Smart Neighborhood Builder Program Impact Evaluation Report

Energy Efficiency Plan: Program Year 2025

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

Prepared for:

Nicor Gas Company

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1 Introduction

This report presents the results of the impact evaluation of the Nicor Gas 2025 Smart Neighborhood Builder (SNB) Program. It presents a summary of the energy impacts for the total program and broken out by relevant measure and program structure details. The appendices present the impact analysis methodology and inputs for the Illinois TRC. Program year 2025 covers January 1 to December 31, 2025. The program was designed to encourage the construction of energy-efficient new homes by incentivizing builders to construct new homes that exceed energy code requirements, resulting in reduced natural gas consumption and improved overall energy efficiency.

2 Program Description

The SNB program's objective is to obtain energy savings by increasing the energy efficiency of new construction single-family detached homes and townhomes. The program provides participating new home builders with a financial incentive to either a) exceed state and local building code requirements regarding duct and air sealing and install specific high-efficiency equipment, or b) install prescriptive high-efficiency equipment only.

The SNB program had 1,760 participants in 2025 and completed 1,762 projects as shown in Table 1.

Table 1. 2025 Volumetric Findings Detail

Participation	SNB Total
Participants *	1,760
Installed Projects †	1,760
Measure Installed‡	6

** Participants are defined as distinct count of addresses.*
† Installed Projects are defined as distinct count of project IDs.
‡ Measure Types Installed are defined as distinct count of Nicor measure names
Source: Nicor Gas tracking data and evaluation team analysis.

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

Table 2. 2025 Installed Measure Quantities

Measure	Quantity Unit	Installed Quantity
Advanced Thermostat	Unit	1,760
Air Sealing	Project	1,760
Duct Insulation and Sealing	Project	1,760
Gas High Efficiency Furnace >95% AFUE*	Unit	1,762
On Demand Water Heater	Unit	789
Storage Water Heater	Unit	413
Total		**8,244**

Source: Nicor Gas tracking data and evaluation team analysis.

3 Program Savings Detail

Table 3 summarizes the energy savings the SNB Program achieved by path in 2025. The program did not have any qualified disadvantaged community (DAC) project in 2025.

Table 3. 2025 Annual Energy Savings Summary

Program Path	Ex Ante Gross Savings (Therms)	Verified Gross RR*	Verified Gross Savings (Therms)	NTG†	NSPO‡	Verified Net Savings (Therms)
SNB	657,964	99%	651,370	0.86	1.048	559,278
Total	**657,964**	**99%**	**651,370**			**559,278**

** Realization Rate (RR) is the ratio of verified gross savings to ex ante gross savings, based on evaluation research findings.*
† The program-level NTG value is calculated as Verified Net/Verified Gross. The program-level analysis typically used measure-level deemed NTG values (see Table 4), which are listed here: https://www.ilsag.info/evaluator-ntg-recommendations-for-2025.
‡ The Non-Disadvantaged Communities net savings were multiplied by a residential non-participant spillover (NPSO) factor of 1.048.
Source: Evaluation team analysis.

4 Program Savings by Measure

The program includes six measures as shown in Table 4. The Advanced Thermostat and Gas High Efficiency Furnace measures contributed the most savings.

Table 4. 2025 Annual Energy Savings by Measure

Savings Category	Ex Ante Gross Savings (Therms)	Verified Gross RR*	Verified Gross Savings (Therms)	NTG†	NSPO‡	Verified Net Savings (Therms)
Advanced Thermostat	125,585	100%	125,664	0.90	1.048	118,526
Air Sealing	121,051	100%	121,051	0.80	1.048	101,489
Duct Insulation and Sealing	99,434	94%	93,274	0.80	1.048	78,201

Savings Category	Ex Ante Gross Savings (Therms)	Verified Gross RR*	Verified Gross Savings (Therms)	NTG†	NSPO‡	Verified Net Savings (Therms)
Gas High Efficiency Furnace >95% AFUE	237,725	100%	237,592	0.80	1.048	199,197
On Demand Water Heater	61,268	100%	61,268	0.80	1.048	51,367
Storage Water Heater	12,901	97%	12,522	0.80	1.048	10,498
Total	**657,964**	**99%**	**651,370**			**559,278**

** 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/.
‡ The Non-Disadvantaged Communities net savings were multiplied by a residential non-participant spillover (NPSO) factor of 1.048.
Source: Evaluation team analysis.

5 Impact Analysis Findings and Recommendations

5.1 Impact Parameter Estimates

Table 5 shows the unit therm savings and realization rate findings by measure. 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%. Appendix A provides a description of the impact analysis methodology.

Table 5. Verified Gross Savings Parameters

Measure	Unit Basis	Ex Ante Gross (therms/unit)	Verified Gross (therms/unit)	Realization Rate	IL TRM v13.0 Section*
Advanced Thermostat	Unit	71.35	71.40	100%	5.3.16
Air Sealing	Project	87.91	87.91	100%	5.6.1
Duct Insulation and Sealing	Project	56.50	53.00	94%	5.3.4
Gas High Efficiency Furnace >95% AFUE	Unit	134.99	134.92	100%	5.3.7
On Demand Water Heater	Unit	77.65	77.65	100%	5.4.2
Storage Water Heater	Unit	31.24	30.32	97%	5.4.2 and 4.3.1

** State of Illinois Technical Reference Manual version 13.0 from http://www.ilsag.info/technical-reference-manual.html.*
Source: Evaluation team analysis.

5.2 Findings and Recommendations

Finding 1. Ten storage water heater projects with project IDs 268164, 275076, 275520, 277043, 277299, 277571, 279442, 279907, 282154, 282656_1, had baseline Uniform Energy Factor (UEF) values greater than post-installation UEF. The verified savings resulted in negative savings, which were accounted for in the total savings, per the TRM requirement. The verified baseline UEF was based on the IL TRM deemed value for a 75-gallon medium draw storage water heater.

> **Recommendation 1.** Ensure the tracking input parameters such as storage water heater kBtu capacity, first-hour rating, and size are verified when applying deemed TRM baseline values to ensure the correct UEF baseline values are calculated for each storage water tank.

Finding 2. Duct Sealing measures had verified gross savings realization rate of 94%. The ex ante savings used the Full Load Heating Hours (FLHheat) value of 1,840 for Chicago climate zone, which comes from TRM v12.0. This value was updated in the TRM v13.0 to 1,726 hours, leading to lower verified gross savings.

> **Recommendation 2.** Ensure that the most current IL TRM deemed values are applied when calculating ex ante savings.

Appendix A. Impact Analysis Methodology

The evaluation team verified savings for each program measure by:

- Reviewing the savings algorithm inputs in the final 2025 tracking data for agreement with the IL-TRM v13.0 and IL-TRM Errata, where applicable.
- Validating the savings algorithm was applied correctly.
- Cross-checking per-unit savings values in the program tracking data with the verified values in Guidehouse's calculations.
- Multiplying the verified per-unit savings value by the quantity reported in the tracking data.
- Guidehouse calculated verified net savings by multiplying verified gross savings by a net-to-gross (NTG) of 0.90 for advanced thermostats and 0.80 for all other measures, and a residential non-participant spillover multiplier of 1.048 as deemed by the Illinois Stakeholder Advisory Group (SAG) for 2025.

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

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)
SNB	Advanced Thermostat	FALSE	Unit	1,760	11.0	NO	125,585	125,664	118,526
	Air Sealing	FALSE	Project	1,760	20.0	NO	121,051	121,051	101,489
	Duct Insulation and Sealing	FALSE	Project	1,760	20.0	NO	99,434	93,274	78,201
	Gas High Efficiency Furnace >95% AFUE	FALSE	Unit	1,761	20.0	NO	237,725	237,592	199,197
	On Demand Water Heater	FALSE	Unit	789	13.0	NO	61,268	61,268	51,367
	Storage Water Heater	FALSE	Unit	413	13.0	NO	12,901	12,522	10,498
Total or Weighted Average				**8,243**	**17.5**		**657,964**	**651,370**	**559,278**

Source: Evaluation team analysis.