**January 2023**



NJNG Moderate Income Weatherization Process Evaluation

Final Report

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Abstract

This report presents the findings from the Program Year 1 (PY1) Process Evaluation of New Jersey Natural Gas’ (NJNG) Moderate-Income Weatherization (MIW) Program. This is a new Energy Efficiency (EE) program that was created at the same time that EE program administration was transferred from the New Jersey Board of Public Utilities (BPU) to the individual utilities including NJNG on July 1, 2021. The first program year, PY1, ran from July 1, 2021 through June 30, 2022. However, NJNG initially focused on programs that were transitioning from New Jersey’s Clean Energy Program (NJCEP) and did not launch MIW until early in calendar year 2022. Because this was a new program, approved only shortly before the beginning of PY1, no MIW jobs were completed in the first program year. Additionally, during the first half of the year, NJNG focused on securing a Program Implementer to assist with the MIW administration. CLEAResult was selected for this role.

This evaluation provides a review of the program design, initial program implementation, and the data that will be available for future evaluations. The PY2 evaluation will provide estimated program impacts on energy usage, realization rates, updates needed to the Technical Reference Manual (TRM), cost-effectiveness, challenges faced, and opportunities to improve program performance.

The NJNG PY1 MIW Process Evaluation included the following research.

* Document Review: Review and analysis of all available program documentation, including the MIW plan, CLEAResult statement of work, program marketing, customer application, and a sample work scope plan.
* Interviews: In-depth telephone interviews were conducted with NJNG and CLEAResult managers and staff.
* Evaluability Assessment: We assessed the level of data available and additional data needed for an Enhanced Rigor Evaluation.[[1]](#footnote-2)
* Program Comparisons: We provide a review of process evaluation findings from other low-income and moderate-income programs offered in New Jersey and in other jurisdictions across the country. Because there were no participants in NJNG’s MIW program to date, the findings for NJNG are not available to compare at this time.
* Recommendations for Refinement: We make recommendations for program refinement based upon all the research conducted.

**Recommendations**

Recommendations based on the process evaluation findings are detailed below.

* Budgeting: Coordinate with electric utilities on expected jobs and costs prior to the next triennial to better align funding.
* MIW Job Cost Limitation: Assess whether job cost limits and health and safety spending limits are resulting in missed opportunities for cost-effective energy savings. Consider an average job cost limit instead of a limit on each job. This structure would allow for more spending in homes that have greater opportunities.
* Data Availability: Develop a method to obtain information on recommended measures that were not installed. This will provide information on whether the job cost limit should be increased to ensure that there are not missed opportunities for energy savings.[[2]](#footnote-3)
* Data Systems: Develop a portal where the customer can view the current stage of their job and key project details, such as what measures were approved and when the work will be completed.
* Program Coordination: Develop an efficient process to coordinate the MIW program with the HVAC program and the Quick Home Energy Check-Up (QHEC) program. Assess how to link the MIW program with the HPwES program so that a HPwES contractor could provide free MIW program measures to income-eligible customers.

Executive Summary

The Clean Energy Act of 2018 (CEA) called for a significant overhaul of New Jersey’s energy systems while growing the economy, building sustainable infrastructure, creating well-paying local jobs, reducing carbon emissions, and improving public health. The CEA required each New Jersey investor-owned gas and electric utility (IOU) to develop energy efficiency (EE) programs in their service territories. In response to the passage of this Act, administration of most EE programs was transitioned from the New Jersey Board of Public Utilities (BPU) to the IOUs and additional new EE programs were designed and implemented, beginning in July 2021.

The Moderate-Income Weatherization (MIW) program is one of the new programs that New Jersey Natural Gas (NJNG) was responsible for beginning in July 2021. However, NJNG initially focused on programs that were transitioning from the New Jersey Clean Energy Program (NJCEP) and did not launch MIW until early in calendar year 2022. The New Jersey Comfort Partners program that provides no-cost energy efficiency services to households at or below 250 percent of the Federal Poverty Level (FPL) began in 2002. The new MIW program expands no-cost EE service delivery to households between 251 and 400 percent of the FPL. The MIW program provides an audit with installation of low-cost measures. Based on the audit findings, air sealing and insulation may be installed, and nonfunctional heating and cooling equipment may be repaired. All program services are provided at no cost to the participant.

This report presents the findings from the Program Year 1 (PY1) Process Evaluation of NJNG’s MIW Program. Because this was a new program, approved only shortly before the beginning of PY1, no MIW jobs were completed in the first program year. This evaluation provides a review of the program design, initial program implementation, and the data that will be available for future evaluations. The PY2 evaluation will provide estimated program impacts on energy usage, realization rates, updates needed to the Technical Reference Manual (TRM), cost-effectiveness, challenges faced, and opportunities to improve program performance.

Research Methods

The NJNG PY1 MIW Process Evaluation included the following research.

* Document Review: Review and analysis of all available program documentation, including the MIW plan, CLEAResult statement of work, program marketing, customer application, and a sample work scope plan.
* Interviews: In-depth telephone interviews were conducted with NJNG and CLEAResult managers and staff.
* Evaluability Assessment: We assessed the level of data available and additional data needed for an Enhanced Rigor Evaluation.[[3]](#footnote-4)
* Program Comparisons: We provide a review of process evaluation findings from other low-income and moderate-income programs offered in New Jersey and in other jurisdictions across the country. Because there were no participants in NJNG’s MIW program to date, the findings for NJNG are not available to compare at this time.
* Recommendations for Refinement: We make recommendations for program refinement based upon all the research conducted.

Program Design

Table ES-1 displays the MIW participation and savings goals, as well as the projected expenditures based on NJNG’s program plan. NJNG was required to develop the plan in a short timeframe, and before details were agreed upon across the utilities, so it is expected that the actual program implementation will differ from these initial projections.

**Table ES-1**

**MIW Goals and Resources**

| **Metric** | **PY1** | **PY2** | **PY3** |
| --- | --- | --- | --- |
| Participants | 100 | 110 | 116 |
| Net Annual Natural Gas Savings (therms) | 34,272 | 37,699 | 39,584 |
| Net Lifetime Natural Gas Savings (therms) | 629,987 | 692,986 | 727,635 |
| Net Annual Electric Savings (kWh) | 173,864 | 191,250 | 200,812 |
| Net Lifetime Electric Savings (kWh) | 2,291,984 | 2,521,182 | 2,647,241 |
| Net Annual Peak Demand Savings (kW) | 5 | 5 | 6 |
| Net Lifetime Peak Demand Savings (kW) | 88 | 97 | 102 |
| Projected Expenditures | $2,283,306 | $2,287,063 | $2,378,238 |

“The SAVEGREEN Project Program Plan,” New Jersey Natural Gas, Published: December 21, 2020 and approved by a March 3, 2021 Board Order.

The MIW program has the following objectives.

* Achieve deep energy savings through comprehensive home retrofits.
* Increase customer awareness of how the whole house approach can improve comfort, health, safety, and home value.
* Recruit local, under-represented, and disadvantaged workers.

The MIW program is not one of the “Core” residential EE programs, but eligibility and incentives are still aligned across the utilities and customers seamlessly receive both gas and electric measures and incentives from the program even if they are served by two different utilities. The primary utility is the utility that the customer applies to for program incentives.

Eligibility

NJNG natural gas customers with income between 251 and 400 percent of the FPL who live in single-family and multi-family buildings up to three units are eligible for MIW.

Program Implementation

CLEAResult serves as the MIW Program Implementer and is responsible for coordination with NJNG, home energy assessments, delivery of eligible weatherization and health and safety measures, and quality control. They are currently delivering services and will be responsible for subcontracting to service delivery firms and training and mentoring those contractors in the future.

NJNG takes responsibility for data system development, marketing and outreach, customer application review and eligibility verification, and work scope review.

NJNG has used several marketing methods, including their website, direct mail, email, social media, presentations, Community Action Agency outreach, and mailings to participants in income-qualified programs and Overburdened Communities (OBCs).

NJNG is responsible for qualifying customers, scheduling audit appointments, and coordinating the schedules with CLEAResult. CLEAResult takes over implementation starting with the audit. CLEAResult began home assessments in mid-March 2022 and no installations were completed by the end of June 2022.

Challenges

The overriding challenge faced by NJNG was the extremely short timeline between approval of their EE plan and the July 1, 2021 implementation date for their portfolio of programs, including the transition of many programs from NJCEP. NJNG had extensive work to complete, including coordination with the other NJ utilities, setting up internal systems, data management, and hiring implementation and evaluation contractors. Another major challenge is the cost limit for jobs and health and safety measures.

NJNG noted the following additional challenges.

* Coordinating the specifics of the MIW program with the other utilities.
* Inability to make changes to the program design before the end of the first triennium.
* Contractors’ (subcontractors to be onboarded) unfamiliarity with the program.
* The RFP process for bringing on the Program Implementer.
* The short turnaround after the selection of the Program Implementer.
* Identifying the target population.
* Customers’ skepticism about a free program that provides such large benefits.
* Customer confusion about “moderate-income” framing. NJNG has moved away from that terminology when marketing the program.

NJNG continues to face minor structural challenges, including SnuggPro modifications, the evolving coordinated measures list, and the energy saving calculations.

Key Findings

Key findings from the research are summarized below.

* Evaluability Assessment: The only key data for an Enhanced Rigor Evaluation[[4]](#footnote-5) that are not available are measures that the contractor recommended (or would be recommended if a higher job budget were available) that were not installed.
* Participation: The MIW did not complete jobs in PY1 but had a good pipeline as of August 2022 with 54 audits completed, 11 approved customers not yet scheduled, six installations in progress, 35 under work scope review, and two completed projects (in PY2).
* Quality Control: In addition to implementing the MIW program, CLEAResult is under contract to conduct quality control inspections on MIW projects. This work is done by a different group than the one that provides service delivery.

CLEAResult is required to inspect the first seven jobs for any new contractor to ensure there is a solid foundation for the program. After that, they expect to inspect about 20 to 25 percent of the jobs. Nearly half of the jobs will receive at least a work-in-progress inspection, if not a full inspection. For the work-in-progress inspection, CLEAResult staff would come on site to assess the work that is being done. NJNG staff also participate in the on-site QC inspection visits.

* Energy Savings: NJNG’s MIW plan projects average participant savings goals of 342 therms and 1,739 kWh, which appear high compared to NJ Comfort Partners’ average evaluated savings based on a pre/post, weather-normalized, comparison group adjusted billing analysis.

Recommendations

Recommendations based on the process evaluation findings are detailed below.

* Budgeting: The utilities provide joint funding for MIW projects. However, there are challenges aligning the expenditures because the utilities did not coordinate their budgets to ensure that the electric utility and gas utility funding are available for the same number of jobs.

*Recommendation: Coordination on expected jobs and costs should be done prior to the next triennial to better align funding across gas and electric utilities.*

* MIW Job Cost Limitation: Costs on MIW jobs are limited to $6,000 plus $1,500 for health and safety work. It is possible that these limits create missed opportunities for cost-effective energy-saving work.

*Recommendation: Assess whether job cost limits and health and safety spending limits are resulting in missed opportunities. Consider an average job cost limit (for each contractor) instead of a limit on each job. This structure would allow for more spending in homes that have greater opportunities.*

* Data Availability: The only key data that are not available are measures that the contractor recommended (or would recommend if a higher job budget were available) that were not installed.

*Recommendation: Develop a method to obtain information on recommended measures that were not installed. This will provide information on whether the job cost limit should be increased to ensure that there are not missed opportunities for energy savings.*

* Data Systems: MIW participants do not have a tool to view the progress of their job and key project details.

*Recommendation: Develop a portal where the customer can view the current stage of their job and key project details, such as what measures were approved and when the work will be completed. This could reduce the number of incoming calls to NJNG.*

* Program Coordination: HVAC work done as part of the MIW project can be paid for out of the $1,500 health and safety budget or out of the $6,000 project budget. Since weatherization measures are the primary focus of this program, the budget for HVAC improvements is limited. However, customers who participate in MIW can also participate in the HVAC program and are eligible for higher incentives. By improving the efficiency of the home with air sealing and insulation through the MIW program, future HVAC equipment can be right sized for the smaller load needed.

*Recommendation: Develop an efficient process to coordinate the MIW program with the HVAC program and the Quick Home Energy Check-Up (QHEC) program. Assess how to link the MIW program with the HPwES program so that a HPwES contractor could provide free MIW program measures to income-eligible customers.*

# Introduction

The Clean Energy Act of 2018 (CEA) called for a significant overhaul of New Jersey’s energy systems while growing the economy, building sustainable infrastructure, creating well-paying local jobs, reducing carbon emissions, and improving public health. The CEA required each New Jersey investor-owned gas and electric utility (IOU) to develop energy efficiency (EE) programs in their service territories. In response to the passage of this Act, administration of most EE programs was transitioned from the New Jersey Board of Public Utilities (BPU) to the IOUs, and additional new EE programs were designed and implemented, beginning in July 2021. However, New Jersey Natural Gas (NJNG) initially focused on programs that were transitioning from New Jersey’s Clean Energy Program (NJCEP) and did not launch the Moderate-Income Weatherization (MIW) program until early in calendar 2022.

The MIW program is one of the new EE programs included in NJNG and the other IOUs’ plans. The New Jersey Comfort Partners program, which provides no-cost energy efficiency services to households at or below 250 percent of the Federal Poverty Level (FPL), began in 2002. The new MIW program expands no-cost EE service delivery to households between 251 and 400 percent of the FPL. The MIW program provides a home assessment with installation of low-cost measures. Based on the audit findings, air sealing and insulation may be installed, and nonfunctional heating and cooling equipment may be repaired. All program services are provided at no cost to the participant.

This report provides information to assess program design and implementation and make recommendations for program refinement. The following sections are included in the report.

* Section II – Evaluability Assessment: This section provides an overview of the program data availability and an assessment of any gaps in data needed to complete an “Enhanced Rigor” evaluation.[[5]](#footnote-6)
* Section III – Process Evaluation: This section provides a review of NJNG’s MIW design and implementation based on review of program documents and interviews with program actors.
* Section IV – Program Comparisons: This section provides a review of process evaluation findings from other low- and moderate-income energy efficiency programs around the country.

APPRISE prepared this report for New Jersey Natural Gas. Any errors or omissions in this report are the responsibility of APPRISE. Further, the statements, findings, conclusions, and recommendations are solely those of analysts from APPRISE and do not necessarily reflect the views of New Jersey Natural Gas.

# Evaluability Assessment

This section provides an assessment of data that are planned to be available for the MIW program and an assessment of any gaps in data needed to complete an “Enhanced Rigor” evaluation as specified by the New Jersey Statewide Evaluator (SWE).[[6]](#footnote-7)

MIW program data that are needed for the evaluation are summarized in Table II-1. Based on interviews with NJNG, it is expected that data availability will be parallel to that for the Home Performance with Energy Star (HPwES) program. Because the HPwES program data have been fully reviewed, there are clear expectations for the data to be available once MIW jobs are completed.

Evaluators will have the ability to download much of the needed data from the online program database. NJNG can download most of the remaining data from the SnuggPro database as requested. The few exceptions are as follows.

* Recommended Measures: Measures that were recommended by the contractor (or would be recommended if a higher job budget were available) but not approved or installed are not expected to be included in the data.
* Energy Savings: Electric demand savings may not be included if initial data availability is parallel to HPwES. Gas demand savings are also unavailable since the methodology has not yet been defined by the utility Evaluation, Measurement, and Verification (EM&V) group.

**Table II-1**

**MIW Program Data Assessment**

| **Type** | **Variables** | **Use** | **Availability** |
| --- | --- | --- | --- |
| Participant | Name, address, phone number, email address, account number | Participant surveys | Online MIW Database |
| Partial Participant | Name, address, phone number, email address, account number | Partial participant interviews | Online MIW Database  |
| Program Dates | Assessment date, job approval date, installation date, work submit date, inspection date, payment date | Process AnalysisImpact Analysis | Online MIW Database |
| Home & Baseline Equipment | Square footage, baseline insulation levels, heating fuel, heating system type, air conditioning type, water heater type, water heating fuel | TRM Update | Separate SnuggPro download  |
| Partner Utility Data | Utility name, customer account number | Match to the electric usage data for the billing analysis. | Online MIW Database |
| Subcontractor Data  | Company name, contact name, phone number, email  | Contractor interviews | Online MIW Database |
| Recommended Measures | All recommended measures, gas savings, electric savings, demand savings | Missed OpportunitiesEquity AssessmentBudget Assessment | Not available in SnuggPro, but captured in paper work scopes. |
| Installed Measures | Installed measures, gas savings, electric savings, demand savings | Impact analysis | Online MIW Database |
| Installed Measure Characteristics | Area of home sealed, insulation R level, heating and cooling system type and efficiency, water heater type and efficiency | TRM Update | Separate SnuggPro download |
| Job Cost | Cost for audit and installed measures | Cost-effectiveness | Online MIW Database |
| Energy Savings | Annual and lifetime gas savings, annual and lifetime electric savings, demand savings, gas MMBTU savings, electric MMBTU savings, Total Energy Savings | Realization RateTRM Updates | Online MIW Database |
| Monthly Energy Usage  | Gas and electric monthly billing data | Impact Analysis | Separate request to NJNG and electric utilities |

Monthly energy usage data are needed to develop a weather-normalized, comparison group adjusted estimate of savings that result from MIW. This billing analysis will be conducted when sufficient post-treatment energy usage data are available for MIW participants.

* Gas Data: NJNG can provide the requested data.
* Electric Data: The utilities will need to agree to provide energy usage data for the partner utilities. They should begin working on the necessary agreements for this data transfer.

Based on the assessment, the only key data that will not be available are measures that the contractor recommended (or would be recommended if a higher job budget were available) that were not installed.

# Process Evaluation

This section provides a description of New Jersey Natural Gas’ (NJNG) Moderate-Income Weatherization (MIW) Program and a discussion of program procedures and implementation.

## Research Conducted

We reviewed MIW documents and interviewed program actors to develop a full understanding of NJNG’s MIW program and opportunities for refinement.

We reviewed the following program documents.

* MIW Plan
* CLEAResult Statement of Work
* MIW Marketing Materials
* Customer Application
* Sample Work Scope Plan

We conducted the following interviews.

* NJNG Program Managers and Staff
* CLEAResult Managers

We discussed NJNG’s MIW program database with NJNG managers and reviewed the data collection form. We also have a good understanding of the data that will be available based on analysis of NJNG’s Home Performance with Energy Star (HPwES) data.

## Program Design

The MIW program provides no-cost EE service delivery to households between 251 and 400 percent of the FPL. The program provides a no-cost Building Performance Institute (BPI) home assessment with installation of low-cost measures. Based on the audit findings, air sealing and insulation may be installed, and nonfunctional heating and cooling equipment may be repaired.

Goals and Resources

Table III-1 displays the MIW participation and savings goals, as well as the projected expenditures based on NJNG’s program plan. NJNG was required to develop the plan in a short timeframe, and before details were agreed upon across the utilities, so it is expected that the actual program implementation will differ from these initial projections. Additionally, NJNG has the ability to shift funding within the triennial so they will be able to accommodate additional participants in the remaining years of this period.

The MIW budget is three percent of NJNG’s portfolio budget and represents one percent of their projected gas savings.

**Table III-1**

**MIW Goals and Resources**

| **Metric** | **PY1** | **PY2** | **PY3** |
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| Participants | 100 | 110 | 116 |
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* Achieve deep energy savings through comprehensive home retrofits.
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* Recruit local, under-represented, and disadvantaged workers.

The MIW program is not one of the “Core” residential EE programs, but eligibility and incentives are still aligned across the utilities and customers seamlessly receive both gas and electric measures and incentives from the program even if they are served by two different utilities. The primary utility is the utility that the customer applies to for program incentives.

Eligibility

The MIW program provides service to NJNG customers who meet the following criteria.

* Income from 250 to 400 percent of the FPL.
	+ Customers who live in moderate-income census tracts can self-certify.
	+ Customers who received energy bill payment assistance from New Jersey Statewide Heating Assistance and Referral for Energy Services (NJ SHARES) in the past year are certified by NJNG as eligible.[[7]](#footnote-8)
	+ Other customers must send pay stubs, Social Security receipts, alimony receipts, W2 forms, or other income documentation to NJNG to be certified as income eligible.
* Single-family home or multi-family home of up to three units.
* Active NJNG residential heating account in the applicant’s name.
* Homeowners must have owned their home for a minimum of one year. Homes that are less than five years old or under builder’s warranty are excluded from participation.
* Renters must obtain the consent of their landlord and their home must be located in an Overburdened Community. (OBC).

Services

The MIW provides a no-cost BPI certified home energy assessment with direct installation of low-cost energy saving and/or health and safety measures including LED bulbs, aerators, showerheads, smart thermostats, smart power strips, and carbon monoxide detectors. Based on the findings from the assessment, customers may receive insulation, air sealing, duct sealing, and repair of nonfunctional heating and/or cooling systems. Up to $6,000 is available for EE measures and up to $1,500 additional can be spent on health and safety repairs.

## Program Implementation

CLEAResult serves as the MIW Program Implementer and is responsible for coordination with NJNG, home energy assessments, delivery of eligible weatherization and health and safety measures, and quality control. They are currently delivering services and will be responsible for subcontracting to service delivery firms and training and mentoring those contractors in the future.

NJNG takes responsibility for data system development, marketing and outreach, customer application review and eligibility verification, and work scope review.

Information Technology

NJNG has developed a robust system to manage data for program administration, quality control, and evaluation. Nexant, also known as Resource Innovations, was the vendor selected to develop the new program system software. Nexant configured the iEPM system, based on NJNG’s requirements.

Contractors use SnuggPro to collect data in the field. This is the same software that was previously used by the NJCEP for the HPwES program. An automated data transfer process imports data from SnuggPro into the iEPM system.

Marketing and Outreach

NJNG has undertaken the following outreach and marketing activities.

* NJNG Website: NJNG promotes MIW as the SAVEGREEN Project Home Weatherization Program on its energy assistance page that includes a link to the MIW microsite. The MIW site includes a flow chart to help customers determine if they are eligible, an option to request information, a contact phone number, and an application to view and submit online.
* Direct Mail: NJNG sent letters and postcards to customers who were identified as potentially eligible for the program. NJNG’s behavioral program vendor provided an initial list of roughly 68,800 homeowners and NJNG’s advertising agency used Claritas data to predict the likelihood of MIW participation. NJNG then mailed postcards and letters to those deemed most likely to participate.
	+ One group of 5,000 customers were sent postcards in March 2022. Fifteen unique calls, four form submissions, and nine QR code scans were attributed to the postcards.
	+ Another group of 5,000 customers were sent letters in April 2022. Twenty-nine unique calls, five form submissions, and one QR code scan were attributable to the letters.
* Email Outreach: Emails were sent to 18,500 of the customers identified based on the analysis of likely participants who did not receive postcards or letters. The emails were sent in three batches in March and April 2022 and 32 form submissions were directly attributable to the email outreach.

NJNG also planned to advertise MIW in their eTips monthly e-newsletter in May 2022[[8]](#footnote-9). This is an opt-in newsletter sent to residential customers.

* Social Media: NJNG is advertising MIW on the neighborhood app Nextdoor.
* Meetings/Presentations: In-person marketing at events was ramping up in Spring 2022. SAVEGREEN representatives attended an event at Ocean County Mall in late April 2022 where they handed out literature about SAVEGREEN programs. SAVEGREEN representatives also planned to table at four Jersey Shore BlueClaws games (a minor league baseball team). Bilingual representatives were to have information about SAVEGREEN programs available for attendees. Significant outreach is planned for late summer/early fall in conjunction with NJNG’s Energy Assistance Outreach team’s Energy Assistance Days season, where they set up temporary screening sites throughout their service territory.
* Senior Citizen Communities: SAVEGREEN staff joined the New Business Group, NJNG’s Marketing department that serves new customer additions at events to ensure eligible customers would be aware of the MIW program. They also worked with Senior Publications to place advertisements beginning in July 2022 (ads currently running through September). Senior communities distribute newsletters or booklets to 55+ communities in NJ. NJNG identified and planned to target advertisements to 49 communities where the average home price is below $350,000. Within this group, they also started identifying senior communities situated in OBCs.

NJNG SAVEGREEN is a diamond-level sponsor of the Senior Citizens Activities Network (SCAN). NJNG leverages this relationship to advertise SAVEGREEN programs like MIW through SCAN’s network, including their television shows and in-person events.

* Community Action Agencies (CAAs): NJNG conducted outreach to local agencies such as O.C.E.A.N. Inc. and Affordable Housing Alliance. The goal is to identify households that are ineligible for Comfort Partners but qualify for NJ SHARES. The CAAs will provide MIW marketing materials to any customers who come to the CAA and are over the Comfort Partners eligibility requirements. There is a one-page program flyer that they can distribute in English and Spanish. NJNG also initiated discussions with the leadership team at NJ SHARES to consider better ways to cross promote these programs.
* Program Participants: NJNG receives a monthly list of customers who received NJ SHARES from the CAAs. NJNG sends these customers a specialized MIW mailing that mentions NJ SHARES recipiency. Typically, there are 30 such customers per month.
* Municipalities: NJNG planned to reach out to municipalities to ask them to advertise MIW. These municipalities have social media presences, websites, and bulletins. They will focus on municipalities with households that are more likely to meet the eligibility criteria.
* Montclair University Institute for Sustainability Green Team: During the summer of 2022, NJNG worked with a Green Team and partnered with Interfaith Neighbors, a nonprofit based in Asbury Park, to help develop effective strategies for reaching customers in OBCs.
* Quick Home Energy Check-Up (QHEC): SAVEGREEN auditors will be providing customers with information following QHEC inspections. They will provide a high-level overview of the MIW program, including a leave-behind explaining the program in more detail and how to qualify.

Intake

NJNG staff undertake the following intake process for customers who call about MIW.

* Check for a NJNG residential account matching the caller’s information.
* Provide a broad overview of MIW and answer customer questions. The following information is provided.
	+ The program is a weatherization program that will help with home energy efficiency. The program installs measures throughout the home to make home energy usage work better for the customer.
	+ If customers ask about specific measures, NJNG staff explain that the home energy assessment will determine what measures are needed.
* Check for eligibility.
	+ First, they check if the customer received a NJ SHARES grant in the last 12 months.[[9]](#footnote-10) This would make them categorically eligible.
	+ If not, they check the address with a census tract search tool that indicates whether it is a moderate-income census tract. If it is, the customer can self-certify that they meet the income guidelines. No documentation is needed beyond the self-certification form.
	+ If not, they ask for income documentation to prove they are within the income thresholds for the program.
* If they satisfy the eligibility criteria, NJNG will email the customer instructions to complete the application, either on DocuSign or by paper. Most choose to fill out digitally.

NJNG staff undertake the following intake process for customers who email about MIW or fill out the online inquiry form. The form provides the information needed to determine initial eligibility.

* NJNG checks eligibility and emails the customer informing them if they were deemed eligible.
* If the customer qualifies, NJNG sends the application form.

Application Review

NJNG reviews the application for all required information. They estimate that approximately 60 percent of applicants are eligible. If the customer is eligible, they email the customer and compile documentation needed, including the application, gas bill, and if there was a conversation with the customer, notes about previous weatherization, work needed, and any other notes.

If the customer is not eligible, NJNG provides resources based on whether income was too low or too high. The information includes phone numbers and websites for other available energy programs. Customers whose incomes are too low for MIW are referred to Comfort Partners.

Service Delivery

NJNG is responsible for qualifying customers, scheduling audit appointments, and coordinating the schedules with CLEAResult. CLEAResult takes over implementation starting with the audit.

CLEAResult began home assessments in mid-March 2022 and no installations were completed by the end of June 2022.

CLEAResult has a team of senior energy auditors with the BPI Building Analyst certification. Some have other certifications as well. On average, these auditors have six years of experience.

Initial audits did not include direct install. The direct install measures will include LEDs, faucet aerators, showerheads, power strips, smart thermostats, pipe insulation, dryer venting, and carbon monoxide detectors. They will also check the water heater temperature and reduce it if needed. Eligible measures were installed at the follow-up visit.

Health & Safety

When gas leaks are identified, CLEAResult contacts NJNG immediately. Other issues that need to be addressed before moving forward include the following.

* Foundation issues
* Crawlspace moisture issues
* Roof leaks
* Atmospheric water heaters that do not draft properly

The CLEAResult auditor can resolve gas leaks on the spot if they are not too severe. The other issues can be addressed, but it is difficult with only $1,500 allowed for health and safety.

CLEAResult has seen some moisture issues in their initial work, but they were not severe and were not a barrier to weatherization work. There were also some gas leaks that CLEAResult corrected.

CLEAResult consults NJNG on a case-by-case basis. If the house has serious issues, they will discuss whether they should pursue the work scope.

Subcontracting

CLEAResult initially managed the installations internally because there were not enough jobs to justify bringing in subcontractors and the internal work makes it easier to manage the installation quality. Their installation staff are also BPI Building Analyst certified.

CLEAResult has plans for subcontracting MIW service delivery. They have discussed three different weatherization contractors, two heating contractors, two plumbing contractors, one electrician, and one durability repair contractor (for roof leaks, foundation leaks, etc.). These contractors have a history with the Comfort Partners program. CLEAResult also looked for contractors that satisfied the program’s criteria for background checks and insurance requirements. In terms of diversity, CLEAResult is making efforts to ensure that the contractors represent the communities NJNG serves.

Participation

NJNG developed MIW service delivery targets based upon estimates of the eligible population who participated in NJ SHARES or Payment Assistance for Gas and Electric (PAGE)[[10]](#footnote-11) and response rates that NJNG has previously achieved from mailings and other outreach activities. The targets also account for the fact that the program is new.

The MIW did not complete jobs in PY1 but had a good pipeline as of August 2022.

* 54 audits completed
* 35 under work scope review
* 11 jobs were approved but the installations were not yet scheduled
* 6 installations in progress
* 2 completed projects

Utility Coordination

Utility customers can enter the program through the gas or electric utility, and the cost share is determined by the percent of MMBTU savings attributable to each fuel. While the utilities are currently using a SharePoint site for coordination, they will eventually use a system set up by the statewide coordinator. The utilities have several weekly meetings to discuss technical program issues related to establishing the Statewide Coordinator System. MIW program-related issues are addressed by a residential sector focused committee.

Quality Control

CLEAResult is responsible for quality control, with the oversight and supervision of experienced NJNG staff. CLEAResult conducts a thorough review of the work order before it is finalized. They look for extreme values, values that seem out of range based on home characteristics, and other potential errors. There is an internal priority list for which measures should be recommended in certain situations, and they check that this priority is followed.

CLEAResult is under contract to conduct quality control inspections on MIW projects. This work is done by a different group than the one that provides service delivery, and CLEAResult was instructed to have a firewall between the installation group and the inspection group.

CLEAResult is required to inspect the first seven jobs for any new contractor to ensure there is a solid foundation for the program. After that, they expect to inspect about 20 to 25 percent of the jobs. Nearly half of the jobs will receive at least a work-in-progress inspection, if not a full inspection. For the work-in-progress inspection, CLEAResult staff would come on site to assess the work that is being done. NJNG staff also participate in the on-site QC inspection visits.

CLEAResult is required to document the following with photographs during their quality control inspections.

* Installed HVAC or domestic hot water equipment, including pictures showing serial numbers and model numbers.
* Any other measures that were included in the job’s work scope, including insulation, air sealing, attic stair covers, baffles, etc.
* An exterior view of the home.

CLEAResult will be complementing the in-person inspections with a virtual option for customers to ask questions after the work is completed. If a customer has any concerns, a CLEAResult employee can do a virtual walkthrough. There is capability to use a laser pointer, take a snapshot, and pull serial numbers using a phone camera. This is not used in place of an inspection, but to help the customer understand the benefits of the weatherization work.

All inspections broadly encompass the following activities.

* Verification that contracted measures have been installed per the certificate of completion.
* Customer interview for description of the initial home condition and confirmation of installations.
* Testing, including combustion testing, blower door testing (when there is envelope work), pressure pan testing, pressure boundary testing, and health and safety-related testing.

If a gas leak is detected, the CLEAResult inspector must call NJNG immediately. However, the inspector is permitted to resolve the gas leak if they are able.

Experienced NJNG staff with related BPI certification oversee the implementation and the quality control. This includes a work scope review to assess any unaddressed opportunities for energy saving work, especially in the basement, crawlspace, and attic, and to identify any incorrect prescriptions. They ensure that CLEAResult is following BPI guidelines, performing testing correctly, and causing no harm to the homes or the occupants. NJNG will eventually be inspecting some jobs to review the work done by CLEAResult and their subcontractors.

Energy Savings

NJNG’s MIW plan provides average participant savings goals of 342 therms and 1,739 kWh, which appear high compared to NJ Comfort Partners’ average evaluated savings.

Program savings estimates were developed with the utility working group based on the NJ Technical Reference Manual (TRM) and adjustments where needed and agreed upon. NJNG’s projected savings were based on the mix of direct install measures, air sealing, and insulation measures, and the estimated usage of a typical participant. NJNG noted that using a building model simulation to calculate savings based on proper inputs may yield a better estimate of savings than the individual measure-based approach.

## Challenges

The overriding challenge faced by NJNG was the extremely short timeline between approval of their EE plan and the July 1, 2021 implementation date for their portfolio of programs, including the transition of many programs from NJCEP. NJNG had extensive work to complete including coordination with the other NJ utilities, setting up internal systems including data management, and hiring implementation and evaluation contractors. Another major challenge is the cost limit for jobs and health and safety measures.

NJNG noted the following additional challenges.

* Coordinating the specifics of the MIW program with the other utilities.
* No streamlined pathway to make changes to the program design before the end of the first triennium.
* Contractors’ (subcontractors to be onboarded) unfamiliarity with the program.
* The RFP process for bringing on the Program Implementer.
* The short turnaround after the selection of the Program Implementer.
* Identifying the target population.
* Customers’ skepticism about a free program that provides such large benefits.
* Customer confusion about “moderate-income” framing. NJNG has moved away from that terminology when marketing the program.

NJNG continues to face minor structural challenges, including SnuggPro modifications, the evolving coordinated measures list, and the energy saving calculations.

# Comparison Program Review

This section provides a review of other low- and moderate-income energy efficiency programs implemented around the country. Process findings are summarized in the table below.

| **Utility****(sample size)** | **PSO****(n = 152)** | **Multiple****(n = 800)** | **Multiple****(n = 207)** | **Multiple****(n = 977)** |
| --- | --- | --- | --- | --- |
| Program | Home Weatherization Program | Home Energy Services | Income Eligible Program | Comfort Partners |
| State | Oklahoma | Massachusetts | Massachusetts | New Jersey |
| Year | 2020 | 2017 | 2017 | 2012 |
| Program Awareness | -- | 34% recalled recommendation from energy specialist during home energy assessment | Local community action agency. | Friend or relative (27%), utility (18%), government or community agency (16%), and contractor (15%). |
| Program Satisfaction | 96%Dissatisfaction primarily driven by negative perceptions of contractor or their work | -- | -- | 90% |
| Participant Barriers | -- | Potential customers reported not having enough time to undergo income verification | Limited customer availability for audit.56% were unaware of the program.46% of customers participating in other bill payment or social programs were unaware of the program.  | -- |
| Participant Recommendations | Add additional measures to the program and increase advertising. | 83% of customers indicated that no-cost assessment was very important in decision to have one | -- | Add additional measures, more follow-up work, improved quality of measures, and contractor training.  |
| Contractor Barriers | -- | Contractors are uncomfortable discussing income with customers, which results in lower program awareness. | -- | -- |
| Contractor Recommendations | -- | Pre-qualifying customers in advance of home energy assessment | -- | -- |

1. New Jersey Guidelines for Enhanced Rigor Clean Energy Program Utility Evaluations. Statewide Evaluator, July 22, 2022. [↑](#footnote-ref-2)
2. The measure opportunities that were not installed are not recorded in SnuggPro but are captured in the paper work scopes. [↑](#footnote-ref-3)
3. New Jersey Guidelines for Enhanced Rigor Clean Energy Program Utility Evaluations. Statewide Evaluator, July 22, 2022. [↑](#footnote-ref-4)
4. “Guidelines for Enhanced Rigor Clean Energy Program Utility Evaluations” received on 7/22/2022. [↑](#footnote-ref-5)
5. Per “Guidelines for Enhanced Rigor Clean Energy Program Utility Evaluations” received on 7/22/2022. [↑](#footnote-ref-6)
6. Per “Guidelines for Enhanced Rigor Clean Energy Program Utility Evaluations” received on 7/22/2022. [↑](#footnote-ref-7)
7. Payment Assistance for Gas and Electric (PAGE) participants were previously eligible, but income limits for the program have changed. [↑](#footnote-ref-8)
8. As of May 2022, the E-tips newsletter had approximately 230,000 NJNG customers as subscribers. However, not all customers received the E-tip that month due to some technical issues with NJNG’s migration to a new email service provider. [↑](#footnote-ref-9)
9. Payment Assistance for Gas and Electric (PAGE) participants were previously eligible, but income limits for the program have changed. [↑](#footnote-ref-10)
10. PAGE recipients were previously eligible for MIW, but no longer are eligible given changes in PAGE grant eligibility. [↑](#footnote-ref-11)