



Online Marketplace Program Evaluation Report

Evaluation Cycle 1 – Program Year 1

Prepared for:

Atlantic City Electric



Submitted by:

Guidehouse Inc.
2000 Lenox Drive, Suite 100
Lawrenceville, NJ 08648
609.896.4000

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guidehouse.com

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Abstract

Guidehouse conducted an impact evaluation, process evaluation and net-to-gross study of Atlantic City Electric’s (ACE) Online Marketplace Program for program year 1 (July 1st, 2021 – June 30th, 2022). The program transitioned from the New Jersey (NJ) Board of Public Utilities (BPU) to ACE on July 1st, 2021. Guidehouse evaluation activities in the first program year primarily focused on developing a robust understanding of the program and the implementer’s data collection activities to establish a foundation for future evaluations. We conducted a tracking database review to verify savings calculations. All the information we need for evaluation is available in the tracking data. We fielded online surveys to gather information on quantity and types of measures installed and to gather information on process evaluation, net-to-gross and demographics. Additionally, we also conducted interviews with program staff and implementers to deepen our understanding of the challenges experienced for implementation of the program. Guidehouse’s impact evaluation results and NTG results are summarized below in Table AB-1 and Table AB-2.

Table AB-1: ACE Online Marketplace Impact Evaluation Results

<i>Protocol</i>	<i>Tracked Energy (MWh)</i>	<i>Tracked Peak Demand (kW)</i>	<i>Evaluated Energy (MWh)</i>	<i>Energy RR</i>	<i>Evaluated Peak Demand (kW)</i>	<i>Peak Demand RR</i>
FY 2020	193	11	195	1.01	11	1.00
FY 2022			190	0.98	10	0.92

Table AB-2: Net-to-Gross Results

Type	Results
Freeridership	0.22
Spillover	0.02
Net-to-Gross Ratio	0.80

Our impact and process evaluation recommendations are provided in Table AB-3.

Table AB-3: Online Marketplace Program Recommendations

Evaluation Area	Recommendation
Process	Increase awareness and knowledge of the program through customer facing marketing distributions and mailers. Increase frequency of marketing activities.
	Track purchases to ensure that customers receive items they purchase. If customers do not receive an item in time, communicate the reason for the delay and consider offering a refund.
	Inform customers that a survey will be distributed after their purchase to gather feedback on their experience.
Impact	Savings calculations and TRM inputs must align with the appropriate NJ Energy Savings Protocols.

Savings from returned items must not be included in the program savings reported in the tracking data.

Recommend additional QA/QC to ensure the quantities in the tracking data match the items purchased and returned by customers.

Executive Summary

Guidehouse conducted an impact evaluation, process evaluation and net-to-gross study for ACE's Online Marketplace program for PY 1. This program rebated products to customers through an online purchasing platform. The objective of our impact evaluation was to check completeness of the tracking data, evaluability of the data, and verify savings claimed by the implementers. Our evaluation analysis included a tracking data review, verification using surveys and reviewing documentation provided in project files. The tracking database review compared the savings calculated by the implementers with independent calculations conducted by Guidehouse using the New Jersey's protocols. Guidehouse also calculated savings using FY 2022 protocols, which are the updated savings algorithms that are likely to be incorporated in the next version of the TRM. Table E-1 below shows the impact evaluation results using the FY 2020 and FY 2022 protocols.

Table E-1: ACE Online Marketplace Impact Evaluation Results

<i>Protocol</i>	<i>Tracked Energy (MWh)</i>	<i>Tracked Peak Demand (kW)</i>	<i>Evaluated Energy (MWh)</i>	<i>Energy RR</i>	<i>Evaluated Peak Demand (kW)</i>	<i>Peak Demand RR</i>
FY 2020	193	11	195	1.01	11	1.00
FY 2022			190	0.98	10	0.92

Guidehouse also put forth several findings and recommendations to improve the documentation, data availability and savings calculations. Table E-2 below shows the findings and recommendations from the impact evaluation.

Table E-2: ACE Online Marketplace Impact Evaluation Findings and Recommendations

Measure Type(s)	Finding	Recommendation
Lighting	The HVACe (interactive factor) was found to be referencing an updated version of the NJ TRM.	Recommend updating measure algorithm TRM inputs to align with the appropriate NJ TRM references.
Smart Thermostats	A small number of measures had negative quantities, indicating a returned product; however, savings for these measures was positive and included in reporting.	Ensure that returned items contain both negative quantities and negative savings. This will effectively zero out the savings for all products that were previously purchased and then returned.
Power Strips	Quantities reported by the customers differed from the quantities reported in tracking data.	Conduct additional QA/QC to ensure the quantities in the tracking data are accurate.

For the process evaluation, Guidehouse conducted program staff and implementer interviews to gather information on the delivery, marketing approach, implementation, trade allies, and customer outreach. These interviews also provided information on barriers to increasing participation experienced by the program staff and implementers. Guidehouse also conducted online surveys to identify challenges and barriers experienced by customers. Table E-3 below shows the key findings and recommendations from our process evaluation.

Table E-3 : ACE Online Marketplace Process Evaluation Findings and Recommendations

Finding	Recommendation
ACE was the primary driver of platform awareness among survey respondents.	Include information on the Online Marketplace in customer facing marketing distributions , increase frequency of marketing outreach activities, and send mailers to customers to increase awareness of the program.
Some customers stated that they did not receive their purchased item(s).	Maintain a tracking system for all purchases to help reduce customer confusion around shipment or missing/misplaced merchandise. If customers do not receive items in time, communicate with the customer and consider offering a refund.
Customer survey participation for evaluation was lower than expected.	Inform customers that a survey will be distributed after their purchase to gather feedback on their experience of using the online marketplace.

The surveys included questions on awareness, satisfaction, experience in the program, and measure related questions. These surveys also captured net-to-gross and demographics using questions recommended by the SWE. Guidehouse notes that this program had 481 unique participants in PY 1. Out of these 96% of the records had the customer’s email addresses. This reduced our sample size to 462 customers. We received 33 survey responses out of which 31 had usable responses. Table E-4 shows the net-to-gross results from this study which were calculated at a 90% confidence value and 10% precision.

Table E-4: Net-to-Gross Results

Type	Results
Freeridership	0.22
Spillover	0.02
Net-to-Gross Ratio	0.80

1. Introduction

1.1 Program Description

The Online Marketplace program transitioned from the New Jersey (NJ) Board of Public Utilities (BPU) to ACE on July 1st, 2021. This program offers rebated energy efficiency upgrades for ACE customers through an online marketplace. The marketplace includes energy efficiency equipment such as smart thermostats, water saving products, lighting, advanced power strips, smart outlets, air purifiers, weatherization upgrades and energy savings kits.

The PY 1 population consisted of 481 unique customers and a total of 913 combined measures installed. Table 1-1 below provides PY 1 program reported savings.

Table 1-1: PY1 Program Participation and Reported Savings

Measure	Planned Savings*	Reported Savings	Reported Energy Savings as a % of Portfolio Energy Savings
Energy Savings (MWh)	209	193	1%
Peak Demand Savings (kW)	1	11	

Note: The planned savings in the table is estimated based on ACE’s planned savings filed for the Efficient Products program.

1.1.1 Program Population

As part of our impact evaluation, Guidehouse stratified the population based on measure types. This method of stratification allows for the investigation of savings results from specific measures and provides more focused recommendations. Table 1-2 shows the total number of participants and savings from the program in PY 1.

Table 1-2: PY 1 Online Marketplace Program Survey Population

Measure Strata	Total Measures	Total Energy Savings (MWh)	Total Peak Demand Savings (kW)
Lighting	361	109	8
Smart Thermostats	392	58	0
Power Strips	135	14	2
Air Purifiers	25	12	1
Total	913	193	11

1.2 Conclusions and Recommendations

Guidehouse had the following conclusions from the PY 1 evaluation:

- Impact Evaluation

- Guidehouse found that the HVAC interactive factor for lighting measures is referenced from the 2022 NJ TRM instead of the 2020 NJ TRM. Guidehouse recommends using algorithms that are approved for use by SWE and the joint utilities.
- Guidehouse found that a number of smart thermostats had negative quantities in the tracking database, which indicates the thermostats were returned by the customers. The savings for these measures, however, were positive and counted towards the program savings. The savings for these measures should be negative to effectively zero out the positive savings that were applied for the measure when the items were initially purchased. Additionally, we recommend conducting additional QA/QC to ensure that the quantities and savings calculations are accurate.
- Customers reported different quantities of power strips in surveys when compared to those reported in the tracking data. We recommend additional QA/QC to ensure the quantities are accurate.
- Process Improvements
 - Some customers reported that they did not receive items they purchased from the marketplace. We recommend setting system to track purchases and shipments to ensure customers receive items they purchased and communicate or offer refunds to customers who do not receive their items.
 - Customers reported that they came to know about the program primarily from ACE. We recommend expanding marketing of the program to improve participation. We recommend including mailers and increasing frequency of outreach to improve program awareness.
 - The response rate to the survey was low at 7.2%. To improve this in the future, we suggest notifying customers who purchase items through the marketplace that a survey will be distributed to gather feedback on their experience and concerns.

2. Evaluation Analysis

This section presents the results of our PY 1 evaluation. Section 2.1 compares our results with similar utilities. Section 2.2 speaks to the evaluability concerns for this program. Sections 2.3, 2.4 and 2.5 discuss the methodology and results from our impact, process and net-to-gross studies. Section 2.6 includes cost-effectiveness results.

2.1 Benchmarking

This section provides comparison of the evaluation results with similar utilities.

2.1.1 Savings and Realization Rates

Guidehouse compared the savings and realization rates (RRs) of ACE’s Online Marketplace Program with similar programs offered by other utilities. Table 2-1 shows the difference between ACE’s savings and realization rates and the savings and realization rates of peer utilities.

Table 2-1: Online Marketplace Program Impact Evaluation Benchmarking

Utility	Program Size - Gross Reported Energy Savings (MWh)	Energy Savings per Participant (kWh)	Peak Demand Savings per Participant (kW)	Energy RR	Peak Demand RR
Midwestern utility	6,706	188	0.02	0.79	0.76
ComEd ¹	58,200	375	0.08	0.97	0.98
ACE	193	404	0.02	1.01	1.00
PECO ^{1,2}	22,522	NA	NA	0.98	1.05

¹ Evaluation results are for both Online Marketplace and Appliance Rebates

² Participation is reported as number of measures because account numbers are not tracked

2.1.2 Measure Mix

ACE’s Online Marketplace program offers similar measures as other utility program online marketplaces. Table 2-2 shows the differences between ACE’s online marketplace offerings and peer utilities, with peer utilities also offering bathroom ventilation fans and EV chargers.

Table 2-2: Residential Online Marketplace Program Measure Mix Benchmarking

Measures Offered by ACE’s Res Online Marketplace Program	Measures Offered by Peer Utilities
LED Lighting	LED Lighting
Smart Thermostats	Smart Thermostats
Power Strips, Smart Home	Power Strips, Smart Home
Air Purifiers, Dehumidifiers	Air Purifiers, Dehumidifiers
Weatherstripping	Weatherstripping
Water Saving Measures	Water Saving Measures
Energy Saving Kits	Bathroom Ventilation Fans
	EV Chargers

2.1.3 Process Evaluation Results

Table 2-3 below shows the process evaluation results of ACE’s Online Marketplace program benchmarked with another similar utility. We note, these results are based on relatively few survey responses and results will likely change as the program gets larger and the survey gets more responses in PY 2.

Table 2-3: Residential Online Marketplace Program Process Benchmarking

Focus Area	ACE (n=31)	Midwestern Utility (n=521)
Program Awareness	Customers became aware of the program mostly through ACE’s website (45%), ACE distributed emails (14%), and bill inserts (11%)	Email (75%), website (31%), word of mouth (5%)
Program Satisfaction	Program satisfaction: 4.68 using a 1-5 scale. Dissatisfaction was primarily driven by one customer that expressed dissatisfaction with the platform because they did not receive their measures after purchasing them	Program satisfaction: 94% - using a scale of 0-10 satisfaction is calculated using percentage of applicable responses that rate satisfaction with the program as 6 or higher
Barriers	Customers generally did not report experiencing challenges or barriers with the Online Marketplace; however, two customers did report that they never received their purchased measures, rating this challenge as extremely serious	NA

2.2 Evaluability

The accuracy and comprehensiveness of program tracking data is critical to conduct an effective evaluation. For PY 1, Guidehouse conducted a basic rigor evaluation. Guidehouse used the tracking database to obtain contact information for customer surveys and savings calculation inputs (such as equipment capacities, appliance ENERGY STAR numbers, etc.). Guidehouse did not find any evaluability concerns with the tracking data and data collection methods used by the implementers.

2.3 Impact Evaluation

2.3.1 Impact Evaluation Overview and Methodology

Guidehouse applied industry-standard methods and approaches to conduct the evaluation as established in the following documents:

- Uniform Methods Project (UMP)¹
- NJ Coordinated measure list – approved by NJ utilities for estimating savings for PY 1.
- New Jersey’s Clean Energy Program Protocols (NJCEP) FY 2020² and FY 2022

2.3.1.1 Evaluation Objectives

The following are the key objectives this first impact evaluation addresses:

- Review the data being collected by the implementation contractor (IC) and establish data collection requirements for different types of measures offered by the program.
- Establish a smooth process for transfer of tracking data and project files with the aim of streamlining the process for future evaluations.
- Determine the evaluability of the program based on the data collected by the implementer.
- Review similar programs implemented by other utilities that can serve as benchmarks for this program.
- Calculate evaluated gross energy and peak demand savings using the agreed savings protocols.
- Calculate savings using new and revised measures developed by New Jersey’s TRM working group.
- Highlight areas for the implementation team to improve data collection, estimate savings, etc.

¹ See Department of Energy, Office of Energy Efficiency and Renewable Energy website at <http://energy.gov/eere/about-us/ump-home>.

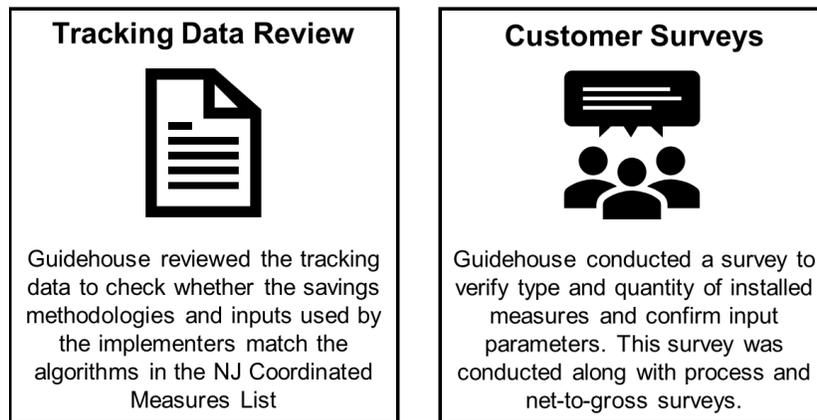
³ See New Jersey’s Clean Energy Program website at https://njcleanenergy.com/files/file/NJCEP%20Protocols%20to%20Measure%20Resource%20Savings%20FY20_FIN_AL.pdf

- Highlight gaps or inaccuracies in the savings algorithms.

2.3.1.2 Evaluation Methods and Tools

Guidehouse used two methods to conduct the impact evaluation for this program: a tracking data review to verify the methods used by the implementers and customer surveys to verify installation type and quantity. We used the results to calculate the verified gross energy and peak demand savings for the program. Figure 1 demonstrates the evaluation methodologies we used for impact evaluation.

Figure 1: Impact Evaluation Methodology for ACE's Online Marketplace Program



2.3.2 Impact Evaluation Results

2.3.2.1 Program-Level Verified Gross Energy and Peak Demand Savings

The evaluation team calculated savings for eligible appliances using the methodology specified in the FY 2020 New Jersey Protocols. Some customers reported purchasing greater quantities of products, resulting in slightly higher realization rates. The program's energy and peak demand realization rates are 1.01 and 1.00 respectively. The results of the FY 2020 and FY 2022 program-level calculations are shown in Table 2-4.

Table 2-4: PY 1 ACE Online Marketplace Program Savings Evaluated using FY 2020 and FY 2022

<i>Protocol</i>	<i>Tracked Energy (MWh)</i>	<i>Tracked Peak Demand (kW)</i>	<i>Evaluated Energy (MWh)</i>	<i>Energy RR</i>	<i>Evaluated Peak Demand (kW)</i>	<i>Peak Demand RR</i>
FY 2020	193	11	195	1.01	11	1.00
FY 2022			190	0.98	10	0.92

2.3.2.2 Measure Level Verified Gross Energy and Peak Demand Savings

Table 2-5 and Table 2-6 show the measure-level savings and realization rates using FY 2020 and FY 2022 NJ Savings Protocols, respectively. The FY 2020 and FY 2022 realization rates are calculated relative to the reported energy and peak demand savings.

Table 2-5: PY 1 ACE Online Marketplace Program Measure Level Savings Calculated using FY 2020

Measure	Ex Ante Energy (MWh)	Ex Ante Peak Demand (kW)	Ex Post Energy FY 2020 (MWh)	Energy RR	Ex Post Demand FY 2020 (kW)	Peak Demand RR
Lighting	109	8	112	1.03	8	1.00
Smart Thermostats	58	0	57	0.99	0	1.00
Power Strips	14	2	14	0.98	2	1.00
Air Purifiers	12	1	12	1.00	1	1.00

Table 2-6: PY 1 ACE Online Marketplace Program Measure Level Savings Calculated using FY 2022

Measure	Ex Ante Energy (MWh)	Ex Ante Peak Demand (kW)	Ex Post Energy FY 2022 (MWh)	Ex Post Demand FY 2022 (kW)	Energy RR	Peak Demand RR
Lighting	109	8	109	8	1.00	1.00
Smart Thermostats	58	0	57	0	0.99	1.00
Power Strips	14	2	14	2	0.98	1.00
Air Purifiers	12	1	10	1	0.85	0.36

2.3.3 Key Findings and Recommendations

2.3.3.1 Recommendation Summary

Table 2-7 presents the Guidehouse evaluation team’s impact findings and recommendations.

Table 2-7: Online Marketplace Program Impact Findings and Recommendations

Measure Type(s)	Finding	Recommendation	Impact
Lighting	The HVACe (interactive factor) was found to be referencing an updated version of the NJ TRM.	Recommend updating measure algorithm TRM inputs to align with the	Improve accuracy of savings

		appropriate NJ TRM references.	
Smart Thermostats	A small number of measures had negative quantities, indicating a returned product; however, savings for these measures was positive and included in reporting.	Ensure that returned items contain both negative quantities and negative savings. This will effectively zero out the savings for all products that were previously purchased and then returned.	Improve accuracy of savings
Power Strips	Quantities reported by the customers differed from the quantities reported in tracking data.	Conduct additional QA/QC to ensure the quantities in the tracking data are accurate.	Improve accuracy of savings

2.4 Process Evaluation

2.4.1 Process Evaluation Overview and Methodology

To obtain process findings, Guidehouse reviewed the program materials and tracking database, surveyed customers, and interviewed program implementors and program managers to identify areas for improvement and barriers to participation.

2.4.1.1 Process Evaluation Objectives

The objective of the process evaluation was to better understand what is going well and what could be improved in the program. The SWE’s guidance for such programs recommends conducting a process evaluation with the objectives outlined in Table 2-8. Guidehouse used the guidance provided by the SWE to define the objectives for this process evaluation.

Table 2-8: Process Evaluation Objectives

Overall Objective	Detailed Objectives
Document changes from NJ BPU to IOU	Document what changes occurred in the program implementation and what stayed the same when the IOU began implementing the program.
Participation Metrics	Document participation rate, closing rate, project completion rate, number of participants, partial participants and, where possible, compare with NJ BPU management.
End-user satisfaction	Satisfaction with all key steps and elements of the program process by end users, reasons for participation, challenges to participation, decision-making, reasons for adoption or rejection of recommended measures, and suggestions to address challenges and barriers.
Program staff satisfaction	Satisfaction with the back-office processes by the implementation team; cycle time findings for back-office processes.
Implementation team satisfaction	Satisfaction with all key steps and elements of the program processes by market actors involved in program delivery and for

	market actors involved in NJ BPU period request assessment of any differences, their reasons for being in the program, challenges to participating in the program, access to products, reasons for recommending services and products, comparison of experiences prior to and during program, and suggestions to address challenges and barriers.
Challenges	Document any difficulties with program-related efficiency products from end user and implementation team perspectives such as availability, quality of materials, installation, quality of product, waiting times, etc. Differentiate COVID-19-related causes where possible.

2.4.2 Process Evaluation Results

Table 2-9 presents the participant survey disposition. The survey response rate was 7.2%. The process evaluation results presented in this report were primarily based on the customer survey.

Table 2-9: Online Marketplace Participant Survey Disposition

Description	Count
Unique participants	481
Unique participants with emails	462
Survey responses	33
Screen outs	2
Usable responses	31
Response rate	7.2%

Note: Screen outs refers to Customers that could not provide information on their participation in the program. Eligible responses are the total number of surveys minus the screened out customers.

The remaining sections provide the process evaluation survey results by topic.

2.4.2.1 Program Design

Customers that responded to the survey (n=31) were generally satisfied with the products they purchased through ACE's Online Marketplace, providing an average satisfaction score of 4.68 using a scale of 1-5, where 1 is extremely dissatisfied and 5 is extremely satisfied. Two customers expressed dissatisfaction with the platform because they did not receive their measures after purchasing them.

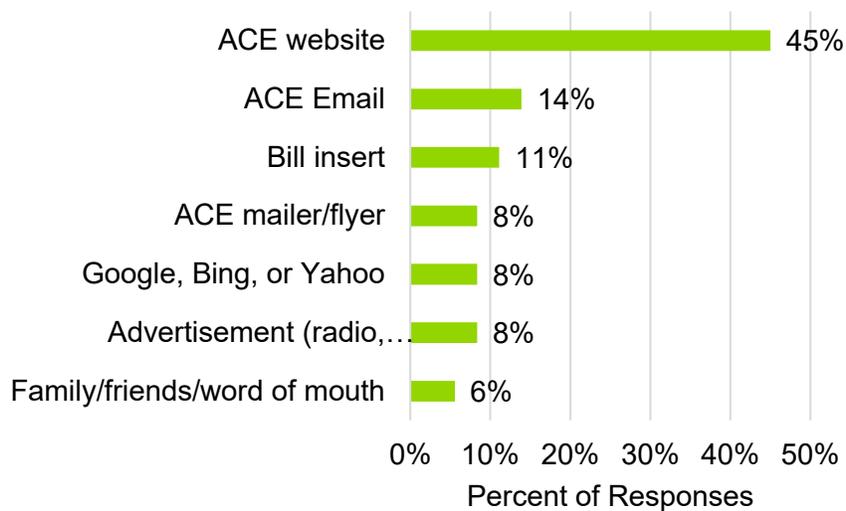
Satisfaction of a similar online marketplace in the mid-west presented a satisfaction score of 94%. Responses are based on a 0-10 scale and calculated using the percentage of applicable responses that rate satisfaction with the program as 6 or higher.

In PY2, Guidehouse will implement a 9-point satisfaction scale to better assess customer’s sentiment on the above-mentioned factors.

2.4.2.2 Program Implementation

Customers learned about the Online Marketplace primarily from ACE’s website (44%), ACE distributed emails (14%), and bill inserts (11%). Search engines (8%), ACE mailers (8%), advertisements (8%), and word of mouth (6%) were the least effective methods of program awareness. Other benchmarked programs had top awareness channels of utility email (75%), utility website (31%), and word of mouth (5%).

Figure 2: Online Marketplace Platform Awareness



Note: N=31. Customers were allowed to provide multiple responses to the question, “How did you learn about ACE’s Appliance Rebate Program? Select all that apply.”, which is why the n value is higher than the number of respondents.

2.4.2.3 Challenges

Customers generally did not report experiencing challenges or barriers with the Online Marketplace; however, two customers reported that they did not receive their purchased items, rating this challenge as extremely serious.

2.4.3 Key Findings and Recommendations

Table 2-10 represents the Guidehouse evaluation team’s process findings and recommendations.

Table 2-10: Online Marketplace Program Process Findings and Recommendations

Finding	Recommendation	Impact
ACE was the primary driver of platform awareness among survey respondents.	Include information on Online Marketplace in customer facing marketing distributions, increase frequency of marketing outreach activities and, send mailers to customers to increase awareness of the program.	Improve participation
Some customers stated that they did not receive their purchased item(s).	Maintain a tracking system for all purchases to help reduce customer confusion around shipment or missing/misplaced merchandise. If customers do not receive items in time, communicate with the customer and consider offering a refund.	Increase satisfaction
Customer survey participation for evaluation was lower than expected.	Inform customers that a survey will be distributed after their purchase to gather feedback on their experience of using the online marketplace.	Increase response rates, improve further research efforts

2.5 Net-to-Gross Evaluation

2.5.1 Net to Gross Data Collection Methodology

To obtain a net to gross (NTG) value for the Online Marketplace, Guidehouse used the self-report method to calculate NTG ratios and net savings by estimating freeridership and spillover in a single survey. The battery utilized is referenced in the NJ EMV Guidelines-NTG Triennium 1 documentation provided by the SWE.

When using this methodology, Guidehouse experienced challenges determining how factors such as timing and efficiency were intended to be applied in the calculation of the final freeridership ratio. Guidehouse chose to average all the scores to determine the intention score. Additionally, the spillover calculations referenced in the guide did not align with description text. Guidehouse determined that the bullet text aligned the most with best practices, and thus was applied when calculating spillover.

2.5.2 Net-to-Gross Results and Key Findings

For the Online Marketplace, Guidehouse found a freeridership value of 0.22 and spillover of 0.02 (illustrated in Table 2-11), and the NTG ratio (NTGR) for Online Marketplace is 0.80 (see Table 2-11).

When compared to other utility programs, the NTGR falls between other benchmarked utilities.

Table 2-11: Program Year 2021 Online Marketplace Program NTGR

Utility	Freeridership	Participant Spillover	NTGR
Atlantic City Electric	0.22	0.02	0.80
Midwestern Utility #1	0.13	0.00	0.87
Mid-Atlantic Utility #2	0.37	0.0	0.63

Freeridership was driven primarily by participants stating that in absence of the program, they would have purchased the item at the same efficiency level at a similar time. One respondent stated, “My decision was roughly 25% based on information I received from ACE and 75% based on recommendations/reviews I researched on the internet.” Another customer shared, “I was thinking of purchasing an air purifier, I received an email from ACE about a promotion they were running with rebates on them. I did some research on the model offered and compared prices and the rebates you offered we’re lower than elsewhere online so I chose to purchase through ACE Marketplace.”

Guidehouse also analyzed the Online Marketplace on a measure level and developed measure-specific NTGRs (Table 2-12). Air purifiers were on the high end at 1.02 and power strips at the low end at 0.47.

Table 2-12: Program Year 2021 Online Marketplace Program Measure Level NTGRs

Measure	Respondents	Freeridership	Participant Spillover	NTGR
Air Purifiers	2	0.00	0.02	1.02
Smart Thermostats	14	0.34	0.02	0.68
Lighting	31	0.17	0.02	0.85
Power Strips	14	0.55	0.02	0.47

2.6 Cost Effectiveness

Guidehouse collected adequate data to support a portfolio-wide cost effectiveness analysis for this program and adhered to the New Jersey Cost Test (NJCT). The NJCT was developed as the primary test to evaluate the benefits and costs of EE and PDR programs established in the state pursuant to the Clean Energy Act (CEA) during the first three-year program cycle, starting with PY1 on July 1, 2021, and running through the end of program year 3 (PY3) on June 30, 2024.

Guidehouse calculated six cost tests for ACE’s Efficient Products program, including the New Jersey cost test as defined in New Jersey BPU Order 8A³. Administrative costs were not tracked by sub-program in a manner that allowed for sub-program level cost testing. The Online Marketplace sub-program contributed 4.20% of the Efficient Products program’s NJCT benefits. Cost test results presented in Table 2-13 and Table 2-14 and were calculated using net ex-post savings. The Efficient Products program achieved a NJCT ratio above 1.0.

Table 2-13: Net Efficient Products Program Cost Test Results

Program	NJCT	PCT	PACT	RIMT	TRCT	SCT
Efficient Products	2.49	14.99	0.80	0.22	0.85	1.03

Table 2-14: Efficient Products Program NJCT NPV Benefits and Costs

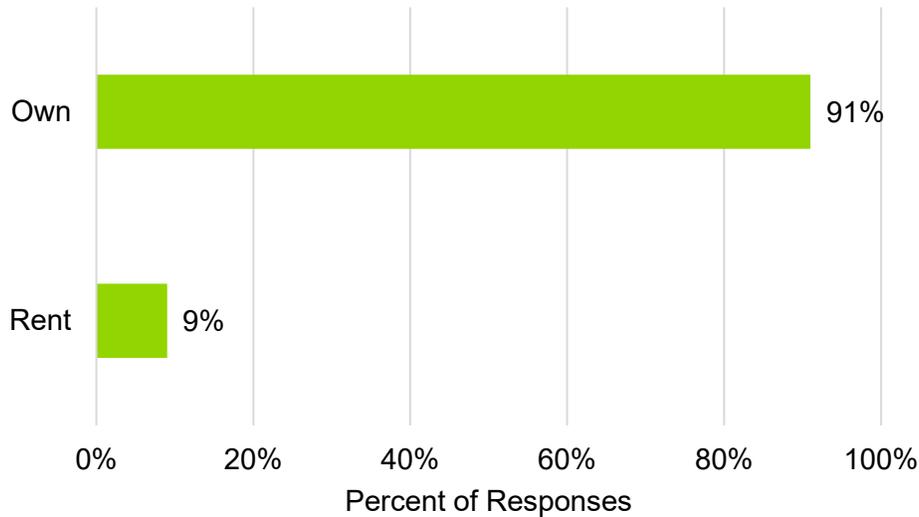
Program	NPV Benefits (\$1,000)	NPV Costs (\$1,000)	Net Benefits (\$1,000)
Efficient Products	\$6,866	\$4,820	\$4,110

³ <https://www.state.nj.us/bpu/pdf/boardorders/2020/20200824/8A%20-%20ORDER%20New%20Jersey%20Cost%20Test.pdf>

Appendix A. Survey Demographics

The overwhelming majority of survey respondents (91%) own their own home and 88% live in a single-family dwelling. Other home types include mobile home or trailer (6%), duplex (3%), and apartment (3%), as seen in Figure 3. Most homes (75%) were 3,000 square feet or less, with roughly 16% reporting a square footage of 3,000 square feet or larger.⁴

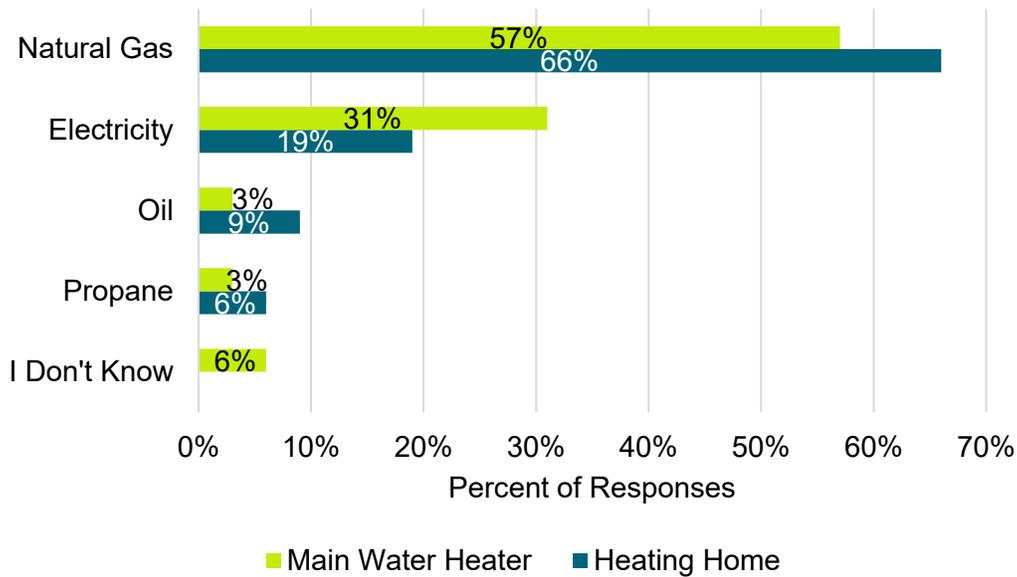
Figure 3: Homeownership Status



Survey respondents primarily heat their home with natural gas (66%) or electric (19%). Similarly, natural gas is the most common fuel being used to heat their water (57%), followed by electric (31%). These results are shown in Figure 4.

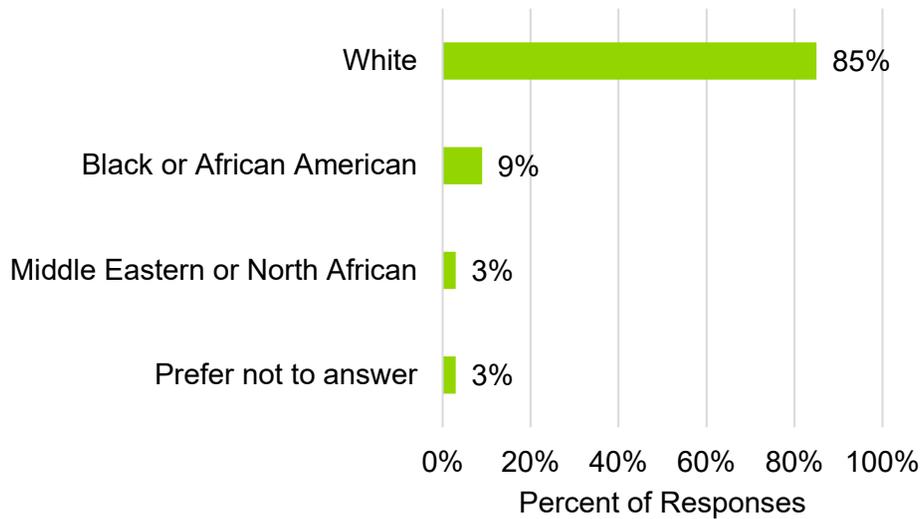
⁴ Nine percent of respondents did not know the square footage of their home.

Figure 4: Fuel Type for Home and Water Heating



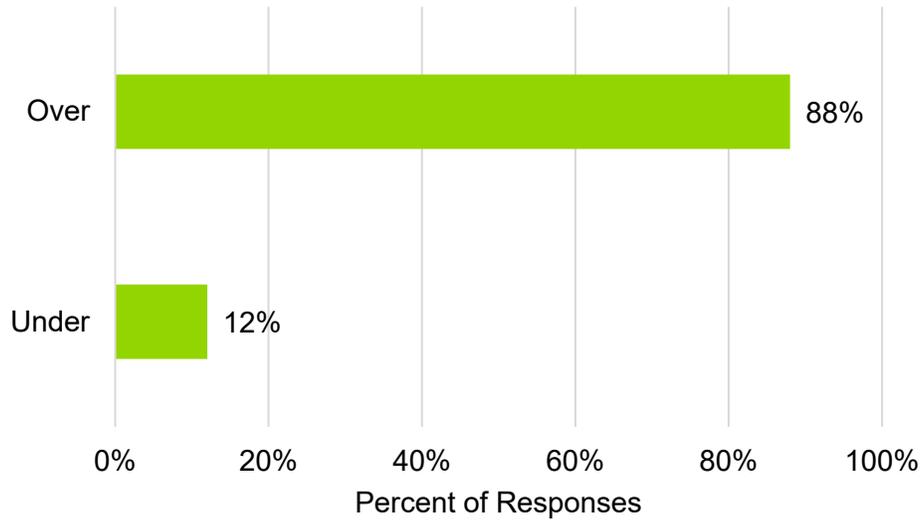
Shown in Figure 5, survey respondents are primarily identifying as white (85%) or black or African American (9%). Three percent of customers preferred not to answer this question. Respondents overwhelmingly reported English was the primary language spoken at home (97%).

Figure 5: Survey Respondent's Race



All respondents reported between one and four occupants in the home. When asked about annual household income levels, 88% of customers reported their income was over the survey base level of 250% of the federal poverty guidelines, as shown in Figure 6.

Figure 6: Income Status Relative to 250 Percent of Federal Poverty Guidelines



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