** | **Verified Gross RR\*** | **Verified Gross Savings (Therms)** | **NTG†** | **NPSO‡** | **Verified Net Savings (Therms)** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| EEO Kits | Market Rate | 136,215  | 100% | 136,685  |  1.00  | 1.083 | 148,030  |
| EEO Kits | Income Eligible | 249,193  | 100% | 250,140  |  1.00  | N/A | 250,140  |
| EEO Kits | School Intern Kit | 919  | 107% | 982  |  1.00  | 1.083 | 1,063  |
| **Total** | **386,328**  | **100%** | **387,807**  | **1.00** |  |  **399,233**  |

\* 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-2024/>.

‡ The market rate net savings were multiplied by a deemed non-participant spillover (NPSO) factor of 1.083.

Source: Evaluation team analysis.

Table 6 summarizes the energy savings the NSG EEO Kits Program achieved by Market Rate and Income Eligible path in 2024.

Table 6. 2024 Annual Energy Savings Summary for NSG

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Program Category** | **Program Path** | **Ex Ante Gross Savings (Therms)** | **Verified Gross RR\*** | **Verified Gross Savings (Therms)** | **NTG†** | **NPSO‡** | **Verified Net Savings (Therms)** |
| EEO Kits | Market Rate | 39,294  | 100% | 39,442  |  1.00  |  1.083  |  42,716  |
| EEO Kits | Income Eligible | 17,115  | 100% | 17,181  |  1.00  | N/A | 17,181  |
| **Total** | **56,409**  | **100%** | **56,623**  | **1.00** |  |  **59,897**  |

\* 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-2024/>.
‡ The market rate net savings were multiplied by a deemed non-participant spillover (NPSO) factor of 1.083.

Source: Evaluation team analysis.

# Program Savings by Measure

The PGL program includes eight measures under the Market Rate and Income Eligible paths and twelve measures in School Interns Kit as shown in the following table. The Window Insulation Kit (5-pack) and Low Flow Showerheads measures contributed the most savings for Market Rate and Income Eligible path. The Window Insulation Kit (5-pack) and Rope Caulk (30') measures contributed the most savings for School Intern Kit path.

Table 7. 2024 Annual Energy Savings by Measure for PGL

| **Program Category** | **Program Path** | **Savings Category** | **Ex Ante Gross Savings (Therms)** | **Verified Gross RR\*** | **Verified Gross Savings (Therms)** | **NTG†** | **NPSO‡** | **Verified Net Savings (Therms)** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| EEO Kits | Market Rate | Window Insulation Kit (5-pack) | 37,606 | 100% | 37,595 | 1.00 | 1.083 | 40,715 |
|  |  | Low Flow Showerheads  | 29,727 | 100% | 29,728 | 1.00 | 1.083 | 32,196 |
|  |  | Closed Foam Weatherstripping (17' Roll) | 22,706 | 100% | 22,703 | 1.00 | 1.083 | 24,588 |
|  |  | Self-Adhesive Door Sweep | 20,022 | 100% | 20,022 | 1.00 | 1.083 | 21,684 |
|  |  | Shower Timer | 16,789 | 100% | 16,790 | 1.00 | 1.083 | 18,183 |
|  |  | Low Flow Aerators (Bathroom) | 4,776 | 100% | 4,776 | 1.00 | 1.083 | 5,172 |
|  |  | Low Flow Aerators (Kitchen)  | 3,955 | 100% | 3,955 | 1.00 | 1.083 | 4,283 |
|  |  | Temperature Setback Card | 636 | 176% | 1,117 | 1.00 | 1.083 | 1,209 |
|  | ***Market Rate Subtotal*** | ***136,215*** | ***100%*** | ***136,685*** | ***1.00*** | ***1.083*** | ***148,030*** |
| EEO Kits | Income Eligible | Window Insulation Kit (5-pack) | 66,941 | 100% | 66,965 | 1.00 | N/A | 66,965 |
|  |  | Low Flow Showerheads  | 56,466 | 100% | 56,466 | 1.00 | N/A | 56,466 |
|  |  | Closed Foam Weatherstripping (17' Roll) | 40,444 | 100% | 40,444 | 1.00 | N/A | 40,444 |
|  |  | Self-Adhesive Door Sweep | 35,661 | 100% | 35,661 | 1.00 | N/A | 35,661 |
|  |  | Shower Timer | 31,887 | 100% | 31,887 | 1.00 | N/A | 31,887 |
|  |  | Low Flow Aerators (Bathroom) | 9,079 | 100% | 9,079 | 1.00 | N/A | 9,079 |
|  |  | Low Flow Aerators (Kitchen)  | 7,513 | 100% | 7,513 | 1.00 | N/A | 7,513 |
|  |  | Temperature Setback Card | 1,202 | 177% | 2,124 | 1.00 | N/A | 2,124 |
|  | ***Income Eligible Subtotal*** | ***249,193*** | ***100%*** | ***250,140*** | ***1.00*** |  | ***250,140*** |
| EEO Kits | School Intern Kit | Window Insulation Kit | 165 | 110% | 183 | 1.00 | 1.083 | 198 |
|  |  | Rope Caulk (30') | 177 | 94% | 167 | 1.00 | 1.083 | 180 |
|  |  | Low-Flow Showerhead (1.5 GPM) | 117 | 124% | 145 | 1.00 | 1.083 | 157 |
|  |  | V-Seal Weatherstripping Roll (17') | 110 | 100% | 110 | 1.00 | 1.083 | 120 |
|  |  | Closed-Cell Foam Weatherstripping (17' Roll) | 110 | 100% | 110 | 1.00 | 1.083 | 120 |
|  |  | Self-Adhesive Door Sweep | 96 | 102% | 97 | 1.00 | 1.083 | 105 |
|  |  | Shower Timer | 79 | 104% | 82 | 1.00 | 1.083 | 88 |
|  |  | Bathroom Aerator (1 GPM) | 20 | 113% | 23 | 1.00 | 1.083 | 25 |
|  |  | Outlet Gasket | 13 | 158% | 20 | 1.00 | 1.083 | 22 |
|  |  | Switch Gasket | 13 | 158% | 20 | 1.00 | 1.083 | 22 |
|  |  | Kitchen Aerator (1.5 GPM) | 17 | 114% | 19 | 1.00 | 1.083 | 21 |
|  |  | Temperature Setback Card | 1 | 369% | 5 | 1.00 | 1.083 | 6 |
|  | ***SIK Subtotal*** | ***919*** | ***107%*** | ***982*** | ***1.00*** |  | ***1,063*** |
| **Total** |  | **386,328** | **386,328** | **387,807** | **1.00** |  | **399,233** |

\* 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-2024/>.

‡ The market rate net savings were multiplied by a deemed non-participant spillover (NPSO) factor of 1.083.

Source: Evaluation team analysis.

The NSG program includes Eight measures as shown in the following table. The Window Insulation Kit (5-pack) and Low Flow Showerheads measures contributed the most savings for each path.

Table 8. 2024 Annual Energy Savings by Measure for NSG

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Program Category** | **Program Path** | **Savings Category** | **Ex Ante Gross Savings (Therms)** | **Verified Gross RR\*** | **Verified Gross Savings (Therms)** | **NTG†** | **NPSO‡** | **Verified Net Savings (Therms)** |
| EEO Kits | Market Rate | Window Insulation Kit (5-pack) | 10,575 | 100% | 10,576 | 1.00 | 1.083 | 11,454 |
|  |  | Low Flow Showerheads  | 8,884 | 100% | 8,884 | 1.00 | 1.083 | 9,621 |
|  |  | Closed Foam Weatherstripping (17' Roll) | 6,386 | 100% | 6,386 | 1.00 | 1.083 | 6,916 |
|  |  | Self-Adhesive Door Sweep | 5,633 | 100% | 5,633 | 1.00 | 1.083 | 6,101 |
|  |  | Shower Timer | 5,018 | 100% | 5,018 | 1.00 | 1.083 | 5,435 |
|  |  | Low Flow Aerators (Bathroom) | 1,427 | 100% | 1,427 | 1.00 | 1.083 | 1,545 |
|  |  | Low Flow Aerators (Kitchen)  | 1,182 | 100% | 1,182 | 1.00 | 1.083 | 1,280 |
|  |  | Temperature Setback Card | 189 | 177% | 335 | 1.00 | 1.083 | 363 |
|  | ***Market Rate Subtotal*** | ***39,294*** | ***100%*** | ***39,442*** | ***1.00*** | ***1.083*** | ***42,716*** |
| EEO Kits | Income Eligible | Window Insulation Kit (5-pack) | 4,425 | 100% | 4,424 | 1.00 | N/A | 4,424 |
|  |  | Low Flow Showerheads  | 4,076 | 100% | 4,076 | 1.00 | N/A | 4,076 |
|  |  | Closed Foam Weatherstripping (17' Roll) | 2,672 | 100% | 2,672 | 1.00 | N/A | 2,672 |
|  |  | Self-Adhesive Door Sweep | 2,356 | 100% | 2,356 | 1.00 | N/A | 2,356 |
|  |  | Shower Timer | 2,302 | 100% | 2,302 | 1.00 | N/A | 2,302 |
|  |  | Low Flow Aerators (Bathroom) | 655 | 100% | 655 | 1.00 | N/A | 655 |
|  |  | Low Flow Aerators (Kitchen)  | 542 | 100% | 542 | 1.00 | N/A | 542 |
|  |  | Temperature Setback Card | 87 | 177% | 154 | 1.00 | N/A | 154 |
|  | ***Income Eligible Subtotal*** | ***17,115*** | ***100%*** | ***17,181*** | ***1.00*** | ***1.083*** | ***17,181*** |
| **Total** |  | **56,409** | **100%** | **56,623** | **1.00** |  | **59,897** |

Source: Evaluation team analysis

# Impact Analysis Findings and Recommendations

## Impact Parameter Estimates

Table 9 shows the unit therms savings and realization rate findings by measure from the evaluation team’s review. The realization rate is the ratio of the verified savings to the ex-ante savings. The findings and recommendations below this table, include a discussion of all measures with realization rates above or below 100 percent. Appendix A provides a description of the impact analysis methodology.

Table 9. Verified Gross Savings Parameters

| **Measure** | **Unit Basis** | **Ex Ante Gross (therms/unit)** | **Verified Gross (therms/unit)** | **Realization Rate** | **Data Source(s)** |
| --- | --- | --- | --- | --- | --- |
| **PGL EEO Kits Market Rate** |  |  |  |  |  |
| Window Insulation Kit (5-pack) | Each | 6.095 | 6.093 | 100% | Illinois TRM, v12.0, Section 5.6.1 and PTD |
| Low Flow Showerheads  | Each | 4.818 | 4.818 | 100% | Illinois TRM, v12.0, Section 5.4.5 and PTD |
| Closed Foam Weatherstripping (17' Roll) | Ln. Ft. | 3.680 | 3.68 | 100% | Illinois TRM, v12.0, Section 5.6.1 and PTD |
| Self-Adhesive Door Sweep | Each | 3.245 | 3.245 | 100% | Illinois TRM, v12.0, Section 5.6.1 and PTD |
| Shower Timer | Each | 2.721 | 2.721 | 100% | Illinois TRM, v12.0, Section 5.4.9 and PTD |
| Low Flow Aerators (Bathroom) | Each | 0.387 | 0.387 | 100% | Illinois TRM, v12.0, Section 5.4.4 and PTD |
| Low Flow Aerators (Kitchen)  | Each | 0.641 | 0.641 | 100% | Illinois TRM, v12.0, Section 5.4.4 and PTD |
| Temperature Setback Card | Each | 0.103 | 0.181 | 176% | Illinois TRM, v12.0, Section 5.4.6 and PTD |
| **PGL EEO Kits Income Eligible** |  |  |  |  |  |
| Window Insulation Kit (5-pack) | Each | 5.515 | 5.517 | 100% | Illinois TRM, v12.0, Section 5.6.1 and PTD |
| Low Flow Showerheads  | Each | 4.652 | 4.652 | 100% | Illinois TRM, v12.0, Section 5.4.5 and PTD |
| Closed Foam Weatherstripping (17' Roll) | Ln. Ft. | 3.332 | 3.332 | 100% | Illinois TRM, v12.0, Section 5.6.1 and PTD |
| Self-Adhesive Door Sweep | Each | 2.938 | 2.938 | 100% | Illinois TRM, v12.0, Section 5.6.1 and PTD |
| Shower Timer | Each | 2.627 | 2.627 | 100% | Illinois TRM, v12.0, Section 5.4.9 and PTD |
| Low Flow Aerators (Bathroom) | Each | 0.374 | 0.374 | 100% | Illinois TRM, v12.0, Section 5.4.4 and PTD |
| Low Flow Aerators (Kitchen)  | Each | 0.619 | 0.619 | 100% | Illinois TRM, v12.0, Section 5.4.4 and PTD |
| Temperature Setback Card | Each | 0.099 | 0.175 | 177% | Illinois TRM, v12.0, Section 5.4.6 and PTD |
| **PGL EEO Kits School Interns Kits** |  |  |  |  |  |
| Window Insulation Kit | Each | 5.515 | 6.093 | 110% | Illinois TRM, v12.0, Section 5.6.1 and PTD |
| Rope Caulk (30') | Each | 5.908 | 5.551 | 94% | Illinois TRM, v12.0, Section 5.6.1 and PTD |
| Low-Flow Showerhead (1.5 GPM) | Each | 3.890 | 4.818 | 124% | Illinois TRM, v12.0, Section 5.4.5 and PTD |
| V-Seal Weatherstripping Roll (17') | Ln. Ft. | 3.682 | 3.68 | 100% | Illinois TRM, v12.0, Section 5.6.1 and PTD |
| Closed-Cell Foam Weatherstripping (17' Roll) | Ln. Ft. | 3.682 | 3.68 | 100% | Illinois TRM, v12.0, Section 5.6.1 and PTD |
| Self-Adhesive Door Sweep | Each | 3.196 | 3.245 | 102% | Illinois TRM, v12.0, Section 5.6.1 and PTD |
| Shower Timer | Each | 2.627 | 2.721 | 104% | Illinois TRM, v12.0, Section 5.4.9 and PTD |
| Bathroom Aerator (1 GPM) | Each | 0.341 | 0.387 | 113% | Illinois TRM, v12.0, Section 5.4.4 and PTD |
| Outlet Gasket | Each | 0.106 | 0.168 | 158% | Illinois TRM, v12.0, Section 5.6.1 and PTD |
| Switch Gasket | Each | 0.106 | 0.168 | 158% | Illinois TRM, v12.0, Section 5.6.1 and PTD |
| Kitchen Aerator (1.5 GPM) | Each | 0.564 | 0.641 | 114% | Illinois TRM, v12.0, Section 5.4.4 and PTD |
| Temperature Setback Card | Each | 0.049 | 0.181 | 369% | Illinois TRM, v12.0, Section 5.4.6 and PTD |
| **NSG EEO Kits Market Rate** |  |  |  |  |  |
| Window Insulation Kit (5-pack) | Each | 6.655 | 6.656 | 100% | Illinois TRM, v12.0, Section 5.6.1 and PTD |
| Low Flow Showerheads  | Each | 5.591 | 5.591 | 100% | Illinois TRM, v12.0, Section 5.4.5 and PTD |
| Closed Foam Weatherstripping (17' Roll) | Ln. Ft. | 4.019 | 4.019 | 100% | Illinois TRM, v12.0, Section 5.6.1 and PTD |
| Self-Adhesive Door Sweep | Each | 3.545 | 3.545 | 100% | Illinois TRM, v12.0, Section 5.6.1 and PTD |
| Shower Timer | Each | 3.158 | 3.158 | 100% | Illinois TRM, v12.0, Section 5.4.9 and PTD |
| Low Flow Aerators (Bathroom) | Each | 0.449 | 0.449 | 100% | Illinois TRM, v12.0, Section 5.4.4 and PTD |
| Low Flow Aerators (Kitchen)  | Each | 0.744 | 0.744 | 100% | Illinois TRM, v12.0, Section 5.4.4 and PTD |
| Temperature Setback Card | Each | 0.119 | 0.211 | 177% | Illinois TRM, v12.0, Section 5.4.6 and PTD |
| **NSG EEO Kits Income Eligible** |  |  |  |  |  |
| Window Insulation Kit (5-pack) | Each | 6.070 | 6.069 | 100% | Illinois TRM, v12.0, Section 5.6.1 and PTD |
| Low Flow Showerheads  | Each | 5.591 | 5.591 | 100% | Illinois TRM, v12.0, Section 5.4.5 and PTD |
| Closed Foam Weatherstripping (17' Roll) | Ln. Ft. | 3.665 | 3.665 | 100% | Illinois TRM, v12.0, Section 5.6.1 and PTD |
| Self-Adhesive Door Sweep | Each | 3.232 | 3.232 | 100% | Illinois TRM, v12.0, Section 5.6.1 and PTD |
| Shower Timer | Each | 3.158 | 3.158 | 100% | Illinois TRM, v12.0, Section 5.4.9 and PTD |
| Low Flow Aerators (Bathroom) | Each | 0.449 | 0.449 | 100% | Illinois TRM, v12.0, Section 5.4.4 and PTD |
| Low Flow Aerators (Kitchen)  | Each | 0.744 | 0.744 | 100% | Illinois TRM, v12.0, Section 5.4.4 and PTD |
| Temperature Setback Card | Each | 0.119 | 0.211 | 177% | Illinois TRM, v12.0, Section 5.4.6 and PTD |

\* Program Tracking Data (PTD) provided by Peoples Gas and North Shore Gas; extract dated January 30, 2025.

† State of Illinois Technical Reference Manual version 12.0 from <http://www.ilsag.info/technical-reference-manual.html>.

## Findings and Recommendations

**Finding 1.** For all kits, the ex-ante gross therms savings are inconsistent with the net therms savings reported in the tracking data. Since the NTG factor (without non-participant spillover) for all measures is 1.00, the gross and net savings should be identical. However, due to errors in transferring the IC calculator’s gross therms to the tracking system, the evaluation team used the ex-ante net therms as a reference point for gross therms, comparing ex-post therms against ex-ante net therms to verify the reported savings. PGL School Intern Kits were an exception, where the evaluation team adjusted the ex-ante net therms by dividing by a 1.083 residential non-participant spillover (NPSO) factor to estimate ex-ante gross therms. The evaluation team made this adjustment because the net savings for school intern kits align with the IC calculator savings when those savings are multiplied by the NPSO factor.

**Recommendation 1.** Ensure that program tracking data for gross savings is consistent with IC calculator’s gross savings.

**Finding 2.** Ex-ante gross therms savings were incorrectly reported as zero for PGL School Intern Kits (SK-CPG-SIK). However, the tracking data showed net therms savings that matched the IC calculator’s gross savings when multiplied by the NPSO factor. Since the net savings aligned with expectations, the evaluation team did not consider ex-ante gross savings to be zero. Instead, to enable comparison with ex-post savings, the evaluation team estimated ex-ante gross savings by dividing net savings by the NPSO factor. This estimated value was then used to calculate realization rates for each measure in the kit.

**Recommendation 2.** Ensure that program tracking data does not report zero gross savings and that gross savings are not multiplied by the NPSO factor if savings are claimed.

**Finding 3.** The ex-ante savings for the shell measures in PGL School Intern Kits are calculated using a fossil heating fuel split (%FossilHeat) that is a weighted average between low-income Single Family (SF) and Multifamily (MF) homes and ISR values corresponding to distributed self-install income-qualified kits. As School Intern Kits are a market rate (MR) offering distributed at schools, the heating fuel split should be a weighted average between MR SF and MF homes and ISR values for distributed school efficiency kits should be used.

**Finding 4.** The ex-ante savings for the hot water measures in PGL School Intern Kits are calculated using a fossil water heating fuel split (%FossilDHW) that is a weighted average between low-income SF and MF homes and ISR values corresponding to income eligible distributed efficiency kits. As School Intern Kits are a market rate (MR) offering distributed at schools, the heating fuel split should be a weighted average between MR SF and MF homes and ISR values for distributed school efficiency kits should be used. The evaluation team calculated savings using fuel splits that are a weighted average between market rate (MR) SF and MF homes. Further, the evaluation team applied ISR values corresponding to distributed school efficiency kits. School Intern Kits account for 0.25% of PGL’s EEO kits verified gross therms savings and the combined impact of findings 3, 4 and 5 increased the kit-level therms savings by 7%.

**Recommendation 3.** Use the percentage fuel splits and ISR values from IL-TRM v12.0 corresponding to MR school kits.

**Finding 5.** For Temperature Setback Card measure, the IC Calculator used the deemed fossil fuel savings provided in IL-TRM v12.0 corresponding to an ‘Other’ system type (which refers to fuel types other than Electric or Gas, for e.g. fuel oil). The evaluation team used the algorithm provided in Section 5.4.6 of the IL-TRM v12.0 utilizing the pre and post hot water setpoint temperatures corresponding to a ‘Gas’ system type when calculating Therms savings. The combined impact of findings 4 and 5 resulted in a 176% RR for Market Rate (MR) PGL kits, 177% RR for Income Eligible (IE) PGL kits and all NSG Kits, and 369% RR for PGL School Intern Kits.

**Recommendation 4.** Use the pre and post hot water temperature setpoints corresponding to a ‘Gas’ system type.

##### Appendix A. Impact Analysis Methodology

The evaluation team verified per-unit savings for each program measure using the impact algorithm sources found in the Illinois Statewide Technical Reference Manual v12.0 (IL-TRM)1. Table A‑1 presents the key parameters and the references used in the verified gross and net savings calculations.

Table A ‑1. Impact Parameters

|  |  |  |
| --- | --- | --- |
| Gross Savings Input Parameters    | Deemed Input Parameters  | Source\*    |
| Window Insulation Kit   | ADJRxAirsealing, ISR, %FossilHeat, Δtherms\_windows  | Illinois TRM, v12.0, Section 5.6.1 |
| Closed Foam Weatherstripping (17' Roll)   | ADJRxAirsealing, ISR, %FossilHeat, Δtherms\_wx  | IL-TRM, v12.0, Section 5.6.1  |
| Self-Adhesive Door Sweep  | ADJRxAirsealing, ISR, %FossilHeat, Δtherms\_sweep  | IL-TRM, v12.0, Section 5.6.1  |
| Shower Timer   | L\_base, Showers per capita per day (SPCD), GPH, EPG\_gas, %FossilDHW, GPM, L\_timer, Household, Usage Factor, %SF, %MF  | IL-TRM, v12.0, Section 5.4.9   |
| Low Flow Showerheads  | GPM\_base, GPM\_low, L\_base, L\_low, Showerheads per household (SPH), showers per capita per day (SPCD), EPG\_gas, %FossilDHW, Household, ISR, %SF, %MF   | IL-TRM, v12.0, Section 5.4.5   |
| Low Flow Aerators (Bathroom)   | GPM\_base, GPM\_low, L\_base, L\_low, faucets per household (FPH), drain factor (DF), EPG\_gas, %FossilDHW, Household, ISR, %SF, %MF  | IL-TRM, v12.0, Section 5.4.4   |
| Low Flow Aerators (Kitchen)  | GPM\_base, GPM\_low, L\_base, L\_low, faucets per household (FPH), drain factor (DF), EPG\_gas, %FossilDHW, Household, ISR, %SF, %MF  | IL-TRM, v12.0, Section 5.4.4   |
| Temperature Setback Card  | U (Overall heat transfer coefficient of tank), A (Surface area of storage tank), Tpre, Tpost, Hours, RE\_gas, %FossilDHW, ISR  | IL-TRM, v12.0, Section 5.4.6  |

\* State of Illinois Technical Reference Manual version 11.0 from <http://www.ilsag.info/technical-reference-manual.html>

GPH – Gallons per hour, DHW – Domestic hot water, GPM – Gallons per minute

SF – Single family, MF – Multi family

ISR – In-service rate

Source: Guidehouse evaluation team analysis

##### Appendix B. Program Specific Inputs for the Illinois TRC

Table B‑1 and Table B‑2 show the Total Resource Cost (TRC) cost-effectiveness analysis inputs available at the time of producing this impact evaluation report. Currently, 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 B‑1. Verified Cost Effectiveness Inputs – PGL

| **Program Category** | **Program Path** | **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)** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| EEO Kits | Market Rate | Window Insulation Kit (5-pack) | FALSE | Each | 6,170  |  1.0  | NO | 37,606  |  37,595  |  40,715  |
|  |  | Low Flow Showerheads  | FALSE | Each | 6,170  |  10.0  | NO | 29,727  |  29,728  |  32,196  |
|  |  | Closed Foam Weatherstripping (17' Roll) | FALSE | Ln Ft | 6,170  |  20.0  | NO | 22,706  |  22,703  |  24,588  |
|  |  | Self-Adhesive Door Sweep | FALSE | Each | 6,170  |  20.0  | NO | 20,022  |  20,022  |  21,684  |
|  |  | Shower Timer | FALSE | Each | 6,170  |  2.0  | NO | 16,789  |  16,790  |  18,183  |
|  |  | Low Flow Aerators (Bathroom) | FALSE | Each | 12,340  |  10.0  | NO | 4,776  |  4,776  |  5,172  |
|  |  | Low Flow Aerators (Kitchen)  | FALSE | Each | 6,170  |  10.0  | NO | 3,955  |  3,955  |  4,283  |
|  |  | Temperature Setback Card | FALSE | Each | 6,170  |  2.0  | NO | 636  |  1,117  |  1,209  |
| EEO Kits | Income Eligible | Window Insulation Kit (5-pack) | FALSE | Each | 12,138  |  1.0  | NO | 66,941  |  66,965  |  66,965  |
|  |  | Low Flow Showerheads  | FALSE | Each | 12,138  |  10.0  | NO | 56,466  |  56,466  |  56,466  |
|  |  | Closed Foam Weatherstripping (17' Roll) | FALSE | Ln Ft | 12,138  |  20.0  | NO | 40,444  |  40,444  |  40,444  |
|  |  | Self-Adhesive Door Sweep | FALSE | Each | 12,138  |  20.0  | NO | 35,661  |  35,661  |  35,661  |
|  |  | Shower Timer | FALSE | Each | 12,138  |  2.0  | NO | 31,887  |  31,887  |  31,887  |
|  |  | Low Flow Aerators (Bathroom) | FALSE | Each | 24,276  |  10.0  | NO | 9,079  |  9,079  |  9,079  |
|  |  | Low Flow Aerators (Kitchen)  | FALSE | Each | 12,138  |  10.0  | NO | 7,513  |  7,513  |  7,513  |
|  |  | Temperature Setback Card | FALSE | Each | 12,138  |  2.0  | NO | 1,202  |  2,124  |  2,124  |
| EEO Kits | School Intern Kit | Window Insulation Kit | FALSE | Each | 30  |  1.0  | NO | 165  |  183  |  198  |
|  |  | Rope Caulk (30') | FALSE | Each | 30  |  20.0  | NO |  177  |  167  |  180  |
|  |  | Low-Flow Showerhead (1.5 GPM) | FALSE | Each | 30  |  10.0  | NO |  117  |  145  |  157  |
|  |  | V-Seal Weatherstripping Roll (17') | FALSE | Ln Ft | 30  |  20.0  | NO |  110  |  110  |  120  |
|  |  | Closed-Cell Foam Weatherstripping (17' Roll) | FALSE | Ln Ft | 30  |  20.0  | NO |  110  |  110  |  120  |
|  |  | Self-Adhesive Door Sweep | FALSE | Each | 30  |  20.0  | NO |  96  |  97  |  105  |
|  |  | Shower Timer | FALSE | Each | 30  |  2.0  | NO |  79  |  82  |  88  |
|  |  | Bathroom Aerator (1 GPM) | FALSE | Each | 60  |  10.0  | NO |  20  |  23  |  25  |
|  |  | Outlet Gasket | FALSE | Each | 120  |  20.0  | NO |  13  |  20  |  22  |
|  |  | Switch Gasket | FALSE | Each | 120  |  20.0  | NO |  13  |  20  |  22  |
|  |  | Kitchen Aerator (1.5 GPM) | FALSE | Each | 30  |  10.0  | NO |  17  |  19  |  21  |
|  |  | Temperature Setback Card | FALSE | Each | 30  |  2.0  | NO |  1  |  5  |  6  |
| **Total or Weighted Average** | **9.6**  |  |  **386,328**  |  **387,807**  |  **399,233**  |

Source: Evaluation team analysis.

Table B-2. Verified Cost Effectiveness Inputs – NSG

| **Program Category** | **Program Path** | **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)** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| EEO Kits | Market Rate | Window Insulation Kit (5-pack) | FALSE | Each | 1,589  |  1.0  | NO | 10,575  |  10,576  |  11,454  |
|  |  | Low Flow Showerheads  | FALSE | Each | 1,589  |  10.0  | NO | 8,884  |  8,884  |  9,621  |
|  |  | Closed Foam Weatherstripping (17' Roll) | FALSE | Ln Ft | 1,589  |  20.0  | NO | 6,386  |  6,386  |  6,916  |
|  |  | Self-Adhesive Door Sweep | FALSE | Each | 1,589  |  20.0  | NO | 5,633  |  5,633  |  6,101  |
|  |  | Shower Timer | FALSE | Each | 1,589  |  2.0  | NO | 5,018  |  5,018  |  5,435  |
|  |  | Low Flow Aerators (Bathroom) | FALSE | Each | 3,178  |  10.0  | NO | 1,427  |  1,427  |  1,545  |
|  |  | Low Flow Aerators (Kitchen)  | FALSE | Each | 1,589  |  10.0  | NO | 1,182  |  1,182  |  1,280  |
|  |  | Temperature Setback Card | FALSE | Each | 1,589  |  2.0  | NO | 189  |  335  |  363  |
| EEO Kits | Income Eligible | Window Insulation Kit (5-pack) | FALSE | Each | 729  |  1.0  | NO | 4,425  |  4,424  |  4,424  |
|  |  | Low Flow Showerheads  | FALSE | Each | 729  |  10.0  | NO | 4,076  |  4,076  |  4,076  |
|  |  | Closed Foam Weatherstripping (17' Roll) | FALSE | Ln Ft | 729  |  20.0  | NO | 2,672  |  2,672  |  2,672  |
|  |  | Self-Adhesive Door Sweep | FALSE | Each | 729  |  20.0  | NO | 2,356  |  2,356  |  2,356  |
|  |  | Shower Timer | FALSE | Each | 729  |  2.0  | NO | 2,302  |  2,302  |  2,302  |
|  |  | Low Flow Aerators (Bathroom) | FALSE | Each | 1,458  |  10.0  | NO | 655  |  655  |  655  |
|  |  | Low Flow Aerators (Kitchen)  | FALSE | Each | 729  |  10.0  | NO | 542  |  542  |  542  |
|  |  | Temperature Setback Card | FALSE | Each | 729  |  2.0  | NO | 87  |  154  |  154  |
| **Total or Weighted Average** |  |  |  |  | **9.5**  |  |  **56,409**  |  **56,623**  |  **59,897**  |

Source: Evaluation team analysis.