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|  | C&I and Public Sector Prescriptive Impact Evaluation ReportEnergy Efficiency Plan: Program Year 2024 (1/1/2024-12/31/2024) |
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# Introduction

This report presents the results of the impact evaluation of the Peoples Gas (PGL) and North Shore Gas (NSG) 2024 Commercial and Industrial (C&I) and Public Sector Prescriptive 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 PGL and NSG comprehensive business programs combine offerings into program paths and allow eligible C&I and Public Sector customers access to any of the paths[[1]](#footnote-2) based on the needs of each customer. This report covers evaluation activities for measures installed and natural gas savings realized through the Prescriptive Rebate path, referred to as the Prescriptive program in this report. The program provides standardized incentives to cover part of the measure costs for existing commercial, industrial, and public sector buildings. The incentives focus on energy efficient measures such as heating systems, water heating systems, pipe and storage tank insulation, steam traps, and food service equipment.

The program had 43 participants (36 C&I and 7 public sector participants) in 2024 and completed 152 projects (42 C&I and 110 public sector projects) as shown in the following table.

Table 1. 2024 Volumetric Summary for PGL

| **Participation** | **Total** |
| --- | --- |
| **C&I Sector** |  |
| Participants \* | 36 |
| Installed Projects † | 42 |
| Measure Types Installed ‡ | 16 |
| **Public Sector** |  |
| Participants \* | 7 |
| Installed Projects † | 110 |
| Measure Types Installed ‡ | 18 |
| **Program 2024 Total** |  |
| Participants \* | 43 |
| Installed Projects † | 152 |
| Measure Types Installed ‡ | 25 |

\* Participants are defined as the distinct count of Account Name.

† Installed Projects are defined as the distinct count of Work Order

IDs not including Steam Trap Test and Bonus measures.

‡ Measure Types Installed are the distinct count of TRM measure

names not including Steam Trap Test and Bonus measures.

*Source: Peoples Gas tracking data.*

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** |
| --- | --- | --- | --- | --- |
| C&I | Prescriptive | Boiler Tune Up - Process | MBH | 271,827 |
| C&I | Prescriptive | Boiler Tune Up - Space Heating | MBH | 25,106 |
| C&I | Prescriptive | Dock Door Seals | Each | 4 |
| C&I | Prescriptive | Draft Controls | MBH | 62,604 |
| C&I | Prescriptive | Infrared Heater | MBH | 200 |
| C&I | Prescriptive | Linkageless Boiler Controls for Space Heating | MBH | 99,186 |
| C&I | Prescriptive | Prescriptive Change Other | Each | 2,700 |
| C&I | Prescriptive | Prescriptive Change Steam Trap | Projects | 11 |
| C&I | Prescriptive | Steam Traps - HVAC Repair/Rep High | Each | 12 |
| C&I | Prescriptive | Steam Traps - HVAC Repair/Rep Low | Each | 183 |
| C&I | Prescriptive | Steam Traps - Industrial Rep | Projects | 70 |
| Public | Prescriptive | Boiler Tune Up - Space Heating | MBH | 238,764 |
| Public | Prescriptive | Business Furnace RTU Tune-Up | MBH | 2,400 |
| Public | Prescriptive | Demand Controlled Ventilation | Sq Ft | 27,630 |
| Public | Prescriptive | High Efficiency Boiler | MBH | 17,725 |
| Public | Prescriptive | Prescriptive Change Other | Each | 2 |
| Public | Prescriptive | Prescriptive Change Steam Trap | Projects | 4 |
| Public | Prescriptive | Steam Pipe Insulation | Ln Ft. | 8,993 |
| Public | Prescriptive | Steam Pipe Insulation - Fitting | Ln Ft. | 1,642 |
| Public | Prescriptive | Steam Pipe Insulation - Valve | Ln Ft. | 423 |
| Public | Prescriptive | Steam Traps - HVAC Repair/Rep Low | Each | 867 |
| Public | Prescriptive | Steam Traps - Industrial Rep | Projects | 6 |
| Public | Prescriptive | Storage Water Heater (Large) | MBH | 1,967.8 |

Source: Peoples Gas tracking data and evaluation team analysis.

The NSG program had 10 participants (5 C&I and 5 public sector participants) in 2024 and completed 46 projects (6 C&I and 40 public sector projects) as shown in the following table.

Table 3. 2024 Volumetric Summary for NSG

| **Participation** | **Total** |
| --- | --- |
| **C&I Sector** |  |
| Participants \* | 5 |
| Installed Projects † | 6 |
| Measure Types Installed ‡ | 6 |
| **Public Sector** |  |
| Participants \* | 5 |
| Installed Projects † | 40 |
| Measure Types Installed ‡ | 3 |
| **Program 2024 Total** |  |
| Participants \* | 10 |
| Installed Projects † | 46 |
| Measure Types Installed ‡ | 7 |

\* Participants are defined as the distinct count of Account Name.

† Installed Projects are defined as the distinct count of Work Order

IDs not including Steam Trap Test and Bonus measures.

‡ Measure Types Installed are the distinct count of TRM measure

names not including Steam Trap Test and Bonus measures.

*Source: North Shore Gas tracking data.*

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** |
| --- | --- | --- | --- | --- |
| C&I | Prescriptive | Boiler Tune Up - Process | MBH | 124,170 |
| C&I | Prescriptive | Prescriptive Change Steam Trap | Projects | 1 |
| C&I | Prescriptive | Steam Traps - HVAC Repair/Rep Low | Each | 281 |
| C&I | Prescriptive | Steam Traps - Industrial Rep | Projects | 6 |
| Public | Prescriptive | Boiler Tune Up - Process | MBH | 5,490 |
| Public | Prescriptive | Boiler Tune Up - Space Heating | MBH | 217,916 |
| Public | Prescriptive | Steam Traps - HVAC Repair/Rep Low | Each | 136 |

Source: North Shore Gas tracking data and evaluation team analysis

# Program Savings Detail

Table 5 summarizes the energy savings the PGL Prescriptive Program achieved by path in 2024. Projects in disadvantaged communities (DAC) designated sites have a verified net-to-gross ratio (NTG) of 1.00.

Table 5. 2024 Annual Energy Savings Summary for PGL

| **Program Category** | **Program Path** | **DAC Project** | **Ex Ante Gross Savings (Therms)** | **Verified Gross RR\*** | **Verified Gross Savings (Therms)** | **NTG†** | **Verified Net Savings (Therms)** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| C&I | Prescriptive | FALSE | 1,126,738 | 1.00 | 1,126,740 | 0.91 | 1,025,334 |
| C&I | Prescriptive | TRUE | 639,646 | 1.00 | 639,646 | 1.00 | 639,646 |
| Public | Prescriptive | FALSE | 361,187 | 1.00 | 361,363 | 0.92 | 332,454 |
| Public | Prescriptive | TRUE | 600,424 | 1.00 | 597,783 | 1.00 | 597,783 |
| **Total** |  |  | **2,727,994** | **1.00** | **2,725,533** |  | **2,595,217** |

\* 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/>. Disadvantaged communities (DAC) designated sites based on census tract and consumption data use an NTG of 1.00.

Source: Evaluation team analysis.

Table 6 summarizes the energy savings the NSG Prescriptive Program achieved by path in 2024. Projects in DAC designated sites have a verified NTG of 1.00 if they meet the size criteria.

Table 6. 2024 Annual Energy Savings Summary for NSG

| **Program Category** | **Program Path** | **DAC Project** | **Ex Ante Gross Savings (Therms)** | **Verified Gross RR\*** | **Verified Gross Savings (Therms)** | **NTG†** | **Verified Net Savings (Therms)** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| C&I | Prescriptive | FALSE | 573,535 | 1.00 | 573,535 | 0.91 | 521,917 |
| C&I | Prescriptive | TRUE | 236,708 | 1.00 | 236,708 | 1.00 | 236,708 |
| Public | Prescriptive | FALSE | 25,763 | 1.00 | 25,763 | 0.92 | 23,702 |
| Public | Prescriptive | TRUE | 192,220 | 1.00 | 192,220 | 1.00 | 192,220 |
| **Total** |  |  | **1,028,227** | **1.00** | **1,028,227** |  | **974,548** |

\* 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/>. Disadvantaged communities (DAC) designated sites based on census tract and consumption data use an NTG of 1.00.

Source: Evaluation team analysis.

# Program Savings by Measure

The PGL program includes 18 measures as shown in the following table. The Boiler Tune Up and Steam Trap measures contributed the most savings.

Table 7. 2024 Annual Energy Savings by Measure for PGL

| **Program Category** | **Program Path** | **DAC Project** | **Savings Category** | **Ex Ante Gross Savings (Therms)** | **Verified Gross RR\*** | **Verified Gross Savings (Therms)** | **NTG†** | **Verified Net Savings (Therms)** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| C&I | Prescriptive | FALSE | Boiler Tune Up - Process | 250,191 | 1.00 | 250,191 | 0.91 | 227,674 |
| C&I | Prescriptive | FALSE | Boiler Tune Up - Space Heating | 10,351 | 1.00 | 10,351 | 0.91 | 9,420 |
| C&I | Prescriptive | FALSE | Draft Controls | 9,146 | 1.00 | 9,146 | 0.91 | 8,323 |
| C&I | Prescriptive | FALSE | Linkageless Boiler Controls for Space Heating | 55,761 | 1.00 | 55,764 | 0.91 | 50,745 |
| C&I | Prescriptive | FALSE | Prescriptive Change Steam Trap | 25,984 | 1.00 | 25,984 | 0.91 | 23,646 |
| C&I | Prescriptive | FALSE | Steam Traps - HVAC Repair/Rep High | 4,426 | 1.00 | 4,426 | 0.91 | 4,028 |
| C&I | Prescriptive | FALSE | Steam Traps - HVAC Repair/Rep Low | 130,257 | 1.00 | 130,257 | 0.91 | 118,534 |
| C&I | Prescriptive | FALSE | Steam Traps - Industrial Rep | 640,621 | 1.00 | 640,621 | 0.91 | 582,965 |
| Public | Prescriptive | FALSE | Boiler Tune Up - Space Heating | 50,723 | 1.00 | 50,900 | 0.92 | 46,828 |
| Public | Prescriptive | FALSE | High Efficiency Boiler | 15,034 | 1.00 | 15,034 | 0.92 | 13,831 |
| Public | Prescriptive | FALSE | Prescriptive Change Steam Trap | 5,312 | 1.00 | 5,312 | 0.92 | 4,887 |
| Public | Prescriptive | FALSE | Steam Pipe Insulation | 34,110 | 1.00 | 34,110 | 0.92 | 31,381 |
| Public | Prescriptive | FALSE | Steam Pipe Insulation - Fitting | 3,590 | 1.00 | 3,590 | 0.92 | 3,303 |
| Public | Prescriptive | FALSE | Steam Pipe Insulation - Valve | 1,861 | 1.00 | 1,861 | 0.92 | 1,713 |
| Public | Prescriptive | FALSE | Steam Traps - HVAC Repair/Rep Low | 238,144 | 1.00 | 238,144 | 0.92 | 219,092 |
| Public | Prescriptive | FALSE | Steam Traps - Industrial Rep | 11,621 | 1.00 | 11,621 | 0.92 | 10,691 |
| Public | Prescriptive | FALSE | Storage Water Heater (Large) | 792 | 1.00 | 792 | 0.92 | 729 |
| ***Non-DAC Subtotal*** |  |  | ***1,487,924*** | ***1.00*** | ***1,488,104*** |  | ***1,357,788*** |
| C&I | Prescriptive | TRUE | Boiler Tune Up - Process | 27,816 | 1.00 | 27,816 | 1.00 | 27,816 |
| C&I | Prescriptive | TRUE | Dock Door Seals | 940 | 1.00 | 940 | 1.00 | 940 |
| C&I | Prescriptive | TRUE | Infrared Heater | 358 | 1.00 | 358 | 1.00 | 358 |
| C&I | Prescriptive | TRUE | Prescriptive Change Other | 2,700 | 1.00 | 2,700 | 1.00 | 2,700 |
| C&I | Prescriptive | TRUE | Prescriptive Change Steam Trap | 57,688 | 1.00 | 57,688 | 1.00 | 57,688 |
| C&I | Prescriptive | TRUE | Steam Traps - HVAC Repair/Rep Low | 12,480 | 1.00 | 12,480 | 1.00 | 12,480 |
| C&I | Prescriptive | TRUE | Steam Traps - Industrial Rep | 537,665 | 1.00 | 537,665 | 1.00 | 537,665 |
| Public | Prescriptive | TRUE | Boiler Tune Up - Space Heating | 64,913 | 0.96 | 62,115 | 1.00 | 62,115 |
| Public | Prescriptive | TRUE | Business Furnace RTU Tune-Up | 911 | 1.00 | 911 | 1.00 | 911 |
| Public | Prescriptive | TRUE | Demand Controlled Ventilation | 1,989 | 1.00 | 1,989 | 1.00 | 1,989 |
| Public | Prescriptive | TRUE | High Efficiency Boiler | 11,707 | 1.01 | 11,865 | 1.00 | 11,865 |
| Public | Prescriptive | TRUE | Prescriptive Change Steam Trap | 10,516 | 1.00 | 10,516 | 1.00 | 10,516 |
| Public | Prescriptive | TRUE | Steam Pipe Insulation | 15,077 | 1.00 | 15,077 | 1.00 | 15,077 |
| Public | Prescriptive | TRUE | Steam Pipe Insulation - Fitting | 1,263 | 1.00 | 1,263 | 1.00 | 1,263 |
| Public | Prescriptive | TRUE | Steam Pipe Insulation - Valve | 4,601 | 1.00 | 4,601 | 1.00 | 4,601 |
| Public | Prescriptive | TRUE | Steam Traps - HVAC Repair/Rep Low | 428,990 | 1.00 | 428,990 | 1.00 | 428,990 |
| Public | Prescriptive | TRUE | Steam Traps - Industrial Rep | 59,880 | 1.00 | 59,880 | 1.00 | 59,880 |
| Public | Prescriptive | TRUE | Storage Water Heater (Large) | 575 | 1.00 | 575 | 1.00 | 575 |
| ***DAC Subtotal*** |  |  | ***1,240,070*** | ***1.00*** | ***1,237,429*** |  | ***1,237,429*** |
| **Total** |  |  |  | **2,727,994** | **1.00** | **2,725,533** |  | **2,595,217** |

\* 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/>. Disadvantaged communities (DAC) designated sites based on census tract and consumption data use an NTG of 1.00.

Source: Evaluation team analysis.

The NSG program includes 5 measures as shown in the following table. The Steam Trap measures contributed the most savings.

Table 8. 2024 Annual Energy Savings by Measure for NSG

| **Program Category** | **Program Path** | **DAC Project** | **Savings Category** | **Ex Ante Gross Savings (Therms)** | **Verified Gross RR\*** | **Verified Gross Savings (Therms)** | **NTG†** | **Verified Net Savings (Therms)** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| C&I | Prescriptive | FALSE | Boiler Tune Up - Process | 126,993 | 1.00 | 126,993 | 0.91 | 115,564 |
| C&I | Prescriptive | FALSE | Prescriptive Change Steam Trap | 1,516 | 1.00 | 1,516 | 0.91 | 1,380 |
| C&I | Prescriptive | FALSE | Steam Traps - HVAC Repair/Rep Low | 219,175 | 1.00 | 219,175 | 0.91 | 199,449 |
| C&I | Prescriptive | FALSE | Steam Traps - Industrial Rep | 225,851 | 1.00 | 225,851 | 0.91 | 205,524 |
| Public | Prescriptive | FALSE | Boiler Tune Up - Process | 3,222 | 1.00 | 3,222 | 0.92 | 2,964 |
| Public | Prescriptive | FALSE | Boiler Tune Up - Space Heating | 22,541 | 1.00 | 22,541 | 0.92 | 20,738 |
| ***Non-DAC Subtotal*** |  |  | ***599,298*** | ***1.00*** | ***599,298*** |  | ***545,619*** |
| C&I | Prescriptive | TRUE | Steam Traps - Industrial Rep | 236,708 | 1.00 | 236,708 | 1.00 | 236,708 |
| Public | Prescriptive | TRUE | Boiler Tune Up - Process | 2,393 | 1.00 | 2,393 | 1.00 | 2,393 |
| Public | Prescriptive | TRUE | Boiler Tune Up - Space Heating | 83,750 | 1.00 | 83,750 | 1.00 | 83,750 |
| Public | Prescriptive | TRUE | Steam Traps - HVAC Repair/Rep Low | 106,078 | 1.00 | 106,077 | 1.00 | 106,077 |
| ***DAC-Subtotal*** |  |  | ***428,929*** | ***1.00*** | ***428,929*** |  | ***428,929*** |
| **Total** |  |  |  | **1,028,227** | **1.00** | **1,028,227** |  | **974,548** |

\* 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/>. Disadvantaged communities (DAC) designated sites based on census tract and consumption data use an NTG of 1.00.

Source: Evaluation team analysis.

# Impact Analysis Findings and Recommendations

## Impact Parameter Estimates

Table 9 shows the unit therm savings and realization rate findings by measure from our review. The realization rate is the ratio of the verified savings to the ex ante savings. Following the table, we provide findings and recommendations, including 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) |
| --- | --- | --- | --- | --- | --- |
| Boiler Tune Up - Process | MBH | Varies | Varies | 1.00 | IL TRM v12.0 Section 4.4.3† |
| Boiler Tune Up - Space Heating | MBH | Varies | Varies | 0.99 | IL TRM v12.0 Section 4.4.2 |
| Business Furnace RTU Tune-Up | MBH | Varies | Varies | 1.00 | IL TRM v12.0 Section 4.4.31 |
| Demand Controlled Ventilation | Sq Ft | 0.072 | 0.072 | 1.00 | IL TRM v12.0, Section 4.4.19 |
| Dock Door Seals | Each | 234.9475 | 234.9483 | 1.00 | MMDB |
| Draft Controls | MBH | Varies | Varies | 1.00 | IL TRM v12.0, Section 4.4.23 |
| High Efficiency Boiler | MBH | Varies | Varies | 1.01 | IL TRM v12.0, Section 4.4.10 |
| Infrared Heater | MBH | Varies | Varies | 1.00 | IL TRM v12.0, Section 4.4.12 |
| Linkageless Boiler Controls for Space Heating | MBH | Varies | Varies | 1.00 | IL TRM v12.0, Section 4.4.21 |
| Prescriptive Change Other | Each | Custom Calculation | Custom Calculation | 1.00 | PTD\*, MMDB |
| Prescriptive Change Steam Trap | Projects | Custom Calculation | Custom Calculation | 1.00 | PTD, MMDB |
| Steam Pipe Insulation | Ln Ft. | Varies | Varies | 1.00 | PTD, MMDB |
| Steam Pipe Insulation - Fitting | Ln Ft. | Varies | Varies | 1.00 | PTD, MMDB |
| Steam Pipe Insulation - Valve | Ln Ft. | Varies | Varies | 1.00 | PTD, MMDB |
| Steam Traps - HVAC Repair/Rep High | Each | Varies | Varies | 1.00 | IL TRM v12.0, Section 4.4.16, PTD, MMDB |
| Steam Traps - HVAC Repair/Rep Low | Each | Varies | Varies | 1.00 | IL TRM v12.0, Section 4.4.16, PTD, MMDB |
| Steam Traps - Industrial Rep | Projects | Varies | Varies | 1.00 | IL TRM v12.0, Section 4.4.16 |
| Storage Water Heater (Large) | MBH | Varies | Varies | 1.00 | IL TRM v12.0, Section 4.3.1 |

\* 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>.

MMDB – Master Measure Database from PG and NSG.

Source: Evaluation team analysis.

## Findings and Recommendations

The following are findings and recommendations from the evaluation team, all findings are minor.

**Finding 1.** The evaluation team found some boiler measures are not utilizing the business type provided in the tracking data to inform the Hours variable in ex ante savings calculations. Verified savings use an Hours value based on the business type provided in the tracking data.

* The Boiler Tune Up - Space Heating measure in Work Order ID WO-6446113 is listed as a Government business type in the tracking data but ex ante savings use an Office business type.
* The Boiler Tune Up - Space Heating measures in Work Order ID WO-4296960 are listed as a K-12 School business type in the tracking data but ex ante savings use a Government business type.
* The Boiler Tune Up - Space Heating measures in Work Order ID WO-4297209 are listed as a WareHouse business type in the tracking data but ex ante savings use an Unknown business type.
* The High Efficiency Boiler measure in Work Order ID WO-5616996 is listed as an Other business type in the tracking data but ex ante savings use an Office business type.

 **Recommendation 1.** Ensure ex ante savings reflect the information provided in the tracking data.

**Finding 2.** The evaluation team matched per-unit incentive amounts in the tracking data to incentive amounts in the MMDB to identify the Steam Pipe Insulation measures’ size. The MMDB does not contain incentive information for the Steam Pipe Insulation – Fitting and Steam Pipe Insulation – Valve measures’ small sizes, so the evaluation team assumed these coordinated with the tracking data’s per-unit incentive amounts of 10 and 30 respectively. Size information was then used to determine verified per-unit savings as no savings inputs were provided in the tracking data. This did not impact the realization rates.

 **Recommendation 2.** Ensure all information required to determine the Steam Pipe Insulation savings is provided to the evaluation team in the tracking data, either all calculation variables or enough information to determine per-unit savings from the MMDB. Since the evaluation team relied on tracking data incentive amounts, ensure these values were entered correctly.

**Finding 3.** The evaluation team used ex ante per-unit savings and details provided in the 2024 Mid-year Summary Findings to determine that Steam Traps – HVAC Repair/Rep measures in Work Order IDs WO-4297182, WO-5917423, and WO-5997695 were High pressure measures with a steam pressure of 15 and above. All other measures were Low pressure measures with a steam pressure default of 14.99. This pressure information determined the values used in savings calculations, there was no impact on the realization rates.

 **Recommendation 3.** Provide the steam pressure information in the tracking data. The evaluation team also recommends specifying High or Low pressure in the measure name.

**Finding 4.** The evaluation team found two instances of the Prescriptive Change Other measure, Work Order IDs WO-6965297 and WO-6965339, reported a quantity of one and zero ex ante savings in the tracking data. These measures have verified savings of zero and are included in the report to ensure verified values account for all quantities. This had no impact on the realization rate.

 **Recommendation 4.** Ensure all measures with positive quantity values but zero ex ante savings, except for Steam Trap Test or Bonus measures, are explained in the tracking data.

**Finding 5.** The evaluation team use a NTG of 1.00 to calculate verified net therms savings for all measures in DAC eligible designated sites that met the size criteria, eligibility determined using a provided supplemental file. The ex ante net savings values provided in the program tracking data for DAC measures do not reflect a NTG value of 1.00. The evaluation team utilized the ex ante gross savings values provided in the tracking data for reporting purposes, so there is no impact to the realization rates of these DAC measures.

 **Recommendation 5.** Ensure the tracking data incorporates DAC eligibility and the proper NTG value when calculating ex ante net savings values.

##### Appendix A. Impact Analysis Methodology

Guidehouse determined verified gross savings for each program measure by:

1. Utilizing a provided supplemental file to identify measures in a DAC designated site.
2. Reviewing the savings algorithm inputs in the MMDB for agreement with the IL TRM v12.0 and IL TRM v12.0 errata memo or evaluation research for non-deemed measures or custom inputs.
3. Validating that the savings algorithm was applied correctly.
4. Cross-checking per-unit savings values in the tracking data with the verified values in the MMDB or Guidehouse’s calculations if the MMDB did not agree with the IL TRM v12.0 or IL TRM v12.0 errata memo.
5. Multiplying the verified per-unit savings value by the quantity reported in the program tracking data to substantiate the type and quantity of measures installed.

Verified gross realization rates are calculated by dividing the verified gross savings by the ex ante gross savings. We calculated verified net energy savings by multiplying the verified gross savings estimates by a deemed NTG. The 2024 NTG were based on past evaluation research and defined by a consensus process through SAG.[[2]](#footnote-3) Economically-disadvantaged areas were identified by census track and evaluation used NTG of 1.00 for DAC projects’ verified savings when they met the size criteria, based on Illinois Policy Manual 3.0.[[3]](#footnote-4)

##### 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†** | **Verified Gross Annual Water Savings (Gallons)** | **Ex Ante Gross Savings (Therms)** | **Verified Gross Savings (Therms)** | **Verified Net Savings (Therms)** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| C&I | Direct Install | Boiler Tune Up - Process | FALSE | MBH | 244,629 | 2.00 | NO | 0 | 250,191 | 250,191 | 227,674 |
| C&I | Direct Install | Boiler Tune Up - Space Heating | FALSE | MBH | 25,106 | 3.00 | NO | 0 | 10,351 | 10,351 | 9,420 |
| C&I | Direct Install | Draft Controls | FALSE | MBH | 62,604 | 15.00 | NO | 0 | 9,146 | 9,146 | 8,323 |
| C&I | Direct Install | Linkageless Boiler Controls for Space Heating | FALSE | MBH | 99,186 | 20.00 | NO | 0 | 55,761 | 55,764 | 50,745 |
| C&I | Direct Install | Prescriptive Change Steam Trap | FALSE | Projects | 9 | 6.00 | NO | 0 | 25,984 | 25,984 | 23,646 |
| C&I | Direct Install | Steam Traps - HVAC Repair/Rep High | FALSE | Each | 12 | 6.00 | NO | 9,428 | 4,426 | 4,426 | 4,028 |
| C&I | Direct Install | Steam Traps - HVAC Repair/Rep Low | FALSE | Each | 167 | 6.00 | NO | 66,881 | 130,257 | 130,257 | 118,534 |
| C&I | Direct Install | Steam Traps - Industrial Rep | FALSE | Projects | 46 | 6.00 | NO | 1,182,007 | 640,621 | 640,621 | 582,965 |
| C&I | Direct Install | Boiler Tune Up - Process | TRUE | MBH | 27,198 | 2.00 | NO | 0 | 27,816 | 27,816 | 27,816 |
| C&I | Direct Install | Dock Door Seals | TRUE | Each | 4 | 15.00 | NO | 0 | 940 | 940 | 940 |
| C&I | Direct Install | Infrared Heater | TRUE | MBH | 200 | 15.00 | NO | 0 | 358 | 358 | 358 |
| C&I | Direct Install | Prescriptive Change Other | TRUE | Each | 2,700 | 6.30 | NO | 0 | 2,700 | 2,700 | 2,700 |
| C&I | Direct Install | Prescriptive Change Steam Trap | TRUE | Projects | 2 | 6.00 | NO | 0 | 57,688 | 57,688 | 57,688 |
| C&I | Direct Install | Steam Traps - HVAC Repair/Rep Low | TRUE | Each | 16 | 6.00 | NO | 33,441 | 12,480 | 12,480 | 12,480 |
| C&I | Direct Install | Steam Traps - Industrial Rep | TRUE | Projects | 24 | 6.00 | NO | 773,870 | 537,665 | 537,665 | 537,665 |
| Public | Prescriptive | Boiler Tune Up - Space Heating | FALSE | MBH | 104,560 | 3.00 | NO | 0 | 50,723 | 50,900 | 46,828 |
| Public | Prescriptive | High Efficiency Boiler | FALSE | MBH | 9,500 | 25.00 | NO | 0 | 15,034 | 15,034 | 13,831 |
| Public | Prescriptive | Prescriptive Change Steam Trap | FALSE | Projects | 2 | 6.00 | NO | 0 | 5,312 | 5,312 | 4,887 |
| Public | Prescriptive | Steam Pipe Insulation | FALSE | Ln Ft. | 6,032 | 15.00 | NO | 0 | 34,110 | 34,110 | 31,381 |
| Public | Prescriptive | Steam Pipe Insulation - Fitting | FALSE | Ln Ft. | 1,396 | 15.00 | NO | 0 | 3,590 | 3,590 | 3,303 |
| Public | Prescriptive | Steam Pipe Insulation - Valve | FALSE | Ln Ft. | 183 | 15.00 | NO | 0 | 1,861 | 1,861 | 1,713 |
| Public | Prescriptive | Steam Traps - HVAC Repair/Rep Low | FALSE | Each | 317 | 6.00 | NO | 164,127 | 238,144 | 238,144 | 219,092 |
| Public | Prescriptive | Steam Traps - Industrial Rep | FALSE | Projects | 2 | 6.00 | NO | 29,732 | 11,621 | 11,621 | 10,691 |
| Public | Prescriptive | Storage Water Heater (Large) | FALSE | MBH | 1,139.8 | 15.00 | NO | 0 | 792 | 792 | 729 |
| Public | Prescriptive | Boiler Tune Up - Space Heating | TRUE | MBH | 134,204 | 3.00 | NO | 0 | 64,913 | 62,115 | 62,115 |
| Public | Prescriptive | Business Furnace RTU Tune-Up | TRUE | MBH | 2,400 | 3.00 | NO | 0 | 911 | 911 | 911 |
| Public | Prescriptive | Demand Controlled Ventilation | TRUE | Sq Ft | 27,630 | 10.00 | NO | 0 | 1,989 | 1,989 | 1,989 |
| Public | Prescriptive | High Efficiency Boiler | TRUE | MBH | 8,225 | 25.00 | NO | 0 | 11,707 | 11,865 | 11,865 |
| Public | Prescriptive | Prescriptive Change Steam Trap | TRUE | Projects | 2 | 6.00 | NO | 0 | 10,516 | 10,516 | 10,516 |
| Public | Prescriptive | Steam Pipe Insulation | TRUE | Ln Ft. | 2,961 | 15.00 | NO | 0 | 15,077 | 15,077 | 15,077 |
| Public | Prescriptive | Steam Pipe Insulation - Fitting | TRUE | Ln Ft. | 246 | 15.00 | NO | 0 | 1,263 | 1,263 | 1,263 |
| Public | Prescriptive | Steam Pipe Insulation - Valve | TRUE | Ln Ft. | 240 | 15.00 | NO | 0 | 4,601 | 4,601 | 4,601 |
| Public | Prescriptive | Steam Traps - HVAC Repair/Rep Low | TRUE | Each | 550 | 6.00 | NO | 220,709 | 428,990 | 428,990 | 428,990 |
| Public | Prescriptive | Steam Traps - Industrial Rep | TRUE | Projects | 4 | 6.00 | NO | 141,125 | 59,880 | 59,880 | 59,880 |
| Public | Prescriptive | Storage Water Heater (Large) | TRUE | MBH | 828 | 15.00 | NO | 0 | 575 | 575 | 575 |
| **Total or Weighted Average** |  |  |  |  | **6.17** |  | **2,621,320** | **2,727,994** | **2,725,533** | **2,595,217** |

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†** | **Verified Gross Annual Water Savings (Gallons)** | **Ex Ante Gross Savings (Therms)** | **Verified Gross Savings (Therms)** | **Verified Net Savings (Therms)** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| C&I | Prescriptive | Boiler Tune Up - Process | FALSE | MBH | 124,170 | 2.00 | NO | 0 | 126,993 | 126,993 | 115,564 |
| C&I | Prescriptive | Prescriptive Change Steam Trap | FALSE | Projects | 1 | 6.00 | NO | 0 | 1,516 | 1,516 | 1,380 |
| C&I | Prescriptive | Steam Traps - HVAC Repair/Rep Low | FALSE | Each | 281 | 6.00 | NO | 6,688 | 219,175 | 219,175 | 199,449 |
| C&I | Prescriptive | Steam Traps - Industrial Rep | FALSE | Projects | 3 | 6.00 | NO | 97,562 | 225,851 | 225,851 | 205,524 |
| C&I | Prescriptive | Steam Traps - Industrial Rep | TRUE | Projects | 3 | 6.00 | NO | 144,355 | 236,708 | 236,708 | 236,708 |
| Public | Prescriptive | Boiler Tune Up - Process | FALSE | MBH | 3,150 | 2.00 | NO | 0 | 3,222 | 3,222 | 2,964 |
| Public | Prescriptive | Boiler Tune Up - Space Heating | FALSE | MBH | 46,276 | 3.00 | NO | 0 | 22,541 | 22,541 | 20,738 |
| Public | Prescriptive | Boiler Tune Up - Process | TRUE | MBH | 2,340 | 2.00 | NO | 0 | 2,393 | 2,393 | 2,393 |
| Public | Prescriptive | Boiler Tune Up - Space Heating | TRUE | MBH | 171,640 | 3.00 | NO | 0 | 83,750 | 83,750 | 83,750 |
| Public | Prescriptive | Steam Traps - HVAC Repair/Rep Low | TRUE | Each | 136 | 6.00 | NO | 46,817 | 106,078 | 106,077 | 106,077 |
| **Total or Weighted Average** |  |  |  | **5.17** |  | **295,422** | **1,028,227** | **1,028,227** | **974,548** |

Source: Evaluation team analysis.

1. The comprehensive business program paths include – Energy Jumpstart (direct installation of free energy saving products), Engineering Studies and staffing assistance, Prescriptive Rebates, Custom Rebates, and Gas Optimization. Only prescriptive program is included in this report. The custom and gas optimization projects are evaluated and reported separately. [↑](#footnote-ref-2)
2. A deemed value. Available on the SAG website: <https://www.ilsag.info/evaluator-ntg-recommendations-for-2024/> [↑](#footnote-ref-3)
3. https://www.ilsag.info/wp-content/uploads/IL\_EE\_Policy\_Manual\_Version\_3.0\_Final\_11-3-2023.pdf [↑](#footnote-ref-4)