PY2024 EVALUATION OF LOCAL INITIATIVES PROGRAM

IESO SAVE ON ENERGY 2021-2024 CDM FRAMEWORK

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Table of Contents

FIGURES

Tables

Abbreviations

Acronym	Meaning
AC	Air conditioning/conditioner
CBI	Capability Building Program
CDM	Conservation and Demand Management
CF	Coincidence factor (peak demand)
CO2	Carbon dioxide
EBCx	Existing building commissioning
EEM	Expanded Energy Management
EER	Energy efficiency ratio
EFLH	Effective full-load hours
EM&V	Evaluation, Measurement, and verification
EPP	Energy Performance Program
GHG	Greenhouse gas emission
IEEP	Industrial Energy Efficiency Program
IESO	Independent Electricity System Operator
IF	Interactive factor (HVAC)
KF&R	Key finding and recommendation
kW	Kilowatt
kWh	Kilowatt-hour
LIP	Local Programs Program
LUEC	Levelized unit energy cost
MW	Megawatt
MWh	Megawatt-hour
NEB	Non-energy benefit
NRCan	Natural Resources Canada
NTG	Net-to-gross
PAC	Program administrator cost
PY	Program year
QA/QC	Quality assurance / quality control
RR	Realization rate
SEER	Seasonal energy efficiency ratio
SEM	Strategic energy management
TRM	Technical reference manual
VFD	Variable frequency drive

The Independent Electricity System Operator (IESO) retained EcoMetric and subcontractors DNV Energy Insights USA Inc. (DNV) and Dunsky Energy + Climate Advisors (Dunsky), collectively referred to as 'EcoMetric', to evaluate the 2021-2024 CDM Framework Local Initiatives Program (LIP) administered in Ontario, Canada.

This executive summary presents an overview of the findings for the PY2024 evaluation.

E.1 PROGRAM DESCRIPTION

The Local Initiatives Program (LIP) is designed to address localized electricity system needs across Ontario, with a goal of delivering 57 MW of demand savings and 230 GWh of energy savings during the 2021-2024 CDM framework. Focused on non-duplicative opportunities, the program targets both residential and non-residential customers through tailored offerings not covered by existing programs:

- Residential programs include Residential CoolSaver, HomeEnergySaver, and HomeSealSaver.
- Non-residential programs include BizEnergySaver and Commercial CoolSaver.

For utilities and system planners, the LIP provides a flexible mechanism to reduce peak demand and defer infrastructure investments in high-need areas, while also enhancing customer satisfaction and supporting CDM targets. Table 1 summarizes the LIP programs that were active in PY2024 and the grid-constrained regions that each served.

Table 1: Summary of PY2024 Active LIP Programs

Program	Sector	Regions Covered
BizEnergySaver	Commercial	Richview South Ottawa
Commercial CoolSaver	Commercial	York
Residential CoolSaver	Residential	Richview South Ottawa York
HomeEnergySaver	Residential	All
HomeSealSaver	Residential	Belle River

E.2 EVALUATION OBJECTIVES

- Annually verify energy and summer peak coincident demand savings.

- Assess program attribution (net-to-gross or NTG), including free ridership and spillover.
- Annually estimate the net greenhouse gas impacts in tonnes of CO2 equivalent using IESO's Cost-Effectiveness Tool.
- Monitor the overall effectiveness and comprehensiveness of key program elements.
- Conduct annual cost-effectiveness analyses and report on key indicators of cost-effectiveness, including, the Program Administrator Cost (PAC) test and Levelized Unit Energy Cost (LUEC) metric.
- Analyze and make recommendations to improve the program.
- Determine customer motivations and experience.
- Identify improvements to program delivery procedures and protocols.
- Annually estimate job impacts and non-energy benefits (NEBs) of the program.

E.3 EVALUATION APPROACH SUMMARY

E.3.1 IMPACT EVALUATION APPROACH

EcoMetric used a variety of methods and approaches to assess LIP program impacts. EcoMetric conducted an impact evaluation for the BizEnergySaver, Residential CoolSaver, and Commercial CoolSaver programs by conducting engineering desk reviews, database reviews, and onsite verifications. EcoMetric sampled 45 out of 154 BizEnergySaver projects and all Residential and Commercial CoolSaver projects for the PY2024 impact evaluation. The analyses involved site-specific data, engineering best practices, workpapers, and technical references.

EcoMetric then conducted a net savings verification to determine both the portion of project savings attributable to IESO programs and the free ridership score.

To best estimate measure-level costs and benefits, EcoMetric conducted cost-effectiveness analyses using the CDM CE Tool. EcoMetric also analyzed other energy efficiency benefits of the program including avoided greenhouse gas emissions, non-energy benefits, and job impacts.

E.3.2 PROCESS EVALUATION APPROACH

For the process evaluation, EcoMetric conducted program material reviews and in-depth interviews with IESO program staff and program delivery vendors to gain insight into the LIP program designs and delivery challenges. EcoMetric also conducted interviews with the IESO system planning team.

EcoMetric also conducted participant surveys to learn more about the programs from the perspective of decision-makers within households and organizations that participate. Finally, EcoMetric conducted surveys with qualified contractors for the three programs to better understand the process of becoming a qualified contractor in the programs, experiences working with participants and their motivation to participate, and how well program activities are addressing their needs. Section 2 provides detailed information about our methodology and approach.

E.4 SUMMARY OF RESULTS

E.4.1 IMPACT EVALUATION RESULTS

Table 2 below summarizes impact evaluation results for each of the 5 programs active in the LIP in PY2024. Verified savings and cost-effectiveness results for the LIP in PY2024 are primarily driven by BizEnergySaver, which accounts for more than 98% of reported and verified savings.

Table 2: PY2024 LIP Impact Results Summary

Impact	BizEnergySaver	Commercial CoolSaver	Residential CoolSaver	HomeEnergySaver	HomeSealSaver	TOTAL
Number of Projects Evaluated and Reported	154	114	1,327	22	23	**1,640**
Total Gross Verified First-Year Energy Savings	26,159 MWh	62 MWh	215 MWh	205 MWh	3 MWh	**26,644 MWh**
Program Level Energy Realization Rate	85.7%	66.5%	49.2%	100.0%	100.0%	**85.3%**
Total Gross Verified Summer Peak Demand Savings	3.53 MW	0.07 MW	0.26 MW	0.02 MW	0.003 MW	**3.89 MW**
Program Level Demand Realization Rate	92.6%	183.6%	39.7%	100.0%	100.0%	**85.9%**
Total Net Verified First Year Energy Savings	24,059 MWh	55 MWh	150 MWh	205 MWh	3 MWh	**24,472 MWh**
Total Net Verified Summer Peak Demand Savings	3.25 MW	0.06 MW	0.18 MW	0.02 MW	0.003 MW	**3.52 MW**
Program Level Net to Gross Ratio	92.0%	88.9%	69.7%	100.0%	100.0%	**91.8%**
Total Net Verified Energy Savings that Persist through 2026 (MWh)	24,059 MWh	55 MWh	150 MWh	205 MWh	3 MWh	**24,472 MWh**
Cost Effectiveness – Program Administrator Cost Test Ratio	1.72	0.67	0.10	0.53	0.03	**1.50**
Cost Effectiveness – Levelized Unit Energy Cost	$0.03/kWh	$0.21/kWh	$1.60/kWh	$0.13/kWh	$5.61/kWh	**$0/04/kWh**

Note that EcoMetric did not evaluate HomeEnergySaver or HomeSealSaver in PY2024. EcoMetric did not adjust reported savings or perform NTG research for those programs.

E.4.2 PROCESS EVALUATION RESULTS

The process evaluation addresses eight key research questions developed in collaboration with the IESO. Findings are based on document review, program benchmarking, and interviews and surveys with IESO staff, delivery vendors, trade allies, and program participants.

E.4.3 SAVINGS GOALS

Due to staggered program launches and early implementation delays, the IESO is not currently on track to meet its original savings goals for the LIP. That said, the IESO reportedly has since adjusted its goals, shifting to more regionally focused and achievable targets. Both BizEnergySaver and CoolSaver have gained momentum, with growing contractor networks and improved delivery infrastructure suggesting the revised goals are now within reach for those programs.

E.4.4 SYSTEM PLANNING – ALLEVIATING GRID CONSTRAINTS

System planners monitor grid impacts indirectly through annual program evaluation results, but do not measure the LIP's grid relief yearly or consider LIP results immediately actionable. This reflects the cyclical nature of planning, and the complexity of isolating program impacts amid other variables. The programs are expected to contribute to alleviating grid constraints over time; however, direct results are not yet available.

E.4.5 MOTIVATIONS & BARRIERS

Participants across programs cited energy bill savings as the primary motivation for enrollment (90%, n = 9, for BizEnergySaver; 72%, n = 113), for Residential CoolSaver).

Barriers to completing more projects under the LIP varied by program. Among BizEnergySaver participants, 40% (n=4) reported no barriers, and no specific barrier was mentioned by more than two participants. In contrast, 49% (n=72) of Residential CoolSaver participants identified low awareness of other Residential CoolSaver program offerings (both the existence of them and the eligibility rules) as a barrier to completing additional projects. Trade allies echo concerns about low awareness of the LIP offerings. Additionally, they cite customer skepticism of the LIP offerings as "too good to be true" and geographic limitations as additional barriers.

E.4.6 DRIVING ENROLLMENT

Trade allies and program delivery vendors play a critical role in enrollment. Contractors accounted for half of BizEnergySaver leads and supported outreach through phone calls, email, and word of mouth. Delivery vendors provided tailored training and materials, where trade ally preparedness to enroll customers in the LIP was rated 7 or higher on a 10-point scale.

BizEnergySaver and Residential CoolSaver participants stated that more clarity about what to expect while participating in the programs would have reduced their skepticism about the program. Despite these concerns, trade allies reported feeling well-prepared to enroll customers in the LIP, and participant feedback showed increased program familiarity compared to the previous evaluation year.

E.4.7 OUTREACH

Contractors and social media were key drivers of initial program awareness. While 50% (n = 5) of BizEnergySaver participants first learned about the program through a contractor, 20% (n = 32) of Residential CoolSaver participants cited social media as their first point of contact.

E.4.8 QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

QA/QC protocols were in place across all three programs, though implementation varied. BizEnergySaver uses a central database to verify eligibility, flag issues, and review all documentation before completion. Commercial CoolSaver integrates automated and manual reviews, contractor training, periodic bulk checks, and account manager support during initial and follow-up tune-ups. Residential CoolSaver employs random on-site inspections1, engineering reviews of documentation and licenses, and pre- and post-service readings to estimate savings. Seven percent (n = 10) of Residential CoolSaver participants reported a quality control visit.

1 QC visits are performed by delivery vendor staff. They aim to visit a random sample of roughly 10% of sites for each contractor. The visits are post-tune up and involve delivery vendor staff inspecting several tune-up components and asking the homeowner for feedback about the program and contractor's work.

E.4.9 DELIVERY IMPROVEMENTS

Findings suggest areas where delivery can be strengthened, including program awareness, enrollment support, and quality control. These areas are being addressed through expanded contractor networks, enhanced vendor coordination, and updated program materials.

E.5 KEY FINDINGS AND RECOMMENDATIONS

The following sections present a high-level summary of the key findings and recommendations for the PY2024 Impact and Process Evaluation. A full list of findings and recommendations can be found in Section 7 while the IESO responses to the recommendations can be found in Appendix B. .

E.5.1 KEY IMPACT EVALUATION FINDINGS AND RECOMMENDATIONS

Key Impact Finding 1 [Residential CoolSaver, Commercial CoolSaver]: For tune-up measures, none of the site-specific pre-tune-up efficiency values (available for 10-15% of the sites) - and corresponding efficiency loss factor (EFL) values - were used in the reported savings calculations. Instead, all savings calculations used the stipulated ELF values from the delivery vendor's database, purportedly from recently analyzed tune-ups in other jurisdictions (i.e., not IESO programs).

Key Impact Recommendation 1 [Residential CoolSaver, Commercial CoolSaver]: Reported savings for tune-up measures should utilize average results from onsite measurements of efficiency loss factors.

The delivery vendor should propose a clear protocol - to be reviewed by the IESO LIP program team - for identifying site-specific tune-up results that are not valid, whether that is due to measurement error (human or equipment) or malfunctioning HVAC equipment. If the delivery vendor proposes to remove any other types of outlier results from savings analyses, they should document their reasoning and approach for identifying such results and present them to the program team for review.

Key Impact Finding 2 [Residential CoolSaver, Commercial CoolSaver]: For tune-up measures, none of the measured or calculated values for cooling capacity were used in reported savings calculations. Instead, all savings calculations used nominal manufacturer-rated cooling capacities.

Key Impact Recommendation 2 [Residential CoolSaver, Commercial CoolSaver]: Reported savings for tune-up measures should incorporate cooling capacity values that are determined via onsite measurements or based on independent testing (for example, AHRI certificates.)

Key Impact Finding 3 [Residential CoolSaver, Commercial CoolSaver]: Reported savings calculations for tune-up measures used values for effective full-load hours and peak coincidence factors that are not aligned with industry standards.

Key Impact Recommendation 3 [Residential CoolSaver, Commercial CoolSaver]: Savings calculations for tune-up measures should use values for effective full-load hours and peak coincidence factors that are building type-specific and sourced from reputable technical references such as the IESO MAL or North American TRMs.

Key Impact Finding 4 [BizEnergySaver]: The reported savings estimates for BizEnergySaver lighting measures did not account for HVAC interactive effects.

Key Impact Recommendation 4 [BizEnergySaver]: IESO should consider allowing HVAC interactive effects to be a part of savings calculations for lighting measures. This is common practice for most energy efficiency program implemented in North America. HVAC interactive effect values should be building type and system-specific and come from recognized sources such as the IESO MAL or North American TRMs.

Key Impact Finding 5 [BizEnergySaver]: While it is slightly lower than in PY2023, the PY2024 program-level NTGR for BizEnergySaver remains high. The program's influence on respondents' decision to install energy-efficient equipment was the key driver of the high NTGR. The program funding was a critical influence on participants' decision-making. For 69% (n = 7) of respondents, the LIP provided the only external support for the energy efficiency upgrades installed through the project.

Key Impact Recommendation 5 [BizEnergySaver]: BizEnergySaver continues to engage and influence a population that would not complete these upgrades without program support. EcoMetric recommends that the program be continued, with a focus on expanding to a wider range of offerings that are not likely to result in high free-ridership.

Key Impact Finding 6 [Residential CoolSaver]: The PY2024 program level NTGR for Residential CoolSaver is significantly lower than in PY2023. In PY2024, AC tune-ups remained the primary measure type implemented; however, 61% (n = 26) of tune-up respondents indicated that they would have completed the tune-ups at the same time or eventually without the program.

Key Impact Recommendation 6 [Residential CoolSaver]: Residential CoolSaver is reaching populations with higher levels of free ridership. EcoMetric recommends continuing the program but focusing outreach on markets and offerings more resistant to free ridership such as low-income

households and higher cost or payback measures (e.g., high efficiency pool pumps, which typically show low levels of free ridership in programs across North America).

E.5.2 KEY PROCESS EVALUATION FINDINGS AND RECOMMENDATIONS

Key Process Finding 1 [BizEnergySaver, Residential CoolSaver, Commercial CoolSaver]: IESO program staff expressed concerns about the depth of QA/QC processes across the programs under their scope and requested that EcoMetric investigate the matter further. EcoMetric found that each program has implemented distinct QA/QC approaches:

- Residential CoolSaver – Uses ride-alongs and training and adds random drop-ins and post-service engineering reviews to verify equipment and service quality. EcoMetric found that seven percent (n = 10) of surveyed participants recalled a QC visit occurring.
- Commercial CoolSaver – Requires ride-alongs for new technicians to accompany experienced staff at two to three facilities to ensure service quality, supported by automated photo documentation reviews.
- BizEnergySaver – Relies on training and automated QA/QC within its central database, with recent enhancements to flag VFD-related measures. Notably, participating trade allies reported the LIP's QA/QC processes as highly effective, giving them an average of more than 9 out of 10 on a scale, where 10 indicates maximum effectiveness.

Key Process Recommendation 1 [BizEnergySaver, Residential CoolSaver, Commercial CoolSaver]: As the LIP offerings expand, EcoMetric recommends identifying and monitoring opportunities to implement standardized and comprehensive QA/QC processes across all programs and offerings. For example, bringing the practice of ride-along training used in the two CoolSaver programs to BizEnergySaver as new technicians during the first three sites, then every 50th tune-up, to improve QA/QC consistency. Another potential example could include requiring additional documentation from trade allies showing performance characteristics (operating schedules, equipment nameplate information, temperatures and setpoints, etc.) before and after the energy efficiency measure to verify the effectiveness of the measure and justify reported savings.

Key Process Finding 2 [BizEnergySaver, Residential CoolSaver, Commercial CoolSaver]: Participant feedback indicates that one of the main barriers to additional program engagement is a lack of awareness about the full range of LIP offerings. Among residential participants, nearly half (49%, n = 72) were unaware of other Residential CoolSaver LIP measure offerings - both the existence of them and the eligibility rules. Commercial customers showed similar levels of engagement, with 20% (n = 2) reporting that they were unaware of other LIP measure offerings.

Key Process Recommendation 2 [BizEnergySaver, Residential CoolSaver, Commercial CoolSaver]: To address low awareness of the full range of measures available under the LIP, EcoMetric recommends developing a concise, user-friendly guide outlining all eligible measures, their benefits, and participation requirements. This should be proactively shared with customers through familiar channels (e.g., emails, social media, utility bill inserts) and with trade allies to generate greater LIP program engagement.

Key Process Finding 3 [BizEnergySaver, Residential CoolSaver, Commercial CoolSaver]: Interviews with program staff and delivery vendors suggested an understanding that contractors are primarily motivated to participate in the LIP because of the opportunity to build work pipelines and establish relationships with new customers. Therefore, it was thought that these trade allies should be a primary driver in bringing in new program participants. However, only 56% (n = 5) of trade ally survey respondents (working as program-qualified contractors) reported joining the program to gain new work or expand their customer base as motivation.

Key Process Recommendation 3 [BizEnergySaver, Residential CoolSaver, Commercial CoolSaver]: EcoMetric recommends emphasizing the potential for business growth through program participation to trade allies, to encourage their engagement with new customers over getting incentives to customers that already intend to procure the service. Examples of growth incentives for allies could include offering tiered rewards, such as marketing funds, co-branding opportunities, or public recognition, for those who meet or exceed a defined new customer enrollment target.

1 INTRODUCTION

This report presents the findings of the impact, process, and cost-effectiveness evaluation conducted for the LIP in PY2024.

1.1 Program Description

The LIP aims to deliver 57 MW of demand savings and 230 GWh of energy savings over the 2021–2024 CDM framework through targeted programs in areas of Ontario with identified electricity system needs. These programs serve both residential and non-residential customers and cover a broad range of end-uses and measure types. A key requirement of the programs is that they must focus on savings opportunities that fall outside the scope of current programs offered in the province.

The LIP targets the following areas:

- Richview South area in Toronto
- York Region
- Ottawa
- Belle River area in Essex County

There were five major programs active in these regions in PY2024:

- BizEnergySaver Program (Richview South and Ottawa). BizEnergySaver provides upfront incentives and direct installation of efficient equipment to reduce electricity consumption in industrial, commercial, institutional, and multi-family buildings throughout the targeted regions. Program measures include LED lighting upgrades, adaptive lighting controls, variable frequency drives (VFDs) for pump systems and fans, and parking garage exhaust fan controls. The program provides free on-site assessments to identify energy- savings opportunities unique to each building. Once the participant agreement is approved, qualified Save on Energy partners handle the entire installation process on behalf of the participants.
- Commercial CoolSaver Program (York Region). The Commercial CoolSaver program offers incentives to commercial customers to upgrade their cooling systems and lower their electricity consumption. The program offers free air conditioner tune-ups, as well as incentives for demand-controlled ventilation (DCV), refrigerant charge adjustment, electronically commutated motors (ECMs), and additional HVAC belts and controls. A pool of

qualified Commercial CoolSaver contractors, permitted to install and service eligible equipment, ensures quality installation and the persistence of savings.

- Residential CoolSaver Program (Richview South, York Region, and Ottawa). The Residential CoolSaver program offers incentives to homeowners and tenants to upgrade their home cooling systems and lower their electricity consumption. The program offers incentives for air conditioner tune-ups, central air conditioner replacements, portable humidifiers, smart thermostats, and variable speed pool pumps. A pool of qualified Residential CoolSaver contractors, permitted to install and service eligible equipment, ensures quality installation and the persistence of savings.
- HomeEnergySaver. The HomeEnergySaver program offered incentives to homeowners to install heat pump systems as well as smart thermostats. The program was available in the 4 main grid-constrained areas, areas served by Retrofit regional adders, and all of Toronto. The program is now part of the new Home Renovations Savings program, co-delivered by Save on Energy and Enbridge Gas.
- HomeSealSaver (Belle River). The HomeSealSaver program offered incentives to homeowners for weatherization measures (insulation, weather-stripping, etc.) and AC tune-ups. The program is no longer active.

1.2 Evaluation Objectives

The evaluation objectives are as follows:

- Annually verify energy and summer peak coincident demand savings.
- Assess program attribution (NTG), including free ridership and spillover effects.
- Annually estimate the net greenhouse gas impacts in tonnes of CO2 equivalent using IESO's Cost-Effectiveness Tool.
- Monitor the overall effectiveness and comprehensiveness of key program elements.
- Conduct annual cost-effectiveness analyses and report on key indicators of cost-effectiveness, including Total Resource Cost (TRC) test, the Program Administrator Cost (PAC) test, and Levelized Unit Energy Cost (LUEC) metric.
- Analyze and make recommendations to improve the program.
- Determine customer motivations and experience.
- Identify improvements to program delivery procedures and protocols.

- Annually estimate job impacts and non-energy benefits of the program.

2 METHODOLOGY

This section of the report outlines the methodologies used in the PY2024 evaluation of the LIP. More detailed descriptions of the evaluation methodology are included in the Appendices.

2.1 Impact Evaluation Approach

For the impact evaluation component of this evaluation, EcoMetric verified energy and demand savings, assessed net program attribution (NTG), and estimated cost-effectiveness, GHG reductions, and job impacts.

Methods for this impact evaluation approach included engineering analysis, project file reviews, telephone interviews, and selective on-site or virtual site visits. Realization rates were calculated for both summer and winter peak demand periods.

2.1.1 Sampling

Table 3 shows the number of projects in the PY2024 population for all LIP programs.

Table 3: PY2024 LIP Completed Projects

Program	Richview South	York	Ottawa	Belle River	Other	Total
BizEnergySaver	86	-	68	-	-	**154**
Commercial CoolSaver	-	114	-	-	-	**114**
Residential CoolSaver	173	435	719	-	-	**1,327**
HomeEnergySaver	3	1	2	0	16	**22**
HomeSealSaver	-	-	-	23	-	**23**
Total	**262**	**550**	**789**	**23**	**16**	**1,640**

EcoMetric employed a stratified sampling design to ensure statistical validity by region and program, aiming for 90/10 precision by region and 85/15 precision by program.

EcoMetric performed a census review of Residential CoolSaver and Commercial CoolSaver. EcoMetric sampled 45 out of 154 BizEnergySaver projects – 22 sample projects from the Ottawa region and 23 sample projects from the Richview South region.

Engineering desk reviews were performed using application documents, contractor work orders, and data collected onsite during AC tune-ups. Verified savings analyses were conducted based on verified inputs from project files, evaluation onsite visits, and other technical references.

Table 4 shows the various primary data collection activities and the total number of samples for each evaluation method. Sample quantities for surveys refer to number of completed responses that were received.

Table 4: PY2024 LIP Population and Evaluation Samples

Evaluation Effort	Component	Population	Sample
LIP – Overall			
Process Evaluation	IESO Program Staff Interviews	1	1
Process Evaluation	IESO System Planning Staff Interviews	1	1
BizEnergySaver			
Gross Savings Verification	Project Reviews	154	45*
Net Savings Verification + Process Evaluation	Participant Surveys	81	10
Process Evaluation	Delivery Vendor Staff Interviews	1	1
Process Evaluation	Program Contractor Surveys	13	2
Commercial CoolSaver			
Gross Savings Verification	Project Reviews	114	Census
Net Savings Verification + Process Evaluation	Participant Surveys	9	0
Process Evaluation	Delivery Vendor Staff Interviews	1	1
Process Evaluation	Program Contractor Surveys	9	3
Residential CoolSaver			
Gross Savings Verification	Project Reviews	1,327	Census
Net Savings Verification + Process Evaluation	Participant Surveys	1,232	147
Process Evaluation	Delivery Vendor Staff Interviews	1	1
Process Evaluation	Program Contractor Surveys	24	5

*EcoMetric conducted onsite verification visits for a sample of five large BizEnergySaver projects. The goals of these visits were to verify installation of energy-efficiency measures, interview site staff about the operation of the affected building equipment and collect operational data if available.

2.1.2 Data Sources

Primary data sources included:

- Program tracking data
- Measurement and verification (M&V) documentation from CoolSaver delivery vendor
- Project files and cost/incentive data
- Contractor workorders
- Participants contact lists
- Onsite verifications

2.1.3 NTG Estimation

Net-to-gross (NTG) is the process of determining the portion of project savings attributable to the influence of IESO programs versus what the customer would have done in the absence of the program. The calculation of NTG factors includes free ridership, defined as the savings customers would have achieved in the absence of the program's influence, and spillover, defined as energy savings influenced by the program but not formally incentivized or reported by the program. Additional context surrounding NTG methodology and calculations can be found in Appendices.

EcoMetric determined NTG ratios through online surveys with decision-makers at participating customer organizations. EcoMetric then combined the NTG data collection with the process evaluation data collection through online surveys with program participants.

2.1.4 Cost-Effectiveness and GHG Estimation

EcoMetric assessed cost-effectiveness using the IESO CDM Cost-Effectiveness Tool. GHG impacts were estimated using the IESO's GHG estimation tools, including verified gross/net savings and standard IESO inputs.

2.1.5 Non-Energy Benefits Estimation

For the PY2024 evaluation, questions with respect to Non-Energy Benefits (NEBs) were included in the participant process/NTG surveys. The purpose was to assess whether participants' valuation of the NEBs realized through participation in the LIP programs – Residential CoolSaver, Commercial CoolSaver and BizEnergySaver – are aligned with the NEB values currently used. The questions focused on the same set of NEBs that have been quantified in previous evaluations. The NEBs

included are the ones ranked most relevant and quantified in Dunsky's 2020/21 assessment of NEBs for the IESO2, as shown in Table 5

Table 5: NEBs Included in Participant Surveys and Evaluations

Non-Energy Benefits	Sector	Program
Thermal Comfort	Residential and Commercial	Residential CoolSaver Commercial CoolSaver* BizEnergySaver
Reduced Building and Equipment O&M	Residential and Commercial	Residential CoolSaver Commercial CoolSaver* BizEnergySaver
Improved Indoor Air Quality	Residential and Commercial	Residential CoolSaver Commercial CoolSaver* BizEnergySaver
Reduced Spoilage	Commercial	Commercial CoolSaver* BizEnergySaver
Reduced Financial Stress	Residential	Residential CoolSaver
Sense of Control Over Energy Decisions	Residential	Residential CoolSaver

*Surveys were delivered to all Commercial CoolSaver participants (9 unique contact persons) – and follow-up reminders sent – but no completed responses were received.

The surveys used two different types of questions to gauge NEBs:

- Relative scaling: Relative scaling questions ask participants to state the value of an item of interest relative to some base. For this survey, participants were asked to state the value of each NEB relative to the annual electricity bill savings that they estimated or (if they could not estimate savings) their annual electricity bill.
- Willingness-to-pay: Willingness-to-pay questions ask participants to assign the dollar value they would be willing to pay for the item of interest. In this case, participants were asked what they would be willing to pay for each relevant NEB.

2 Dunsky Energy + Climate Advisors (2021). *Non-Energy Benefits Study: Phase II – Quantitative Benefits and Qualitative Insights*. Prepared for the Independent Electricity System Operator (IESO). Available online at: https://www.ieso.ca/en/Sector-Participants/IESO-News/2021/08/Non-Energy-Benefits-Study-Released

All survey respondents were asked to value all NEBs (for their given sector) using both techniques. The reported values were then divided by the total gross savings for each participant. This calculation was completed for each individual NEB using both the Relative Scaling and Willingness to Pay NEB values, where possible.

In some cases, participants responded either 'don't know' or valued a NEB at zero when asked to value a NEB using one valuation approach but provided a non-zero value when asked using the other valuation approach. These values were not considered to be true zeros – rather, they pointed to participants having difficulty responding to the question. To ensure the responses from these participants were considered, hybrid values were calculated (using the responses provided to the relative scaling question for some participants and the responses provided to the willingness-to-pay question for others). These hybrid values are more representative of the sample as they include all participants that responded to at least one of the two questions with a non-null value.

Two approaches were considered to determine the hybrid values:

- Hybrid, relative scaling priority – in which priority was given to the relative-scaling response value given the preference for this approach in previous NEBs research. In this approach, only willingness-to-pay was considered if the participant did not answer the relative scaling question.
- Hybrid, minimum approach – in which the lowest non-null response between the relative scaling and the willingness-to-pay questions was used.

EcoMetric followed a similar approach to the IESO Non-Energy Benefits Study, and all values included in this evaluation report are based on the hybrid, minimum approach. However, due to a small participant population and sample size, it is not possible to provide a statistically significant result. The estimates have low statistical power, are unlikely to allow detection of differences with previous NEB estimates and are most probably biased.

Furthermore, usable responses and data were limited due to a combination of factors, including responses provided by participants in the wrong format (e.g., values which were not a percentage, as needed) and respondents that reported relative scaling for some NEBs but did not report yearly electricity savings or energy bills. In some cases, minor modifications were made to responses where the intent was clear and the response required a small edit to be usable (e.g., removing non-needed text following a valid numerical response). Table 6 shows the usable responses for the NEBs assessment.

Table 6: Usable Responses Included in the NEB Assessment

Non-Energy Benefits	Number of Usable Responses in 2024 Survey – Residential CoolSaver	Number of Usable Responses in 2024 Survey - BizEnergySaver
Thermal Comfort	26	0
Reduced Building & Equipment O&M	28	2
Improved Indoor Air Quality	17	1
Reduced Spoilage	N/A	0
Reduced Financial Stress	21	N/A
Sense of Control Over Energy Decisions	35	N/A

EcoMetric estimated NEBs ($) by utilizing sector-based $/kWh NEBs values provided by the IESO and defined in the IESO's Conservation and Demand Management Energy Efficiency Cost Effectiveness Tool. Finally, it should also be noted that all NEBs quantified in this report reflect the value of the NEB across the surveyed sector population as a whole, not just among those who reported experiencing the particular NEB. Those survey respondents who reported that they had not experienced a given NEB were assumed to have valued the NEB as $0 and were included when calculating the overall value.

2.1.6 Job Impacts

EcoMetric leveraged the Statistics Canada (StatCan) custom input/output (I/O) economic model to estimate the job impacts of the LIP. The StatCan I/O model simulates the economic and employment impacts of economic activity related to the program. The economic activity related to the LIP was leveraged as "shocks," which act as inputs into the model to show the direct, indirect, and induced impacts on the number of jobs created by the program. The I/O model uses regional and national multipliers to estimate the economy-wide effects of the economic activity induced by the program. The I/O model used three shocks to determine the job impacts of the LIP:

- Demand for goods and services (program spending)
- Business reinvestment
- Program ratepayer funding

EcoMetric and StatCan developed the shocks using the net verified savings for the sample summarized in Section 3.2. The output of the model expresses job impacts in "person-years"—representing a job for one person for one year.

2.2 Process Evaluation Approach

For the comprehensive process evaluation, EcoMetric reviewed program documentation, collected primary data for a range of stakeholders, and conducted a benchmarking exercise.

2.2.1 Document and Database Review

EcoMetric reviewed program documents related to the LIP, including the LIP design, communications with participants, LIP implementation, and marketing and application materials. The program documentation review supplemented the customer feedback received through survey tasks.

2.2.2 Review Primary Data Collection

All primary data were collected either through video calls, phone calls, or web surveys by EcoMetric. Survey and interview instruments for all process evaluation data collection activities are included in the Appendices.

2.2.2.1 Staff & Vendor Interviews

EcoMetric conducted the following interviews:

Table 7: Staff & Vendor Interview Summary

Interview Type	Participants	Programs Covered	Key Topics
IESO LIP Program Advisors	2 Program Advisors	BizEnergySaver Residential CoolSaver Commercial CoolSaver	Program design, targeting procedures, grid constraint relief, marketing, QA/QC, trade ally/customer challenges
BizEnergySaver Program Delivery Vendor Manager	1 Program Manager	BizEnergySaver	Same as above
Residential CoolSaver Program Delivery Vendor Managers	1 Portfolio Manager 1 Program Manager	Residential CoolSaver	Same as above
Commercial CoolSaver Program Delivery Vendor Managers	1 Associate Program Manager 1 Observer	Commercial CoolSaver	Same as above
IESO LIP System Planning Team	1 Senior Planner 1 Planning Supervisor	All LIP Programs	Same as above

2.2.2.2 Participant Surveys

EcoMetric received web survey responses (combined process and NTG) from 157 participants who completed the survey in its entirety in March 2025. The IESO sent an initial outreach letter to

potential respondents, encouraging them to respond. Then, each potential respondent received an initial survey invitation, followed by three reminders to complete the survey. BizEnergySaver accounted for 10 full completions, Residential CoolSaver accounted for 147, and Commercial CoolSaver had none. Additionally, 37 participants partially completed the web survey. Partial responses are incorporated into the analysis and presentation of results, where relevant.

The combined process and NTG surveys gathered information on customer motivations, participation barriers, overall program experience, and opportunities for program improvement. Since the IESO did not conduct a customer satisfaction survey this year, the surveys also included a limited number of program satisfaction questions.

2.2.2.3 Trade Ally Surveys

In March 2025, EcoMetric also conducted a web survey with trade allies working as program-qualified contractors on one of the three major programs. EcoMetric received web survey responses from seven qualified contractors who participated in the LIP. Three of the respondents answered for the two programs they supported. The following sections further explore the responses of trade allies. These surveys gathered information on working with the program, the outreach and marketing methods used to promote the program(s), their overall program experience, including adherence to program requirements in terms of quality of work, and opportunities to improve the delivery of the three major programs.

2.2.3 Secondary Data Collection – Program Benchmarking

EcoMetric conducted a jurisdictional scan of three programs across the United States that are similar to those within the LIP:

- DTE Energy (formerly Detroit Edison) - Michigan - compared to Residential CoolSaver
- Baltimore Gas and Electric (BGE) - Maryland - compared to Commercial CoolSaver
- Commonwealth Edison (ComEd) - Illinois - compared to BizEnergySaver

These programs were selected based on their measure offerings and because of environmental and regional factors like those in the IESO's service territory. EcoMetric reviewed public reports, program websites, and evaluation data to identify best practices in program design, implementation, incentive types and levels, savings achieved, and cost-effectiveness, including whether such information can inform the direction of the three current IESO major LIP programs.

3 IMPACT EVALUATION RESULTS

This section details the results from the impact evaluation of the LIP in PY2024.

3.1 Gross Verified Savings Results

EcoMetric calculated savings at the measure level for each sampled project to determine program level energy and peak demand savings realization rates and applied those to the PY2024 population. The gross verified energy savings and peak demand savings for the program are listed in Table 8.

Table 8: PY2024 LIP Gross Verified Savings Results

Program	Reported Energy Savings (MWh)	Energy Realization Rate	Gross Verified Energy Savings (MWh)	Reported Peak Demand Savings (MW)	Peak Demand Realization Rate	Gross Summer Peak Demand Savings (MW)	Precision Achieved (Error Margin[3]), Confidence Level
BizEnergySaver	30,512	85.7%	26,159	3.81	92.6%	3.53	2%, 85%
Commercial CoolSaver	94	66.5%	62	0.04	183.6%	0.07	0%, 85%
Residential CoolSaver	436	49.2%	215	0.65	39.7%	0.26	0%, 85%
HomeEnergySaver*	205	-	205	0.02	-	0.02	-
HomeSealSaver*	3	-	3	0.00	-	0.00	-
TOTAL	**31,249**	**85.3%**	**26,644**	**4.53**	**85.9%**	**3.89**	**2%, 90%**

*EcoMetric did not evaluate HomeEnergySaver or HomeSealSaver in PY2024. Gross verified savings were assumed to be equal to the reported savings.

The evaluation was designed to exceed 10% precision at the 90% confidence level at the region level and 15% precision at the 85% confidence level at the program level across BizEnergySaver, Commercial CoolSaver, and Residential CoolSaver.

3 Error margin is 0% for Residential CoolSaver and Commercial CoolSaver, since the impact evaluation involved a census analysis. HomeEnergySaver and HomeSealSaver were not evaluated.

Due to the size and status of HomeEnergySaver and HomeSealSaver, EcoMetric did not evaluate or make any adjustments to reported savings for those programs.

Table 9 and Table 10 list the gross verified energy savings and gross verified peak demand savings for each region. Most verified savings come from BizEnergySaver, particularly in the Richview South region.

The 'Other' category refers to all locations outside the four primary regions targeted by the LIP programs (including Muskoka, Niagara, Kingston, Peterborough, Pembroke, and others), though most of the locations included in this category tend to be in the Muskoka area. A blank cell indicates a region that was not covered by the program.

Table 9: PY2024 LIP Gross Verified Energy Savings (MWh) by Region

Program	Belle River	Ottawa	Richview South	York	Other	Program Total
BizEnergySaver	-	6,120	20,039	-	-	**26,159**
Commercial CoolSaver	-	-	-	62	-	**62**
Residential CoolSaver	-	97	32	86	-	**215**
HomeEnergySaver*	0	17	31	11	146	**205**
HomeSealSaver*	3	-	-	-	-	**3**
Region Total	**3**	**6,235**	**20,101**	**159**	**146**	**26,644**

*EcoMetric did not evaluate HomeEnergySaver or HomeSealSaver in PY2024

Table 10: LIP Gross Verified Summer Peak Demand Savings (MW) by Region

Program	Belle River	Ottawa	Richview South	York	Other	Program Total
BizEnergySaver	-	0.90	2.63	-	-	**3.53**
Commercial CoolSaver	-	-	-	0.07	-	**0.07**
Residential CoolSaver	-	0.13	0.04	0.10	-	**0.26**
HomeEnergySaver*	0.00	0.002	0.004	0.001	0.02	**0.02**
HomeSealSaver*	0.003	-	-	-	-	**0.003**
Region Total	**0.003**	**1.03**	**2.67**	**0.17**	**0.02**	**3.89**

*EcoMetric did not evaluate HomeEnergySaver or HomeSealSaver in PY2024

Table 11 shows a comparison of verified gross savings for PY2024 and PY2023. The significant increase in participation in BizEnergySaver is the main cause of the increase in savings for PY2024 compared to PY2023. Residential CoolSaver also had a significant increase in participation from PY2023, but the savings impact is low relative to BizEnergySaver.

Table 11: Comparison of Gross Savings Results, PY2023 and PY2024

Year	Energy Savings (MWh)	Peak Demand Savings (MW)
PY2023	6,074	0.84
PY2024	26,644	3.89
Percent Change	+339%	+363%

3.1.1 BizEnergySaver

In PY2024, BizEnergySaver included lighting retrofits, lighting controls measures, and motor VFD installations. The incentivized projects generally involved building equipment that had high runtimes prior to the energy efficiency improvement, and thus greater potential for savings.

EcoMetric found that the assumptions and values used by the delivery vendor for key inputs in lighting savings calculations for BizEnergySaver measures were not based on values from reputable sources such as the IESO Measures & Assumptions List (MAL) or technical reference manuals (TRMs) from North American sources. Examples of such inputs included:

- Hours-of-use (HOU) estimates for lighting measures with non-continuous (i.e. not operating 24 hours per day) baseline operation
- HOU reduction for lighting controls measures

In conversations with the delivery vendor, EcoMetric found that these input values were based solely on rough general estimates provided by a small number of installation contractors. The values were used for all measures, regardless of facility/space type or site-specific conditions. Table 12 summarizes the limited number of unique lighting HOU values used in reported savings calculations, when the population covered a much wider variety of facility/space types.

Table 12: Summary of Unique HOU Values in BizEnergySaver Reported Savings Calculations

#	HOU Value	Baseline or Post HOU	Assumed Lighting Schedule	Relevant Application
1	8,760	Baseline	24/7 operation	All/Any
2	6,500	Baseline	24 hours per day, Mon-Fri, 5 hours on weekend	Industrial/High-Bay
3	5,110	Baseline	14 hours per day, 7 days per week	Retail + Commercial Facilities
4	3,250	Post	50% reduction from Schedule #2 above – associated with automated controls being added	Industrial/High-Bay
5	1,460	Post	4 hours/day, 7 days/week – associated with automated controls being added	Retail + Commercial Facilities
6	365	Post	1 hour per day, every day of year – associated with automated controls being added	Garbage Chute Lighting

The reported savings estimates for BizEnergySaver lighting measures also did not account for any HVAC interactive effects. Inclusion of HVAC interactive effects is a standard practice for lighting measure calculations in most energy efficiency programs.

For verified savings calculations, EcoMetric used values for HOU, controls factors, and HVAC interactive factors from the New York State TRM[4] and corresponding to a city (Buffalo) in close proximity to Ontario. Table 13 outlines the significance of the various adjustments EcoMetric made to the savings calculations.

[4] https://dps.ny.gov/technical-resource-manual-trm

Table 13: Comparison of Average Values for Key Inputs in BizEnergySaver Lighting Savings Calculations, Evaluation Sampled Projects

Input	Reported Savings Assumptions Average Value	Verified Savings Assumptions Average Value	Difference
Baseline Hours-of-Use	8,295	7,980	-4%
Post Hours-of-Use	3,760	6,325	+68%
Peak Demand Factor (Percentage of kWh Savings)	0.014%	0.011%	-24%
HVAC IF – Energy	-	4%	N/A
HVAC IF – Peak Demand	-	11%	N/A
Controls Factor (Reduction In Operating Hours)	54%	21%	-61%

The net impact of the decrease in baseline HOU and the increase in post-installation HOU in verified savings calculations was a significant decrease in energy savings compared to the reported values.

3.1.2 Commercial CoolSaver

In PY2024 Commercial CoolSaver included rooftop unit (RTU) tune-ups and V-belt replacements (replacing smooth belts with notched belts. Table 14 shows a summary of reported and verified savings by measure category. All savings adjustments are related to tune-up measures; EcoMetric did not make any adjustments to reported savings for the 'notched belts' measure as the algorithms and assumptions used for reporting savings were reasonable and in line with industry standard practice.

Table 14: Commercial CoolSaver Savings Summary by Measure Category

Measure Category	Quantity	Reported kWh Savings	Verified kWh Savings	kWh Savings RR	Reported Peak kW Savings	Verified Peak kW Savings	Peak kW Savings RR
Tune Ups	31	87,664	56,254	64.2%	36.56	69.66	191.1%
Notched Belts	83	6,215	6,215	100.0%	3.05	3.05	100.0%
TOTAL	**114**	**93,879**	**62,469**	**66.5%**	**39.61**	**72.71**	**183.6%**

Verified energy savings for the Commercial CoolSaver program's tune-up measures were significantly lower than reported savings. The causes for the savings reductions include are summarized below and quantified in Table 15:

- Reduction in average unit tons, based on calculated actual cooling capacity values provided by the delivery vendor. None of the calculated equipment cooling capacity values were used in

the reported savings calculations. Instead, all savings calculations used nominal rated[5] cooling capacities.

- Reduction in average cooling EFLH and peak coincidence factor values, based on the New York State TRM (Buffalo, NY).

Table 15: Comparison of Average Values for Key Inputs in Tune-Up Savings Calculations

Input	Reported Savings Average	Verified Savings Average	Percentage Change
Cooling Capacity (Tonnes)	4.95	3.67	-26%
EFLH Cooling (Hours)	669	638	-5%
Peak CF	0.36	0.80	+122%

While EcoMetric made adjustments that reduced energy savings for Commercial CoolSaver, the peak demand savings realization rate was significantly higher than 100% primarily due to the peak coincidence factor (CF) used. The reported savings estimates used 36%, whereas verified savings used 80%, which is appropriate for the IESO peak summer demand period and more in line with a typical value for commercial buildings. It is also the value used in the New York TRM for the same measure for a city near to Ontario (Buffalo, NY).

None of the site-specific pre-tune-up efficiency values recorded by the delivery vendors (available for 10-15% of the sites) - and corresponding efficiency loss factor (ELF) values - were used in reported savings calculations. Instead, all savings calculations used the stipulated ELF values from the delivery vendor's database, purportedly from recently analyzed tune-ups in other jurisdictions (i.e., not IESO programs).

For the Commercial CoolSaver program, the site-specific ELF values were mostly negative - this would indicate an increase in energy consumption as a result of the tune-up. The delivery vendor disregarded most of those altogether, citing a variety of concerns with testing conditions or the HVAC units themselves. It is certainly possible – and expected – that some results would not be valid, due to

[5] Nominal cooling capacity is a rough approximation (usually a round number) of cooling tonnes, typically at whatever the equipment manufacturer deems to be "typical" operating conditions. The actual cooling capacity of a given A/C unit will vary from the nominal capacity and depends on various site-specific factors.

measurement error and/or malfunctioning HVAC equipment; however, it is not reasonable to accept that all results from onsite measurements should be disregarded.

EcoMetric observed the following about the stipulated ELF values from the delivery vendor's national database, and the approach the vendor used for calculating energy savings for the commercial tune-ups:

- The stipulated values are purported to be weighted averages from analysis of thousands of recent tune-up projects in other jurisdictions where the delivery vendor offers tune-up program offerings. EcoMetric did not have access to the data or the analysis behind the stipulated values.
- Site-specific ELF values for Commercial CoolSaver were negative, on average - this would imply that energy consumption actually increased after the tune-up.
- The stipulated ELF values are significantly higher than those used in similar tune-up programs elsewhere in North America.
- The delivery vendor did not collect pre-tune-up efficiency values for any tune-up projects with refrigerant charge adjustments (RCA).
- The delivery vendor has claimed that climate region has little or no impact on the energy savings achieved for a tune-up but provided no data to back up the claim.

3.1.3 Residential CoolSaver

In PY2024, Residential CoolSaver included air conditioner and heat pump tune-ups, smart thermostats, AC unit replacements, and VFD pool pumps. By far, the most prominent measure type was tune-ups. All savings adjustments are related to tune-up measures; EcoMetric did not make any

adjustments to reported savings for the other three measure types because the savings assumptions were found to be correct and in line with standard industry practice.

Table 16: Residential CoolSaver Savings Summary by Measure Category

Measure Category	Quantity	Reported kWh Savings	Verified kWh Savings	kWh Savings RR	Reported Peak kW Savings	Verified Peak kW Savings	Peak kW Savings RR
Tune Ups	1,190	362,201	140,896	39%	608.54	216.25	36%
Smart Thermostats	83	8,250	8,250	100%	2.90	2.90	100%
AC Replacements	3	723	723	100%	1.74	1.74	100%
Pool Pumps	109	64,746	64,746	100%	37.1	37.1	100%
TOTAL	**1,327**	**435,920**	**214,615**	**49%**	**650.2**	**257.9**	**40%**

Verified energy and peak demand savings for the Residential CoolSaver program's tune-up measures are significantly lower than reported savings. The causes are summarized below and quantified in Table 17:

- Reduction in average unit tons by about 25%, based on calculated actual cooling capacity values provided by the delivery vendor. None of the calculated equipment cooling capacity values were used in reported savings calculations. Instead, all savings calculations used nominal rated cooling capacities.
- EcoMetric utilized an average efficiency loss factor (ELF[6]) of about 11% in verified savings calculations. The average is based on results from onsite measurements taken by the delivery vendor and their contractors. Reported savings utilized an average ELF of about 18%, which is based on stipulated values that the delivery vendor purportedly compiled from previous tune-up programs in the southern US.

[6] Efficiency loss factor (ELF) is the term that the delivery vendor uses in CoolSaver programs to describe the difference between system efficiency pre-tune-up and system efficiency post-tune-up. The general expectation is that there will be an efficiency improvement as a result of the tune-up.

- Verified savings calculations used SEER[7] for kWh savings calcs, versus EER as was used for reported savings estimates.
- Reduction in average cooling EFLH and peak coincidence factor, based on values for Buffalo, NY from the New York State TRM.

Table 17: Comparison of Average Values used for Key Inputs in Tune-Up Measure Savings Calculations

Input	Reported Savings Average	Verified Savings Average	Percentage Change
Cooling Capacity (Tonnes)	2.27	1.70	-25%
EFLH Cooling	508	392	-23%
Peak CF	0.87	0.69	-21%
Efficiency Loss Factor (Improvement)	18%	11%	-39%

The tune-up reported savings estimates did not seem to account for heat pump heating savings. EcoMetric added savings for heating for all measures involving heat pumps, though they did not come close to making up for the savings reductions summarized in the bulleted list and Table 17 above.

None of the site-specific pre-tune-up efficiency values (available for 10-15% of the sites) - and corresponding efficiency loss factor (ELF) values - were used in reported savings calculations. Instead, all savings calculations used stipulated ELF values from the delivery vendor's database, purportedly from recently analyzed tune-ups in other jurisdictions (i.e., not IESO programs).

EcoMetric observed the following about the stipulated ELF values and approach for calculating energy savings for residential tune-ups:

- The stipulated values from the delivery vendor's national database are significantly higher than the average ELF calculated from the delivery vendor's onsite measurements from a sample of IESO Residential CoolSaver tune-up projects in PY2024. The stipulated ELF values are also significantly higher than those used in other North American tune-up programs that are not run by the same delivery vendor.

[7] SEER, or Seasonal Energy Efficiency Ratio, is a measure of equipment efficiency that is meant to represent average performance across a cooling season. EER, or Energy Efficiency Ratio, is also a measure of efficiency but specifically efficiency at peak loads (i.e. high outdoor temperatures).

- The stipulated values are purported to be weighted averages from analysis of thousands of recent tune-up projects in other jurisdictions where the delivery vendor offers tune-up program offerings. EcoMetric did not have access to the data or the analysis behind the stipulated values.
- The delivery vendor has claimed (in discussions with EcoMetric as well as their CoolSaver M&V protocols document) that climate region has little or no impact on the energy savings achieved for a tune-up but provided no data to back up the claim.

3.2 Net Verified Savings Results

The tables below show NTG ratios and net savings results by program and region. Note that the LIP's savings target is based on savings persisting to 2026.

Table 18 summarizes overall LIP net savings results.

Table 18: PY2024 LIP Net Verified Savings (MWh) Results

Program	Population	NTG Ratio	Net First Year Energy Savings (MWh)	Net 2026 Energy Savings (MWh)	Net Verified First Year Summer Peak Demand Savings (MW)	Net 2026 Summer Peak Demand Savings (MW)
BizEnergySaver	154	92%	24,059	24,059	3.25	3.25
Commercial CoolSaver	114	89%	56	56	0.06	0.06
Residential CoolSaver	1,327	70%	150	150	0.18	0.18
HomeEnergySaver	22	100%	205	205	0.02	0.02
HomeSealSaver	23	100%	3	3	0.00	0.00
TOTAL	**1,640**	**92%**	**24,472**	**24,472**	**3.52**	**3.52**

Table 19 and Table 20 break down net savings for all programs by region.

Table 19: PY2024 LIP Net Energy Savings (MWh) by Region

Program	Belle River	Ottawa	Richview	York	Other	Program Total
BizEnergySaver	0	5,629	18,430	0	0	**24,059**
Commercial CoolSaver	0	0	0	56	0	**56**
Residential CoolSaver	0	68	22	60	0	**150**
HomeEnergySaver	0	17	31	11	146	**205**
HomeSealSaver	3	0	0	0	0	**3**
Region Total	**3**	**5,714**	**18,483**	**126**	**146**	**24,472**

Table 20: PY2024 LIP Net Summer Peak Demand Savings (MW) by Region

Program	Belle River	Ottawa	Richview	York	Other	Program Total
BizEnergySaver	0.00	0.83	2.42	0.00	0.00	**3.25**
Commercial CoolSaver	0.00	0.00	0.00	0.06	0.00	**0.06**
Residential CoolSaver	0.00	0.09	0.03	0.07	0.00	**0.18**
HomeEnergySaver	0.00	0.00	0.00	0.00	0.02	**0.02**
HomeSealSaver	0.00	0.00	0.00	0.00	0.00	**0.00**
Region Total	**0.00**	**0.92**	**2.45**	**0.13**	**0.02**	**3.52**

Table 21 shows a comparison of net savings achieved in PY2023 and PY2024 by program. PY2023 was the first year that the LIP reported projects with energy savings, involving BizEnergySaver and Residential CoolSaver.

Table 21: Net Savings Comparison between PY2023 and PY2024

Program	Net First Year Energy Savings (MWh), PY2023	Net Verified First Year Summer Peak Demand Savings (MW), PY2023	Net First Year Energy Savings (MWh), PY2024	Net Verified First Year Summer Peak Demand Savings (MW), PY2024
BizEnergySaver	5,839	0.78	24,059	3.25
Commercial CoolSaver	-	-	56	0.06
Residential CoolSaver	21	0.03	150	0.18
HomeEnergySaver	-	-	205	0.02
HomeSealSaver	-	-	3	0.00
TOTAL	**5,860**	**0.81**	**24,472**	**3.52**

Table 22 shows a comparison of verified net savings for PY2023 and PY2024 rolled up for LIP. There were no reported savings projects for the LIP in PY2021 or PY2022. The significant increase in participation in BizEnergySaver is the main cause of the increase in savings for PY2024 compared to PY2023. Residential CoolSaver also had a significant increase in participation from PY2023, but the savings impact is low relative to BizEnergySaver. The savings realization rates for Residential CoolSaver are low. NTG ratios decreased for both BizEnergySaver and Residential CoolSaver compared to PY2023.

Table 22: Comparison of Net Savings Results, PY2023 and PY2024

Year	Energy Savings (MWh)	Peak Demand Savings (MW)
PY2023	5,860	0.81
PY2024	24,472	3.52
Percent Change	+318%	+335%

3.2.1 BizEnergySaver

The program-level NTG for BizEnergySaver was 92% for PY2024 projects, reflecting a low free ridership score of 15%. Spillover was assessed through the NTG survey by asking respondents if they had completed any additional energy-efficiency programs without receiving an incentive because of the influence of their BizEnergySaver participation. Five BizEnergySaver respondents reported spillover, which was found to be 7%. Total net first-year savings for BizEnergySaver projects evaluated in PY2024 were 24,059 MWh, and net peak demand savings were 3.25 MW. The first-year net savings persist through 2026.

The program's influence on respondents' decision to install energy-efficient equipment was the key driver of the high NTGR. The program funding was a critical influence on participants' decision-making. For 69% of respondents (n= 7), the LIP provided the only external support for the energy-efficiency upgrades installed through the project. Respondents were asked to rank the influence of the BizEnergySaver incentive on a scale of 0 to 10, with 10 indicating the most influential. Notably, 77% of respondents (n=8) indicated that the incentive was eight or higher. The majority of BizEnergySaver respondents reported that the LIP influenced when they would have installed the energy-efficient measures. Respondents mentioned that the program incentive sped up the completion of the projects by reducing financial barriers. However, several respondents indicated that the program did not lead them to install equipment with higher efficiency than what they would have selected on their own (which included LED measures) nor the quantity of measures implemented, resulting in a lower NTG than in PY2023.

3.2.2 Residential CoolSaver

The program-level NTG for Residential CoolSaver was 70% for PY2024 projects, reflecting a free ridership score of 31%. Spillover was assessed for Residential CoolSaver using the same method as BizEnergySaver, and a spillover of 1% was found. Total net first-year savings for Residential CoolSaver projects evaluated in PY2024 were 150 MWh, and net peak demand savings were 0.18 MW. The first-year net savings persist through 2026.

The NTGR for PY2024 is significantly lower than the 2023 program level NTGR of 98%. In 2023, the only program measure implemented was AC tune-ups, and respondents reported that they were unlikely ever to install them without the program. In 2024, AC tune-ups were the primary measures implemented (91% of measures); however, 61% of tune-up respondents (n= 26) indicated that they would have completed the tune-ups at the same time or eventually without the program. The additional measures implemented in 2024 included variable-speed pool pumps (6%), central air conditioners (2%), and smart thermostats (1%).

3.2.3 Commercial CoolSaver

EcoMetric was unable to complete any NTG surveys for the Commercial CoolSaver program due to non-response from all of the program's nine participants. All measures completed through the program in PY2024 were for air conditioner tune-ups. EcoMetric recommends that the NTG for this program for PY2024 reflect the air conditioner tune-up measure from the Residential CoolSaver program as the Commercial CoolSaver measures and delivery channels have more in common with Residential CoolSaver than BizEnergySaver. This results in an NTG of 89%. The total net first-year

savings for Commercial CoolSaver projects evaluated in PY2024 were 56 MWh, and net peak demand savings were 0.06 MW. The first-year net savings persist through 2026.

4 COST EFFECTIVENESS RESULTS

EcoMetric used the Program Administrator Cost (PAC) test to assess the cost-effectiveness of the LIP in PY2024. The PAC test compares benefits (i.e. avoided costs resulting from the energy efficiency measures) and costs (i.e. program administrative costs and participant incentives), with a benefit/cost threshold of 1.0. As shown in Table 23, the LIP is cost effective for PY2024, achieving a 1.50 PAC ratio. Overall, the LIP PAC benefits totaled $11,988,218, while costs totaled $7,983,644. The levelized unit energy cost (LUEC) was $0.04/kWh for the program.

The LIP PAC ratio results indicate that, while many individual programs were not independently cost-effective, the LIP achieved cost-effectiveness in PY2024. The overall cost-effectiveness in PY2024 was driven by strong performance from the commercial portfolio, especially BizEnergySaver, which delivered significant savings through lighting and VFD measures. Residential programs like CoolSaver and HomeSealSaver underperformed, with lower savings relative to costs; however, as participation increases and additional savings are realized, EcoMetric expects the cost-effectiveness of these residential programs to improve over time. Residential CoolSaver has already shown this, improving from a PAC ratio of 0.04 in PY2023 to 0.10 in PY2024.

Table 23: PY2024 LIP Cost Effectiveness Results

Program	PAC Costs	PAC Benefits	PAC Ratio	LUEC $/kWh
BizEnergySaver	$6,844,701	$11,757,242	1.72	$0.03
Commercial CoolSaver	$32,741	$22,003	0.67	$0.21
Business Sector Total	**$6,877,442**	**$11,779,245**	**1.71**	**$0.03**
Residential CoolSaver	$657,604	$62,526	0.10	$1.60
HomeEnergySaver	$267,526	$140,468	0.53	$0.13
HomeSealSaver	$181,072	$5,977	0.03	$5.61
Residential Sector Total	**$1,106,201**	**$208,972**	**0.19**	**$0.45**
PY2024 Total	**$7,983,644**	**$11,988,218**	**1.50**	**$0.04**

The overall PAC ratio decreased from 1.69 to 1.50 between PY2023 and PY2024, due to a decrease in cost-effectiveness for BizEnergySaver as well as the addition of residential programs in PY2024.

Table 24: Comparison of Cost-Effectiveness Results, PY2023 and PY2024

Year	PAC Costs	PAC Benefits	PAC Ratio	LUEC $/kWh
PY2023	$1,342,641	$2,268,992	1.69	$0.03
PY2024	$7,983,644	$11,988,218	1.50	$0.04

5 PROCESS EVALUATION RESULTS

This section presents the results from the LIP PY2024 comprehensive process evaluation. It focuses on goals, program effectiveness, customer experience and program improvement research objectives. Benchmarking outcomes derived from secondary research are consolidated across all programs within the LIP. Results from primary data collection, including market actor surveys and interviews, are systematically organized and presented by individual program.

5.1 Research Questions

The process evaluation focused on the following research questions (for BizEnergySaver, Commercial CoolSaver, and Residential CoolSaver), which EcoMetric developed with the IESO LIP program design and delivery team:

- Is the IESO on track to meet savings goals for this program within the current framework?
- How effective have the programs been in alleviating grid constraints?
- How effective, if at all, have trade allies and the program delivery vendor been in driving enrollment for the programs?
- What are the motivations and barriers for customers and trade allies to participate in the programs?
- How is the overall customer and trade ally program experience?
- What marketing changes can be made to increase customer trust in the validity of the programs?
- How effective have the QA/QC processes been for the programs?
- Where are the opportunities to improve the delivery of the programs?

5.2 Benchmarking

Comparing the IESO's programs with peer and near-peer programs can shed light on alternative designs that might address IESO barriers. EcoMetric selected three programs that were similar to the programs within the LIP that EcoMetric evaluated in PY2024. The benchmarking included both quantitative and qualitative comparisons.

5.2.1 Program Design

- **DTE Energy (formerly Detroit Edison) Michigan**. The Diagnostic Air Conditioner Tune-Up program is offered to DTE residential electric customers as part of the HVAC program. Financial incentives are provided to make diagnostic tune-up services for heating and cooling equipment more affordable, benefiting both customers and participating contractors. It is designed for residential customers in single-family homes with two or less individually metered units to receive tune-up incentives once every five years. A standardized service checklist is also used. This program is being used to benchmark the IESO's Residential CoolSaver program, which offers free central AC or heat pump tune-ups (valued up to $165) and is geographically targeted to areas with identified electricity system needs. Residential CoolSaver also includes optional refrigerant adjustments at a discounted rate and incentives for equipment replacement, which broadens the scope beyond tune-ups alone. While Residential CoolSaver's higher-value, no-cost tune-up is a strong draw, DTE's use of a standardized service checklist may help ensure consistent service quality over time.
- **Baltimore Gas and Electric (BGE) Maryland**. The HVAC Tune-Up program provides incentives to BGE's non-residential, commercial, industrial, government, institutional, and nonprofit customers when they receive HVAC tune-ups from approved Service Providers as part of the Building Tune-Up program (under the Commercial and Industrial RCx program). This program focuses on improving operating efficiency and reducing energy costs and is designed for customers with existing facilities and units ranging from less than 3 tons to greater than 50 tons. Customers are eligible to receive incentives once every three years. This program is being used to benchmark the IESO's Commercial CoolSaver program, which focuses on eligible commercial customers in York Region and provides free rooftop unit, AC, or heat pump tune-ups (up to $800 value) plus instant discounts on a range of efficiency upgrades such as refrigerant charge adjustments, demand-controlled ventilation, and advanced rooftop controls. The integration of tune-ups with targeted equipment incentives may encourage deeper savings per participant. Commercial CoolSaver's integration of tune-ups with upgrade incentives is a strength, but BGE's inclusion of a very broad equipment size range (50 tons) could offer insights into serving a wider variety of facility types.
- **Commonwealth Edison (ComEd) Illinois**. The Small Business Energy Savings program connects ComEd's non-residential customers with authorized service providers for no-cost energy efficiency assessments, direct install measures, and additional incentives for approved measures. This program helps qualified customers achieve electric energy savings by educating them about opportunities through onsite assessments and installations provided at no cost. It is designed for ComEd's eligible private and public sector small business customers

with an electrical peak demand under 400 kW. Customers who choose to self-install are not eligible for measure incentives. This program is being used to benchmark the IESO's BizEnergySaver program, which is geographically targeted (Ottawa and Toronto's Richview South) and combines a free on-site assessment with direct installation of lighting, controls, and variable frequency drives, plus instant discounts on qualifying equipment. While ComEd's program is broader in customer eligibility, BizEnergySaver's focus on local electricity system constraints shapes its measure mix and delivery approach. BizEnergySaver's geographic targeting supports system needs, but ComEd's broader eligibility criteria may allow for greater market penetration and economies of scale in delivery.

5.2.2 Implementation

- **DTE Michigan**. Customers connect with participating contractors through the DTE website. The participating contractor performs the Diagnostic Air Conditioner Tune-Up per the Service Checklist and completes a detailed tune-up report. The signed reports, invoices, and rebate application are submitted online by the participating contractor within 20 days of the service. The DTE contractor database offers an online directory of participating contractors, making it easy for customers to learn about who may perform their services. In the IESO's Residential CoolSaver program, customers typically connect with participating trade allies through targeted outreach or program marketing, and the program delivery vendor coordinates trade ally participation. Residential CoolSaver could potentially benefit from DTE's public-facing trade ally directory, which gives customers more autonomy in selecting a provider and may increase trust through transparency.
- **BGE Maryland**. Customers connect with approved Service Providers through the BGE website, submit an online application, sign the Terms and Conditions, and request pre-approval. Once approved, the Service Provider completes the HVAC Tune-Up and submits documentation, invoices, photos, and the signed pre-approval letter within 60 days of the service. Like DTE, BGE provides a list of certified contractors to help customers identify potential service providers. The Commercial CoolSaver program streamlines participation by allowing eligible customers to work directly with trade allies without a formal pre approval step, reducing administrative burden. However, BGE's combination of a public trade ally directory and pre approval process may help customers make informed provider selections and ensure project eligibility and documentation quality before work begins.
- **ComEd Illinois**. Customers visit the ComEd website to answer questions and schedule a free assessment with an authorized Energy Efficiency Service Provider. The ComEd website operates much like the IESO's BizEnergySaver website, offering customers the option to either

call a representative directly or fill out a form to be contacted by a program service provider. Service Providers identify and provide upgrade recommendations based on facility needs and budgets, install incentivized measures, and fully manage projects, if desired. The IESO's BizEnergySaver program follows a similar intake model, offering both phone and online form options to connect customers with program service providers. However, ComEd's process integrates the scheduling of assessments directly into the online workflow, whereas BizEnergySaver's intake process is more focused on initial contact and eligibility confirmation before scheduling. While the evaluation revealed that BizEnergySaver's intake process is effective, ComEd's ability to schedule assessments directly through the website could reduce friction and shorten the time from interest to service delivery.

5.2.3 Incentive Types/Levels

- **DTE Michigan**. Customers receive a $75.00 check in the mail within six to eight weeks of project completion. The Diagnostic Air Conditioner Tune-Up program offers no additional stratification based on the system size. Program funds are limited, and rebates are paid on a first-come, first-served basis. As of the issuance date of this report, 19% of program incentives have been paid [8]. In the Residential CoolSaver program, customers receive a free central AC or heat pump tune up (valued up to $165) delivered by trade allies, with no out of pocket cost. This higher incentive value and immediate benefit at the time of service may reduce participation barriers compared to DTE's smaller, delayed rebate. However, DTE's straightforward, single amount incentive structure may simplify administration and customer understanding.
- **BGE Maryland**. HVAC Tune-Up incentives are based on the size of the unit(s). Units range from less than 3 tons to greater than 50 tons. Incentives range from $40.00 per unit to $350.00 per unit, respectively. Projects with incentives greater than $2,800.00 require pre-approval. The Commercial CoolSaver program offers free tune ups for eligible rooftop units, ACs, or heat pumps (valued up to $800) plus instant discounts on additional efficiency upgrades. Covering the full cost at the point of service removes the need for customers to front costs and wait for reimbursement, which may encourage higher uptake. At the same

[8] https://www.dteenergy.com/us/en/residential/save-money-energy/rebates-and-offers/air-conditioners.html#tabs-6411a69827-item-ff0ac87673

time, BGE's size-based incentive tiers align payment with potential savings, which could help manage program budgets while targeting higher incentives to larger, higher impact equipment.

- **ComEd Illinois**. Incentivized measures can be found on the program website[9] while incentive amounts are provided in customized reports. After project completion, incentives are applied to the invoice before customers pay the remaining balance. Program funds are limited, and rebates are paid on a first-come, first-served basis. ComEd's facility assessment fact sheet outlines sample rebate amounts but does not include a thorough list of all measures and rebates. The BizEnergySaver program also applies incentives at the point of sale but publishes a detailed list of all available measure incentives in its program requirements document. This transparency may help potential participants better understand the full range of benefits before committing themselves to an assessment. ComEd's approach of tailoring incentive amounts to the facility's specific recommendations, however, may allow for more customized and context specific incentive offers.

5.2.4 Savings Achieved

- **DTE Michigan** reported savings for its residential HVAC program portfolio. The projected savings for 2023 were 3,874 MWh, while the actual savings achieved were 3,421 MWh. Measure-specific data was not available. Because Residential CoolSaver launched partway through the program cycle, current projections suggest that cumulative goals may be challenging to reach within the original timeframe. This pattern is not unique since other jurisdictions, including DTE, have also reported lower than projected savings in certain years, underscoring that early cycle performance can be influenced by program ramp up periods rather than long term potential.
- **BGE Maryland** reported savings for its C&I RCx program portfolio. In 2023, the semi-annual reported gross energy savings were 16,125 MWh, while the verified gross energy savings were 14,625 MWh, and the verified net energy savings were 11,261 MWh. BGE also reported an NTG of 0.77 for the C&I RCx program in 2023. For the Commercial CoolSaver program, the NTGR is currently reported at 89%. This figure was not derived from primary data for the

[9] https://www.comed.com/ways-to-save/for-your-business/incentives/small-businesses-facilities

commercial offering; rather, it was based on primary data from the same AC tune-up measure in the Residential CoolSaver program. While this provides a reasonable proxy in the absence of direct evaluation data, the difference from BGE's NTG suggests it may be useful to revisit the Commercial CoolSaver NTG in future evaluations once program-specific primary data becomes available.

- **ComEd Illinois** was the only program where program-specific information was available. The Small Business Energy Savings program reported achieving first-year gross energy savings of 233,649 MWh and first-year net energy savings of 227,894 MWh. ComEd also reported an electric program NTG of 0.98. The BizEnergySaver program reports a NTGR of 92%. While the absolute savings figures are not directly comparable due to differences in market size and program scope, ComEd's high NTG and program-specific reporting illustrate how closely aligned gross and net savings can be when free-ridership is low – a useful benchmark for understanding BizEnergySaver's performance context.

5.2.5 Cost Effectiveness

When comparing cost effectiveness results across jurisdictions, it is important to consider that the IESO's PAC test and related metrics may differ in scope, inputs, and calculation methods from the cost effectiveness tests used in other regions. These methodological differences can influence reported ratios and should be kept in mind when interpreting cross-program comparisons. There are multiple approaches and tests used to assess cost-effectiveness of incentive programs. Each approach incorporates different combinations of cost and benefit inputs.

- **DTE Michigan**. DTE reported the 2023 Cost-Effectiveness Values for the residential HVAC program, showing DTE Electric's Utility System Resource Cost Test (USRCT) score of 0.48. For context, this is lower than the PAC ratio of 0.10 observed for the Residential CoolSaver program in the LIP portfolio (see Table 23), which similarly underperformed in cost effectiveness due to relatively low savings compared to costs.
- **BGE Maryland**. BGE reported the 2023 Verified Cost-Effectiveness Results for the C&I RCx program, showing a Societal Cost Test (SCT) score of 1.82 and a Total Resource Cost (TRC) score of 0.60. By comparison, the Commercial CoolSaver program in the LIP portfolio had a PAC ratio of 0.67, reflecting a similar pattern of moderate cost effectiveness in commercial HVAC tune up offerings.
- **ComEd Illinois**. ComEd assessed cost-effectiveness using the Utility Cost Test (UCT) and the Illinois Total Resource Cost (TRC) test. The 2023 values for the Small Business Program are as follows: Illinois TRC Test score of 3.49 (with Societal UCT NEIs), Illinois TRC Test score of 2.37

(without Societal UCT NEIs), and UCT score of 1.27. For reference, the BizEnergySaver program in the LIP portfolio achieved a PAC ratio of 1.72, also indicating strong cost effectiveness in the small business/commercial sector.

5.3 Interview and Survey Results

5.3.1 IESO Savings Goals

Delayed starts to multiple programs within LIP and low early market adoption, combined with the amount of time vendors require to scale up direct-install labor capacity, will likely result in not program-level and regional savings targets for the framework not being met.

5.3.2 Alleviating Grid Constraints

System planners, during interviews with EcoMetric, explained that they monitor grid impacts indirectly through the annual program evaluation results, but do not measure the grid relief associated with the LIP on a yearly basis. This approach reflects the cyclical nature of system planning, where planners assess demand forecasts against actual conditions and re-evaluate DSM contributions periodically, typically every few years, unless an urgent grid need arises.

While planners expect the LIP to contribute to grid constraint relief over time, isolating their impact annually is challenging due to multiple overlapping factors (e.g., weather variability, baseline forecast assumptions, and broader market trends). As such, evaluations serve as a key input to understanding grid relief provided by specific programs in the short term.

This method allows planners to take a longer-term view of program effectiveness and adjust strategies as needed during major planning cycles, rather than relying on frequent updates that may not yield actionable insights. EcoMetric found that LIP's progress in addressing regional grid constraints is most appropriately measured at the end of a framework period, or after approximately three years, rather than on an annual basis.

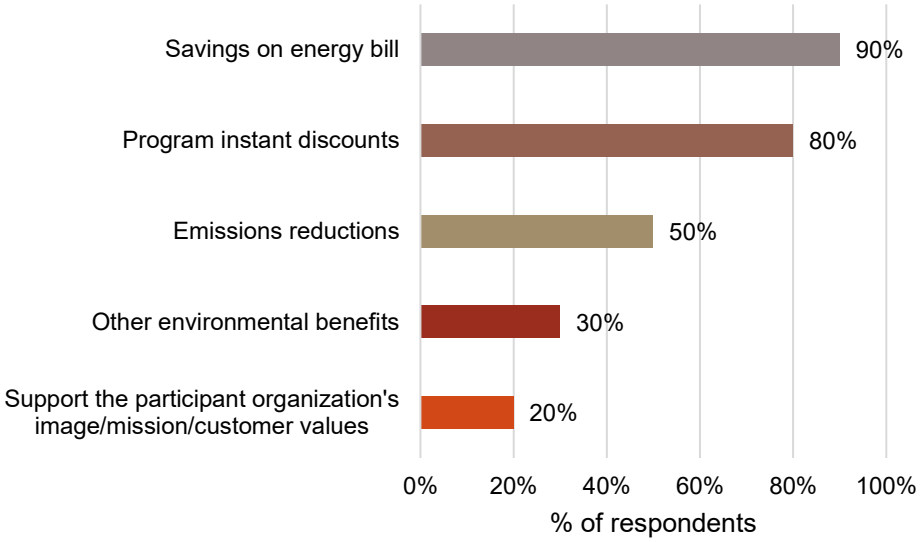
5.3.3 Motivations and Barriers

5.3.3.1 BizEnergySaver

BizEnergySaver participants indicated that savings on their energy bills were their primary motivation for participating. Specifically, 90% (n = 9) of BizEnergySaver respondents (Figure 1) were motivated by energy bill savings. This is like last year's evaluation, where BizEnergySaver participants indicated incentives, support, and energy savings were their primary motivations for participation. The program delivery vendors also projected cost savings to be a strong motivation for customers.

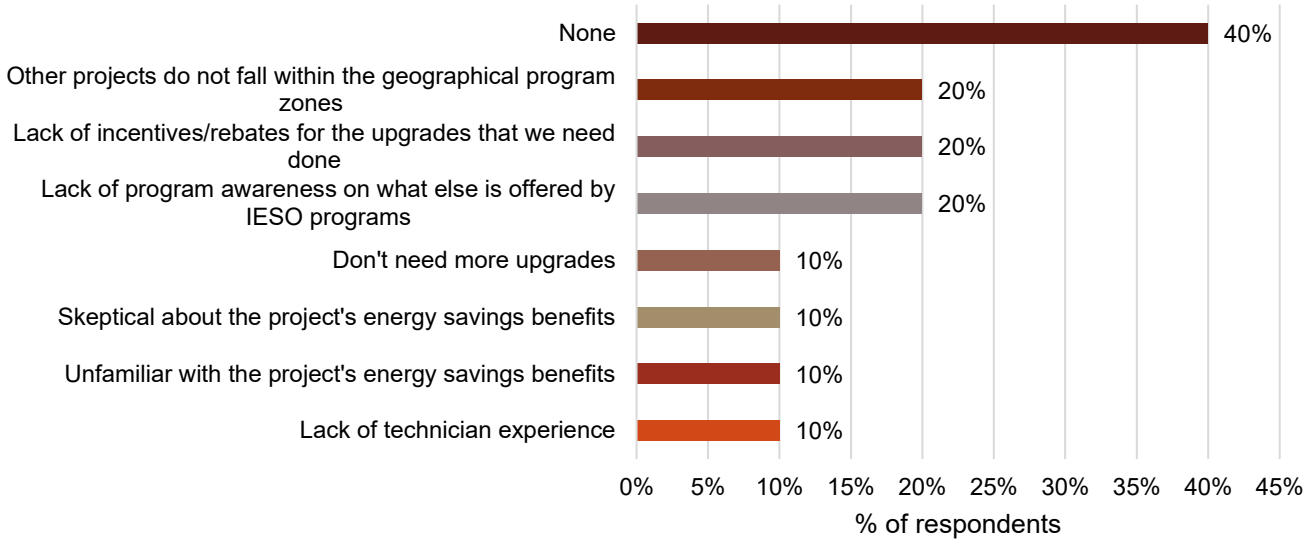
Additionally, trade allies indicated that they thought the primary reason customers participate in the LIP is for incentives/rebates. Taken together, these results suggest that the IESO should continue to lead LIP marketing with a message of cost reduction. Current program materials and the program webpages already provide these highlights.

Figure 1: PY2024 BizEnergySaver Participant Motivations to Participate (n = 10, 1 respondent ≈ 10%)



40% (n = 4) of BizEnergySaver participants (Figure 2) indicated no barriers are keeping them from participating in more projects under the IESO's Save on Energy programs. This is a significant positive overall takeaway.

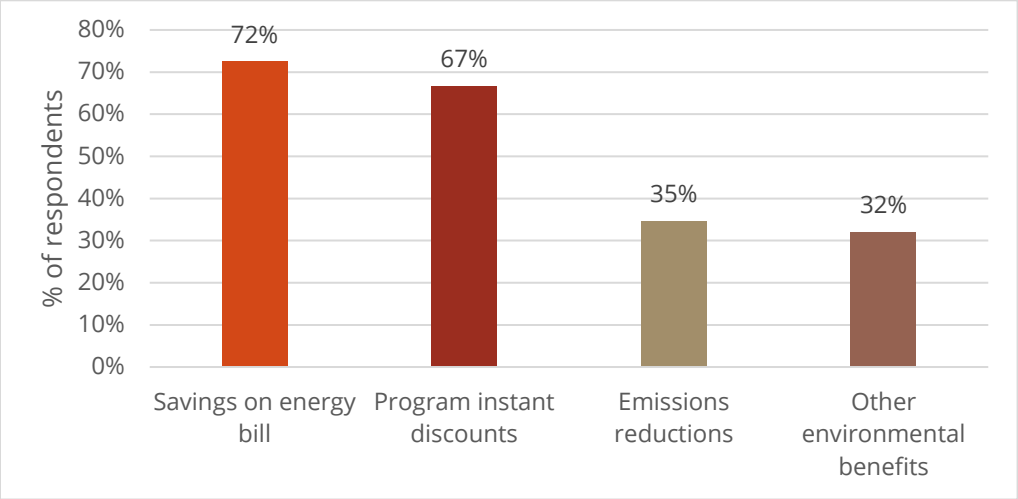
Figure 2: PY2024 BizEnergySaver Participants Barriers to More Fully Participate in the Program (n = 10, 1 respondent ≈ 10%)



5.3.3.2 Residential CoolSaver

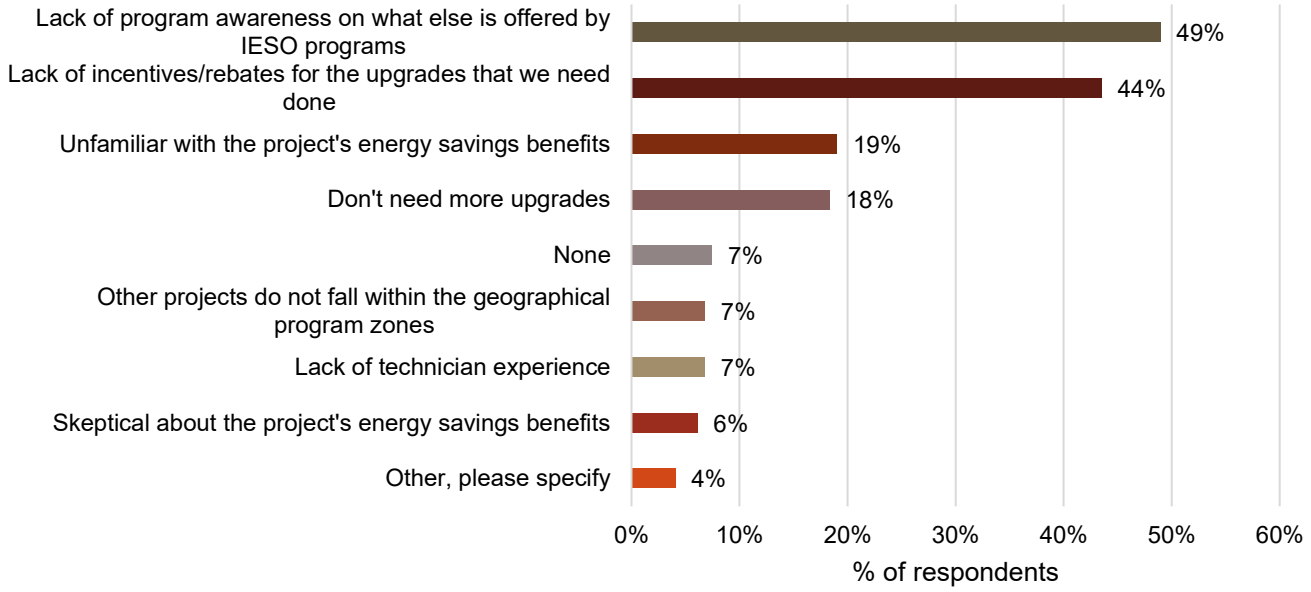
Residential CoolSaver participants indicated that savings on their energy bills were their primary motivation for participating. Specifically, 72% (n = 113) of Residential CoolSaver respondents (Figure 3) were motivated by energy bill savings. This is similar to last year's evaluation, where CoolSaver participants indicated incentives, support, and energy savings were their primary motivations for participation. The program delivery vendors also projected cost savings to be a strong motivation for customers. Additionally, trade allies indicated that they thought the primary reason customers participate in the LIP is for incentives/rebates. Taken together, these results suggest that the IESO should continue to lead LIP marketing with a message of cost reduction. Current program materials and the program webpages already provide these highlights.

Figure 3: PY2024 Residential CoolSaver Participant Motivations to Participate (n = 157, 1 respondent ≈ 0.6%)



49% (n = 72) of Residential CoolSaver participants (Figure 4) identified a lack of program awareness about what other Residential CoolSaver measures are incentivized as their top barrier to participating in more projects under the program.

Figure 4: PY2024 Residential CoolSaver Participants Barriers to More Fully Participate in the Program (n = 147, 1 respondent ≈ 0.7%)



5.3.3.3 Cross Program (BizEnergySaver and Residential CoolSaver)

The program delivery vendor teams perceived that participants' greatest barriers to participation are a lack of incentives and other projects not falling within the geographical program zones. Trade allies

ranked the lack of program awareness in a three-way tie (alongside not being in the geographical program zones and skepticism about the program offerings) as a major barrier faced by customers. Although a lack of program awareness about what else is offered by the IESO was not mentioned as an essential barrier by program delivery vendors, it was recognized by trade allies.

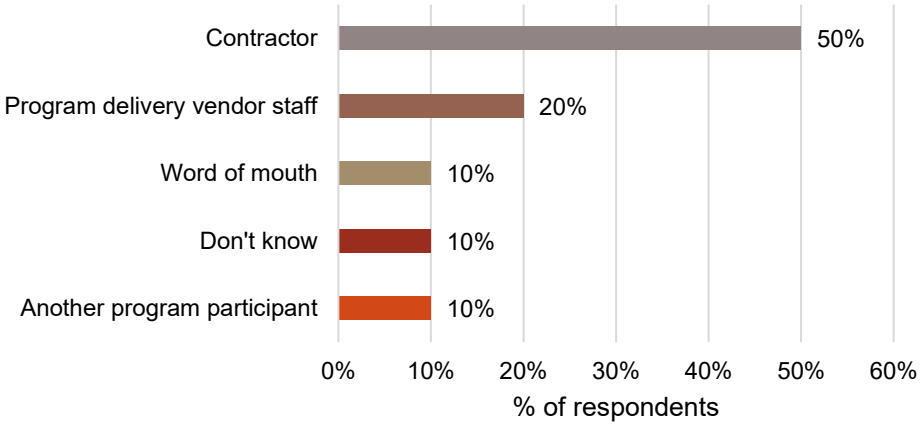
5.3.4 Driving Enrollment

5.3.4.1 BizEnergySaver

The program delivery vendor reported that BizEnergySaver trade allies play a crucial and effective role in driving enrollment. They work closely with customers to develop a business case and meet customer needs within the program's eligibility. Many new leads come from these trade allies.

50% (n = 5) of BizEnergySaver participants first heard of the program through a contractor, as shown in Figure 5. Strikingly, none learned of the program through social media or any electronic means. Overall, since the IESO program staff and the program delivery vendor staff report a desire for the LIP to be greatly supported by trade allies driving enrollment, these expectations may need to be revisited explicitly, with trade allies encouraged to drive new program enrollment.

Figure 5: PY2024 BizEnergySaver Participants First Heard of the Program (n = 10, 1 respondent ≈ 10%)



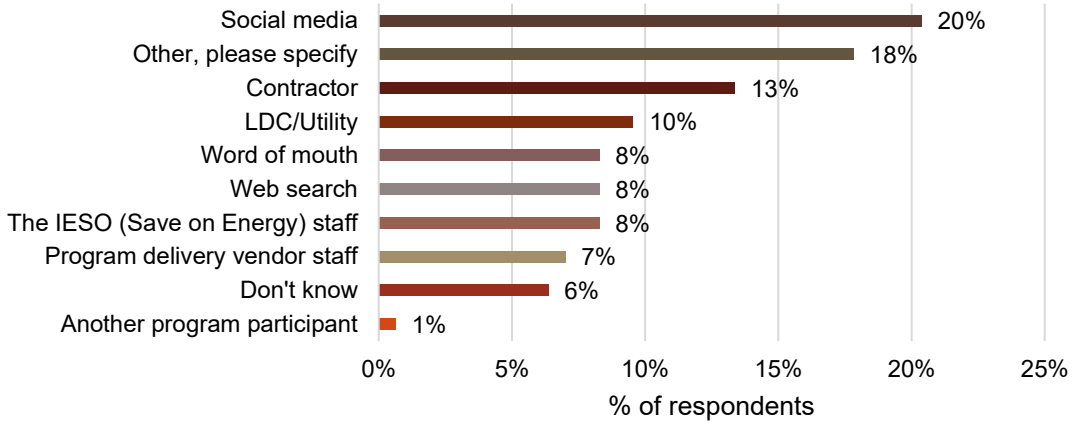
5.3.4.2 Residential CoolSaver

According to program delivery vendor staff, contractors adopted a more tailored approach to driving enrollment for Residential CoolSaver in 2024, which included holding regular meetings with trade allies to share insights on which strategies were effective or ineffective with participants. Similarly, in 2024, the program delivery vendor shared additional marketing materials with trade allies to support enrollment efforts and launched sales-focused training sessions to help contractors and trade allies

communicate not only what the Residential CoolSaver program offers, but also why it holds value for participants.

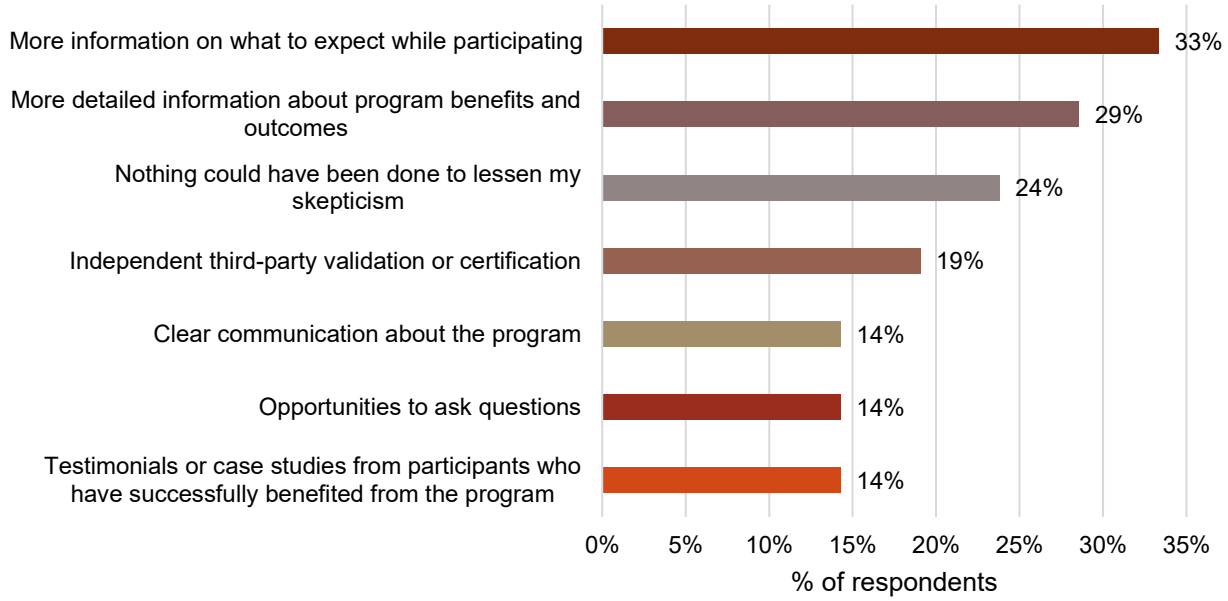
20% (n = 32) of Residential CoolSaver participants first heard of the program through social media, as shown in Figure 6. In addition to the response options provided, participants also reported "other" sources as receiving flyers in the mail and hearing radio ads about the program. Overall, since the IESO program staff and the program delivery vendor staff report a desire for the LIP to be greatly supported by trade allies driving enrollment, these expectations may need to be revisited explicitly, with trade allies encouraged to drive new program enrollment. Additionally, tiered rewards, such as marketing funds, co-branding opportunities, or public recognition, could be offered for those who meet or exceed a defined customer enrollment target.

Figure 6: PY2024 Residential CoolSaver Participants First Heard of the Program (n = 160, 1 respondent ≈ 0.6%)



33% of Residential CoolSaver participants (n= 7) reported that more information on what to expect while participating would have made them less skeptical about the programs Figure 7. Including additional information upfront about the programs during enrollment (either by encouraging contractors to provide more information or by including more information in social media postings, where possible) may help decrease the sentiment expressed during last year's evaluation that the programs sounded "too good to be true."

Figure 7: PY2024 Reducing Residential CoolSaver Program Skepticism (n = 31, 1 respondent ≈ 3.2%)



5.3.4.3 Cross Program (BizEnergySaver, Residential CoolSaver, and Commercial CoolSaver) Findings

Trade ally respondents primarily noted using phone calls for marketing and outreach to drive enrollment, accounting for 89% of responses (n= 8). Word of mouth and email are also popular methods, each used by 67% (n = 6) of respondents.

Trade ally respondents reported feeling well-prepared to enroll customers in each of the LIP programs. When asked to rate their level of preparedness on a scale of 0 to 10, with 0 indicating extreme unpreparedness and 10 indicating extreme preparedness, all responses were 7 or higher.

5.3.5 Quality Assurance/Quality Control

5.3.5.1 BizEnergySaver

For BizEnergySaver, program delivery vendor staff report having a central database where all potential program documentation is stored. The software can confirm whether a location is eligible to participate in a program. During the program participation stage, the software automatically reviews photographic documentation and alerts the program delivery vendor staff if any documentation is illegible for manual review. All signed work orders and photos are reviewed before the project is considered complete.

5.3.5.2 Commercial CoolSaver

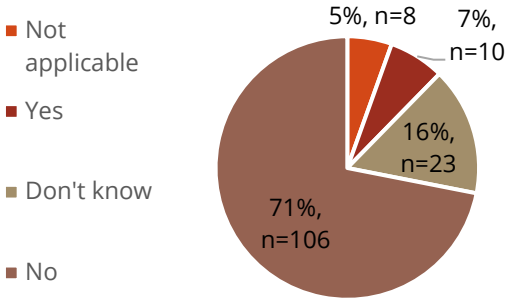
For Commercial CoolSaver, the QA/QC process begins at the operational level with document and component verification, followed by contractor updates if needed. Technical QA leverages established CoolSaver program practices, utilizing automated checks and manual reviews to ensure data accuracy, support contractor training, and minimize application errors over time. A final bulk review is conducted monthly or annually. Technicians enrolled in the program are accompanied by an account manager for their first 2–3 facility tune-ups (which may include up to 10 tune-ups total) to ensure they're comfortable with the process. Technical reviewers verify documentation, such as stickers and photos, and account managers continue on-site visits for requalification and new customer support as part of this evolving program.

5.3.5.3 Residential CoolSaver

According to program delivery vendor staff, an account manager is supposed to schedule a random drop-in to monitor the service and ensure the quality of the Residential CoolSaver program. Following the service, a regular engineering review is conducted, where program delivery vendor staff verify documentation, licenses, and data. Meanwhile, contractors conduct readings both before and after the tune-up to help estimate savings.

Just under 10% (n = 10) of the participants reported receiving quality control check visits before, during, or after their measure was installed, as Figure 8: illustrates (excluding not applicable and don't know respondents).

Figure 8: PY2024 Residential CoolSaver Quality Control Checks (n = 147)



5.3.5.4 Cross Program (BizEnergySaver, Residential CoolSaver, and Commercial CoolSaver) Findings

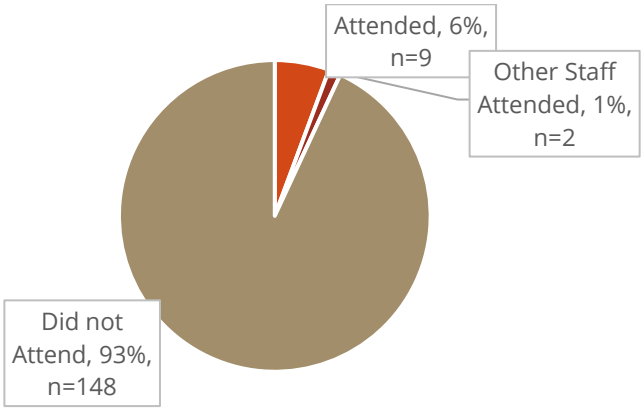
While there is evidence of QA/QC taking place across all three programs, the IESO program staff interview revealed a desire for these practices to become even more thorough. For example,

implementing standardized and comprehensive QA/QC processes across all programs and offerings. Other potential solutions could include ride-alongs for new technicians during the first three sites, then every 50th tune-up, to improve QA/QC consistency. Another possible example could consist of requiring documentation from trade allies showing performance characteristics (specifically system wattage) before and after the tune-up to verify the effectiveness of the tune-up and justify reported savings.

5.3.6 Save on Energy Trainings

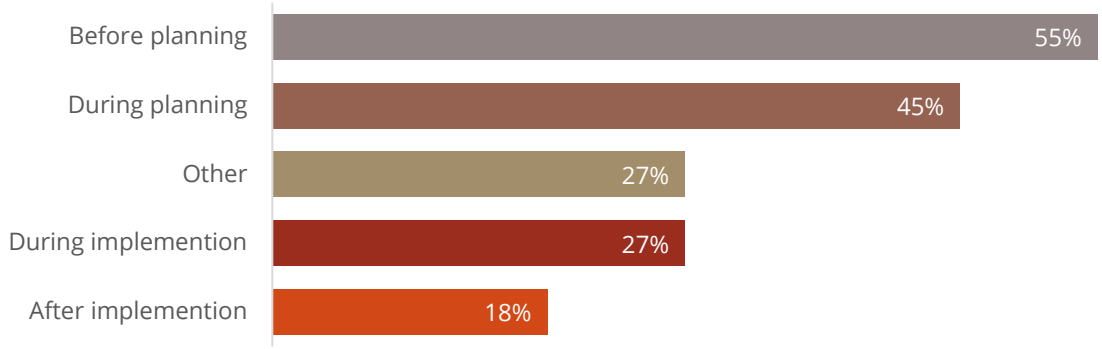
About 6% (n=9) of respondents or their staff attended at least one training session from Save on Energy under Capability Building Programs (CBI). Those respondents who reported attending CBI trainings were participants from BizEnergySaver (Figure 9).

Figure 9: LIP Respondent Attendance at CBI (n=159)



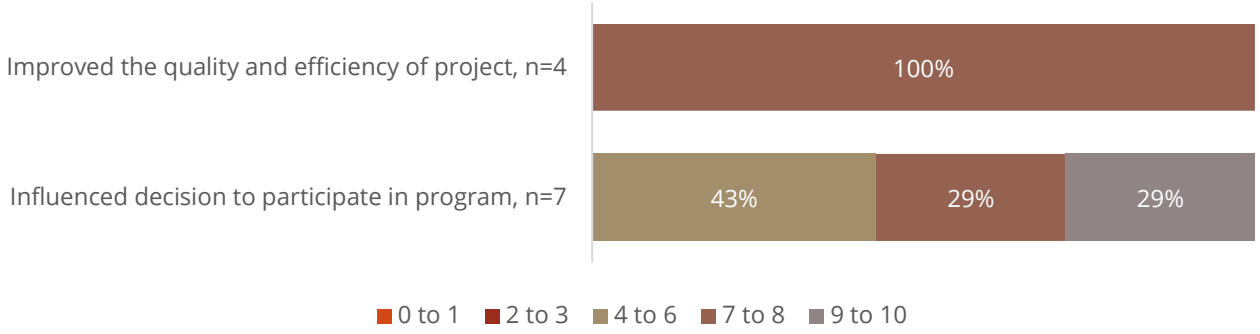
More than half of respondents who attended a CBI session did so before project planning (Figure 10). Just under half of respondents also attended again during the planning process and more than one quarter during implementation stages, showing continued engagement across multiple project phases.

Figure 10: Project Stage with CBI Attendance (n=11, 1 respondent ≈ 9.1%)



100% of respondents who attended a CBI said that it improved the quality and efficiency of an energy efficiency project (Figure 11). Nearly 60% of respondents who attended a CBI said that it influenced their decision to participate in the LIP, rating the influence over a 6 on a 0-10 scale. This influence is "channeling" from one program to another and is evaluated using a methodology similar to that used to detect and quantify spillover. Channeling does not impact net-to-gross or the savings attributable to either program.

Figure 11: Impact and Influence of CBI on Energy Efficiency Projects and Program Participation (1 respondent ≈ 25% for project bar; 1 respondent ≈ 14.3% for program bar)



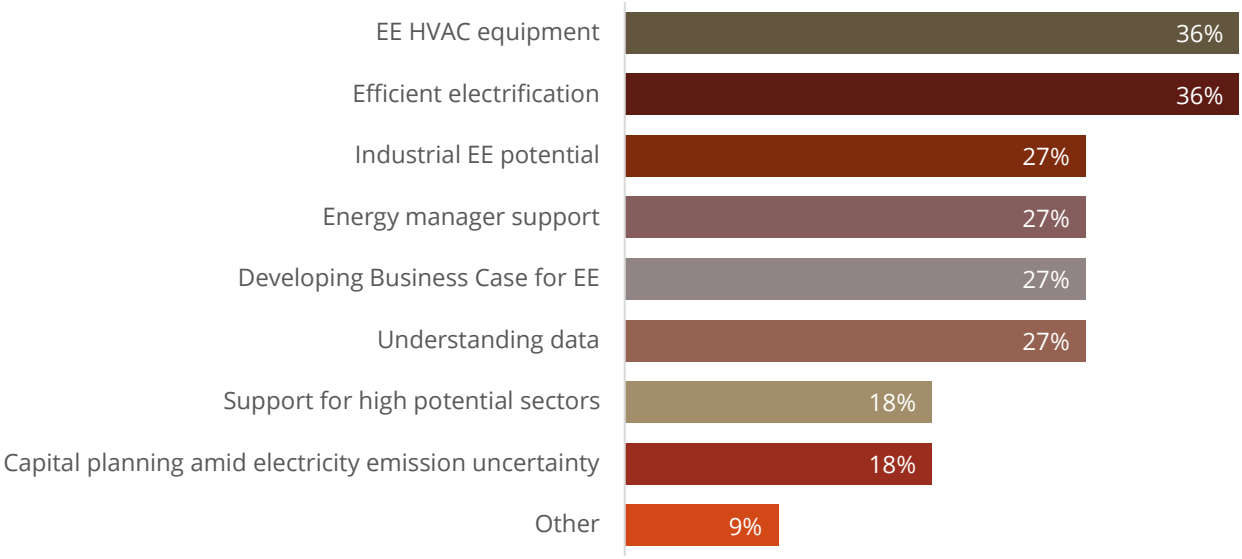
Key impacts reported by respondents:

- Improved understanding of certain topics
- Benefitted from the group learning experience
- Motivated attendees to continue working toward electrification
- Encouraged excitement about future training topics - particularly residential HVAC, new construction, solar, and battery storage

Training topics covered:

All but one respondent attended CBIs addressing at least two topics. Those respondents each attended CBIs addressing two to four different topics. The topics most frequently attended were "Energy efficient HVAC equipment" and "Efficient electrification". (Figure 12).

Figure 12: CBI Topics Attended by LIP Respondents (n=11, 1 respondent ≈ 9.1%, multiple selections allowed; does not total 100%)



6 OTHER ENERGY EFFICIENCY BENEFITS

6.1 Avoided Greenhouse Gas Emissions

An often-overlooked impact of electric energy-efficiency measures is the avoided greenhouse gas emissions from the avoided generation, transmission, and distribution of electricity in Ontario's grid. Net first-year greenhouse gas (GHG) reductions total 5,305 metric tonnes of CO_2 equivalent (CO_2e) for the LIP, as summarized in Table 25. As LIP projects focus on electricity savings, these GHG reductions are derived from the avoided generation of electricity. Over the lifetime of the PY2024 evaluated projects, net GHG reductions total 53,297 tonnes of CO_2e for the entire program.

Table 25: PY2024 LIP Avoided Greenhouse Gas Emissions

Program	First Year GHG Impacts (tonnes CO_2e)	Lifetime GHG Impacts (tonnes CO_2e)
BizEnergySaver	5,214.87	52,563.26
Commercial CoolSaver	12.03	34.33
Business Sector Total	**5,226.90**	**52,597.60**
Residential CoolSaver	32.76	97.20
Residential HomeEnergySaver	44.91	593.29
Residential HomeSealSaver	0.62	9.11
Residential Sector Total	**78.29**	**699.59**
LIP Program Total	**5,305.19**	**53,297.18**

6.2 Non-Energy Benefits

In 2020/21, EcoMetric assessed the Non-Energy Benefits (NEBs) from energy-efficiency projects funded by the IESO from 2017-2019. This included the quantification of NEBs in the seven sectors served by the IESO programs and an assessment of how those values might be included in cost-effectiveness testing.

Benefits created by LIP measures completed in facilities and residences extend well beyond just avoided kWh and kW. NEBs refer to the value beyond energy savings that CDM programs offer participants. NEBs for BizEnergySaver and Residential CoolSaver programs can include thermal comfort for building occupants, reduced building and equipment maintenance, and improved air quality.

Table 26 shows the business sector NEBs as quantified by the 2021 NEBs study for BizEnergySaver program of the LIP. In PY2024, NEBs for the BizEnergySaver program totaled $3,310,515. Benefits from reduced building and equipment operations and maintenance represented 58% of the NEBs,

followed by thermal comfort at 36%. Overall, NEBs accounted for about 28% of the $11,757,242 in total benefits achieved by the BizEnergySaver program in PY2024.

Table 26: PY2024 LIP BizEnergySaver Non-Energy Benefits

Non-Energy Benefit	Measure Type	$/net kWh	Total TRC and SC Benefits from NEBs
Thermal Comfort	HVAC, Envelope	0.050	$1,202,947
Reduced Building and Equipment O&M	All	0.080	$1,924,715
Improved Indoor Air Quality	HVAC, Envelope	0.007	$168,413
Reduced Spoilage	HVAC, Refrigeration	0.0002	$4,812
Air Quality	All	0.0004002	$9,628
TOTAL			**$3,310,515**

Table 27 shows the consumer sector NEBs as quantified by the 2021 NEBs study for the Residential CoolSaver program of the LIP. In PY2024, NEBs for the Residential CoolSaver program totaled $40,446. Benefits from thermal comfort represented about 41% of the NEBs, followed by sense of control over energy decisions at 22%. Overall, NEBs accounted for about 65% of the $62,526 in total benefits achieved by the Residential CoolSaver program in PY2024.

Table 27: PY2024 LIP Residential CoolSaver Non-Energy Benefits

Non-Energy Benefit	Measure Type	$/net kWh	Total TRC and SC Benefits from NEBs
Reduced Financial Stress	All	0.030	$4,487
Thermal Comfort	HVAC, Envelope	0.110	$16,454
Reduced Building & Equipment O&M	All	0.020	$2,992
Improved Indoor Air Quality	HVAC, Envelope	0.050	$7,479
Sense of Control Over Energy Decisions	Control equipment	0.060	$8,975
Air Quality	All	0.0004002	$60
TOTAL			**$40,446**

In addition to the program evaluation, the IESO requested that EcoMetric reassess and validate the current NEB values, which may be used for cost-effectiveness testing going forward. Questions related to the NEBs were included in the participant survey tool, and the methodology used to quantify the values is outlined in Section 2.1.5.

Table 28 and Table 29 provide a comparison of the initial NEB values and the results from the recently completed self-reported assessment for PY2024.

Table 28: Comparison Between PY2024 LIP Non-Energy Benefits and Survey Results – BizEnergySaver

Non-Energy Benefit	Quantified Value, based on 2021 study ($/kWh)	Quantified Value, based on 2024 survey ($/kWh)	Number of Usable Responses in 2024 Survey
Thermal Comfort	0.050	0.000	0
Reduced Building and Equipment O&M	0.080	0.002	2
Improved Indoor Air Quality	0.007	0.000	0
Reduced Spoilage	0.0002	0.000	0

Table 29: Comparison between PY2024 LIP Non-Energy Benefits and Survey Results – CoolSaver

Non-Energy Benefit	Quantified Value, based on 2021 study ($/kWh)	Quantified Value, based on 2024 survey ($/kWh)	Number of Usable Responses in 2024 Survey
Thermal Comfort	0.110	0.012	4
Reduced Building and Equipment O&M	0.020	0.081	3
Improved Indoor Air Quality	0.050	0.087	2
Reduced Financial Stress	0.030	0.125	1
Sense of Control Over Energy Decisions	0.060	0.012	1

The participant population and sample sizes were small, and in terms of NEBs, results were derived at low statistical power. That said, the quantified values are directionally informative when compared with the 2021 NEBs study.

EcoMetric does not recommend updating the NEBs at this time, but the IESO should continue to reassess NEB values when it has a larger pool of participants and survey respondents.

6.3 Job Impacts

As summarized in Table 30, the LIP created an estimated eighty-two jobs in the PY2024 sample frame. Of these eighty-two jobs, thirty-eight were direct, twenty-four were indirect, and twenty were induced, of which seventy-one jobs created were in Ontario. In terms of full-time equivalent (FTE) jobs, the program created an estimated seventy-one jobs.

Table 30: PY2024 LIP Job Impacts

Job Impact Type	Ontario FTE	Canada Total FTE	Ontario Jobs	Canada Total Jobs
Direct	35	36	37	38
Indirect	14	19	18	24
Induced	12	16	16	20
LIP Total	**61**	**71**	**71**	**82**

Jobs and FTEs are expressed in person-years, meaning each job or FTE represents one job for one person for one year.

Direct jobs include all jobs created by LIP activity, such as administrative jobs, contractors hired to complete projects, engineers, and inspectors, among many others. Indirect jobs include the additional jobs created from economic activity related to program participation, including equipment and supply distribution centers, delivery drivers, and manufacturing, among many others. Induced jobs include those supported by the "ripple effects" of economic activity from LIP participation (i.e., the re-spending of income and benefits resulting from LIP activity).

6.3.1 Job Impacts by Industry

The job impacts for PY2024 sample frame by industry for the LIP is summarized in Table 31. Most of the jobs created by the program are in the other provincial and territorial government services sector, followed by the retail and wholesale trade sector—specifically building material and supplies merchant wholesalers and building material and garden equipment and supplies dealers. Additional employment impacts are seen in food services and drinking places, non-residential building construction, and ventilation, heating, air-conditioning and commercial refrigeration equipment manufacturing. In total, the job impacts from of the LIP reached over sixteen different industries in StatCan's I/O model.

Table 31: LIP Job Impacts by Industry

Industry	Ontario FTE	Canada Total FTE	Ontario Jobs	Canada Total Jobs
Repair Construction	1	1	1	1
Non-Residential Building Construction	3	3	3	3
Ventilation, Heating, Air-Conditioning and Commercial Refrigeration Equipment Manufacturing	1	3	1	3
Electric Lighting Equipment Manufacturing	1	1	1	1
Building Material and Supplies Merchant Wholesalers	3	3	3	4
Building Material and Garden Equipment and Supplies Dealers	3	3	4	4
Machinery, Equipment and Supplies Merchant Wholesalers	1	1	1	1
Food and Beverage Stores	1	1	1	1
Truck Transportation	0	1	1	1
Banking And Other Depository Credit Intermediation	1	1	1	1
Services to Buildings and Dwellings	0	0	1	1
Food Services and Drinking Places	1	1	1	2
Other Provincial and Territorial Government Services	24	24	25	25
Software Publishers	0	0	0	1
Computer Systems Design and Related Services	1	2	1	2
Universities	2	2	2	2
GRAND TOTAL	**43**	**47**	**47**	**53**

6.3.2 Job Impacts by Model Shock

EcoMetric estimated job impacts of the LIP by leveraging three shocks in the StatCan I/O model: demand for goods and services related to the program, business reinvestment, and program funding. The shock that resulted in the largest number of jobs created was the demand for goods and services related to the LIP. As detailed in Table 32, the demand shock resulted in forty-nine jobs supported in Ontario and fifty-seven throughout Canada. Economic activity across the value chain serving the participants and supporting their projects resulted in seventeen indirect jobs and fifteen induced jobs across Canada. Per $1M in funding, the LIP supported over 10 FTEs throughout Canada.

Table 32: LIP Job Impacts from Goods and Services Shock

Job Impact Type	Ontario FTE	Canada Total FTE	Ontario Jobs	Canada Total Jobs
Direct	24	24	25	25
Indirect	10	15	12	17
Induced	9	11	12	15
LIP Total	**43**	**50**	**49**	**57**

The job impacts of the business reinvestment shock are summarized in Table 33. This shock represents the amount of bill savings the participating organizations reinvest in their company to spur further economic activity. The business reinvestment shock resulted in twenty-three total jobs supported in Canada, twenty of which are in Ontario.

Table 33: LIP Job Impacts from Business Reinvestment Shock

Job Impact Type	Ontario FTE	Canada Total FTE	Ontario Jobs	Canada Total Jobs
Direct	10	11	11	12
Indirect	4	4	5	6
Induced	3	4	4	5
LIP Total	**17**	**19**	**20**	**23**

The program funding shock represents the increase in Ontario residents' utility bills from funding the LIP. EcoMetric estimates that $271,291 of the $775,116 PY2024 LIP budget was supplied by the residential sector[10]. As this shock represents less money available to the residential sector for spending throughout the economy, the job impacts are zero.

[10] The IESO estimates that 35% of the portfolio's funding is supplied by the residential sector.

7 FINDINGS AND RECOMMENDATIONS

The following sections present a summary of all findings and recommendations for the PY2024 Impact and Process Evaluation. The IESO's responses to the recommendations can be found in Appendix B.

7.1 Impact Evaluation

Impact Finding 1 [Residential CoolSaver, Commercial CoolSaver]: For tune-up measures, none of the site-specific pre-tune-up efficiency values (available for 10-15% of the sites) - and corresponding efficiency loss factor (EFL) values - were used in the reported savings calculations. Instead, all savings calculations used the stipulated ELF values from the delivery vendor's database, purportedly from recently analyzed tune-ups in other jurisdictions (i.e., not IESO programs).

Impact Recommendation 1 [Residential CoolSaver, Commercial CoolSaver]: Reported savings for tune-up measures should utilize average results from onsite measurements of efficiency loss factors.

The delivery vendor should propose a clear protocol - to be reviewed by the IESO LIP program team - for identifying site-specific tune-up results that are not valid, whether that is due to measurement error (human or equipment) or malfunctioning HVAC equipment. If the delivery vendor proposes to remove any other types of outlier results from savings analyses, they should document their reasoning and approach for identifying such results and present them to the program team for review.

Impact Finding 2 [Residential CoolSaver, Commercial CoolSaver]: For tune-up measures, none of the measured or calculated values for cooling capacity were used in reported savings calculations. Instead, all savings calculations used nominal manufacturer-rated cooling capacities.

Impact Recommendation 2 [Residential CoolSaver, Commercial CoolSaver]: Reported savings for tune-up measures should incorporate cooling capacity values that are determined via onsite measurements or based on independent testing (for example, AHRI certificates.)

Impact Finding 3 [Residential CoolSaver, Commercial CoolSaver]: Reported savings calculations for tune-up measures used EER values for efficiency inputs in kWh savings calculations.

Impact Recommendation 3 [Residential CoolSaver, Commercial CoolSaver]: Savings calculations for tune-up measures should use SEER (or IEER) for efficiency input values in annual energy savings calculations. EER should only be used for peak demand calculations.

Impact Finding 4 [Residential CoolSaver, Commercial CoolSaver]: Reported savings calculations for tune-up measures used values for effective full-load hours and peak coincidence factors that are not aligned with industry standards.

Impact Recommendation 4 [Residential CoolSaver, Commercial CoolSaver]: Savings calculations for tune-up measures should use values for effective full-load hours and peak coincidence factors that are building type-specific and sourced from reputable technical references such as the IESO MAL or North American TRMs.

Impact Finding 5 [Residential CoolSaver]: Reported savings estimates for heat pump tune-up measures did not account for heating season savings.

Impact Recommendation 5 [Residential CoolSaver]: Savings calculations for heat pump tune-up measures should account for system operation and energy savings across both cooling and heating seasons.

Impact Finding 6 [BizEnergySaver]: EcoMetric found that the assumptions and values used for HOU inputs in savings calculations for BizEnergySaver lighting measures were solely based on limited estimates produced by a small number of installation contractors. The values were used for all measures, regardless of facility type, space type, and site-specific conditions.

Impact Recommendation 6 [BizEnergySaver]: HOU inputs for lighting measure savings calculations should be based on site-specific data or building type and space type specific values from recognized sources such as the IESO MAL or North American TRMs.

Impact Finding 7 [BizEnergySaver]: The reported savings estimates for BizEnergySaver lighting measures did not account for HVAC interactive effects.

Impact Recommendation 7 [BizEnergySaver]: IESO should consider allowing HVAC interactive effects to be a part of savings calculations for lighting measures. This is common practice for most energy efficiency program implemented in North America. HVAC interactive effect values should be building type and system-specific and come from recognized sources such as the IESO MAL or North American TRMs.

Impact Finding 8 [BizEnergySaver]: While it is slightly lower than in PY2023, the PY2024 program-level NTGR for BizEnergySaver remains high. The program's influence on respondents' decision to install energy-efficient equipment was the key driver of the high NTGR. The program funding was a critical influence on participants' decision-making. For 69% (n = 7) of respondents, the LIP provided the only external support for the energy efficiency upgrades installed through the project.

Impact Recommendation 8 [BizEnergySaver]: BizEnergySaver continues to engage and influence a population that would not complete these upgrades without program support. EcoMetric recommends that the program be continued, with a focus on expanding to a wider range of offerings that are less likely to result in high free-ridership.

Impact Finding 9 [Residential CoolSaver]: The PY2024 program level NTGR for Residential CoolSaver is significantly lower than in PY2023. In PY2024, AC tune-ups remained the primary measure type implemented; however, 61% (n = 26) of tune-up respondents indicated that they would have completed the tune-ups at the same time or eventually without the program.

Impact Recommendation 9 [Residential CoolSaver]: Residential CoolSaver is reaching populations with higher levels of free ridership. EcoMetric recommends continuing the program but focusing outreach on markets and offerings more resistant to free ridership such as low-income households and higher cost or payback measures (e.g., high efficiency pool pumps, which typically show low levels of free ridership in programs across North America).

7.2 Process Evaluation

Process Finding 1 [BizEnergySaver, Residential CoolSaver, Commercial CoolSaver]: IESO program staff expressed concerns about the depth of QA/QC processes across the programs under their scope and requested that EcoMetric investigate the matter further. EcoMetric found that each program has implemented distinct QA/QC approaches:

- Commercial CoolSaver – Requires ride-alongs for new technicians to accompany experienced staff at two to three facilities to ensure service quality, supported by automated photo documentation reviews.
- Residential CoolSaver – Also uses ride-alongs and training and adds random drop-ins and post-service engineering reviews to verify equipment and service quality. EcoMetric found that seven percent (n = 10) of surveyed participants recalled a QC visit occurring.
- BizEnergySaver – Relies on training and automated QA/QC within its central database, with recent enhancements to flag VFD-related measures. Notably, participating trade allies reported the LIP's QA/QC processes as highly effective, giving them an average of more than 9 out of 10 on a scale, where 10 indicates maximum effectiveness.

Process Recommendation 1 [BizEnergySaver, Residential CoolSaver, Commercial CoolSaver]: As the LIP programs expand, EcoMetric recommends identifying and monitoring opportunities to implement standardized and comprehensive QA/QC processes across all programs and offerings. For example, bringing the practice of ride-along training used in the two CoolSaver programs to

BizEnergySaver as new technicians during the first three sites, then every 50th tune-up, to improve QA/QC consistency. Another potential example could include requiring additional documentation from trade allies showing performance characteristics (operating schedules, equipment nameplate information, temperatures and setpoints, etc.) before and after the energy efficiency measure to verify the effectiveness of the measure and justify reported savings.

Process Finding 2 [BizEnergySaver, Residential CoolSaver, Commercial CoolSaver]: Participant feedback indicates that one of the main barriers to additional program engagement is a lack of awareness about the full range of LIP offerings. Among residential participants, nearly half (49%, n = 72) were unaware of other LIP measure offerings. Commercial customers showed similar levels of engagement, with 20% (n = 2) reporting that they were unaware of other LIP measure offerings.

Process Recommendation 2 [BizEnergySaver, Residential CoolSaver, Commercial CoolSaver]: To address low awareness of the full range of measures available under the LIP program, EcoMetric recommends developing a concise, user-friendly guide outlining all eligible measures, their benefits, and participation requirements. This should be proactively shared with customers through familiar channels (e.g., emails, social media, utility bill inserts) and with trade allies to generate greater LIP program engagement.

Process Finding 3 [BizEnergySaver, Residential CoolSaver, Commercial CoolSaver]: Interviews with program staff and delivery vendors suggested an understanding that contractors are primarily motivated to participate in the LIP because of the opportunity to build work pipelines and establish relationships with new customers. Therefore, it was thought that these trade allies should be a primary driver in bringing in new program participants. However, only 56% (n = 5) of trade ally survey respondents (working as program-qualified contractors) reported joining the program to gain new work or expand their customer base as motivation.

Process Recommendation 3 [BizEnergySaver, Residential CoolSaver, Commercial CoolSaver]: EcoMetric recommends emphasizing the potential for business growth through program participation to trade allies, to encourage their engagement with new customers over getting incentives to customers that already intend to procure the service. Examples of growth incentives for allies could include offering tiered rewards, such as marketing funds, co branding opportunities, or public recognition, for those who meet or exceed a defined new customer enrollment target.

Appendix A. Energy and Peak Demand Savings

Table 34: Annual Summary of Gross Savings Results for LIP

Evaluated Year	Verified Year	Gross Energy Savings (MWh)	Gross Peak Demand Savings (MW)
PY2021	PY2021	-	-
PY2022	PY2022	-	-
PY2023	PY2023	6,074	0.84
PY2024	PY2024	26,644	3.89
TOTAL	**-**	**32,718**	**4.73**

Table 35: Annual Summary of Net Savings Results for LIP

Evaluated Year	Verified Year	Net Energy Savings (MWh)	Net Peak Demand Savings (MW)
PY2021	PY2021	-	-
PY2022	PY2022	-	-
PY2023	PY2023	5,860	0.81
PY2024	PY2024	24,472	3.52
TOTAL	**-**	**30,332**	**4.33**

Appendix B. PY2024 EM&V Findings and Recommendations with IESO Response

Table 36: LIP PY2024 Findings and Recommendations with IESO Response

No.	Key Findings	2024 EM&V Recommendations	Impact	IESO Response
1	[Residential CoolSaver, Commercial CoolSaver]: For tune-up measures, none of the site-specific pre-tune-up efficiency values (available for 10-15% of the sites) - and corresponding efficiency loss factor (EFL) values - were used in the reported savings calculations. Instead, all savings calculations used the stipulated ELF values from the delivery vendor's database, purportedly from recently analyzed tune-ups in other jurisdictions (i.e., not IESO programs).	[Residential CoolSaver, Commercial CoolSaver]: Reported savings for tune-up measures should utilize average results from onsite measurements of efficiency loss factors. The delivery vendor should propose a clear protocol - to be reviewed by the IESO LIP program team - for identifying site-specific tune-up results that are not valid, whether that is due to measurement error (human or equipment) or malfunctioning HVAC equipment. If the delivery vendor proposes to remove any other types of outlier results from savings analyses, they should document their reasoning and approach for identifying such results and present them to the program team for review.	High	Average results from onsite measurements of efficiency loss factors are now being utilized for PY2025. Rationale for removing outlier results from savings analysis is also now being documented by the delivery vendor. As a next step, the IESO has requested the program delivery vendor do develop a consistent protocol to identify and remove outliers in site- specific tune-up measurement results for savings analysis.
2	[Residential CoolSaver, Commercial CoolSaver]: For tune-up measures, none of the measured or calculated values for cooling capacity were used in reported savings calculations. Instead, all savings calculations used nominal manufacturer-rated cooling capacities.	[Residential CoolSaver, Commercial CoolSaver]: Reported savings for tune-up measures should incorporate cooling capacity values that are determined via onsite measurements or based on independent testing (for example, AHRI certificates.)	High	Both the modelled and M&V savings approach for the program currently involve post tune-up measurements collected to determine Useful Cooling Capacity (Btu/hr) for each unit. The IESO will work with the program delivery vendor to ensure these on-site measurements are incorporated into the savings analysis.
3	[Residential CoolSaver, Commercial CoolSaver]: Reported savings calculations for tune-up measures used EER values for efficiency inputs in kWh savings calculations.	[Residential CoolSaver, Commercial CoolSaver]: Savings calculations for tune-up measures should use SEER (or IEER) for efficiency input values in annual energy savings calculations. EER should only be used for peak demand calculations.	Medium	Currently, the program collects on-site measurements to calculate a post tune-up EER value specific to each individual unit. This EER value is used for both peak demand and energy savings calculations. The IESO will discuss further

No.	Key Findings	2024 EM&V Recommendations	Impact	IESO Response
				with the delivery vendor the possibility of further calculating unit-specific SEER values for energy-saving calculations.
4	[Residential CoolSaver, Commercial CoolSaver]: Reported savings calculations for tune-up measures used values for effective full-load hours and peak coincidence factors that are not aligned with industry standards.	[Residential CoolSaver, Commercial CoolSaver]: Savings calculations for tune-up measures should use values for effective full-load hours and peak coincidence factors that are building type-specific and sourced from reputable technical references such as the IESO MAL or North American TRMs.	High	In PY2025, the Commercial CoolSaver program is utilizing a region-specific calculated value for peak coincidence factor based on Ontario weather data. The factor for the residential program is still using the original CoolSaver program source. The IESO team will work with the delivery vendor to revisit the residential value and see if an Ontario-specific calculation can be completed. Different EFLH values are currently used for each region in which the programs are offered in and are based on American TRM data. The IESO will work with the delivery vendor to explore if Ontario region- and building-specific values can be sourced or calculated for use in savings analysis.
5	[Residential CoolSaver]: Reported savings estimates for heat pump tune-up measures did not account for heating season savings.	[Residential CoolSaver]: Savings calculations for heat pump tune-up measures should account for system operation and energy savings across both cooling and heating seasons.	Low	This will impact the annual energy savings only and not the peak demand. The IESO will work with the delivery vendor to calculate an EFLH value for heating as well and incorporate into the energy savings calculation for heat pump systems.

No.	Key Findings	2024 EM&V Recommendations	Impact	IESO Response
6	[BizEnergySaver]: EcoMetric found that the assumptions and values used for HOU inputs in savings calculations for BizEnergySaver lighting measures were solely based on limited estimates produced by a small number of installation contractors. The values were used for all measures, regardless of facility type, space type, and site-specific conditions.	[BizEnergySaver]: HOU inputs for lighting measure savings calculations should be based on site-specific data or building type and space type specific values from recognized sources such as the IESO MAL or North American TRMs.	Medium	The program now uses different HOU inputs for continuous and non-continuous operations, as well as different values for High and Low Bay fixtures. The IESO will discuss further with the program delivery vendor the possibility of further specifying HOU inputs based on building and space type.
7	[BizEnergySaver]: The reported savings estimates for BizEnergySaver lighting measures did not account for HVAC interactive effects.	[BizEnergySaver]: The IESO should consider allowing HVAC interactive effects to be a part of savings calculations for lighting measures. This is common practice for most energy efficiency program implemented in North America. HVAC interactive effect values should be building type and system-specific and come from recognized sources such as the IESO MAL or North American TRMs.	High	The IESO will explore this adjustment further with the delivery vendor and align based on findings from other Save on Energy business lighting measures and the IESO MAL.
8	[BizEnergySaver]: While it is slightly lower than in PY2023, the PY2024 program-level NTGR for BizEnergySaver remains high. The program's influence on respondents' decision to install energy-efficient equipment was the key driver of the high NTGR. The program funding was a critical influence on participants' decision-making. For 69% (n = 7) of respondents, the LIP provided the only external support for the energy efficiency upgrades installed through the project.	[BizEnergySaver]: BizEnergySaver continues to engage and influence a population that would not complete these upgrades without program support. EcoMetric recommends that the program be continued, with a focus on expanding to a wider range of offerings that are not likely to result in high free-ridership.	Medium	The program is working well with its current mix of measures and installers. The IESO has no plans at this time to expand the measure mix.
9	[Residential CoolSaver]: The PY2024 program level NTGR for Residential CoolSaver is significantly lower than in PY2023. In PY2024, AC tune-ups remained the primary measure type implemented; however, 61% (n = 26) of tune-up respondents indicated that they would have completed the tune-ups at the same time or eventually without the program.	[Residential CoolSaver]: Residential CoolSaver is reaching populations with higher levels of free ridership. EcoMetric recommends continuing the program but focusing outreach on markets and offerings more resistant to free ridership such as low-income households and higher cost or payback measures (e.g., high efficiency pool pumps, which typically show low levels of free ridership in programs across North America).	Medium	The program is cross-promoted to income-eligible participants of the Energy Affordability Program in eligible areas. Pool pumps were removed from the program in 2025 to increase the focus on AC tune-ups.
10	[BizEnergySaver, Residential CoolSaver, Commercial CoolSaver]:	[BizEnergySaver, Residential CoolSaver, Commercial CoolSaver]: As the LIP programs	High	The IESO will discuss with the delivery vendor the

No.	Key Findings	2024 EM&V Recommendations	Impact	IESO Response
	IESO program staff expressed concerns about the depth of QA/QC processes across the programs under their scope and requested that EcoMetric investigate the matter further. EcoMetric found that each program has implemented distinct QA/QC approaches.	expand, EcoMetric recommends identifying and monitoring opportunities to implement standardized and comprehensive QA/QC processes across all programs and offerings. For example, bringing the practice of ride-along training used in the two CoolSaver programs to BizEnergySaver as new technicians during the first three sites, then every 50th tune-up, to improve QA/QC consistency. Another potential example could include requiring additional documentation from trade allies showing performance characteristics (operating schedules, equipment nameplate information, temperatures and setpoints, etc.) before and after the energy efficiency measure to verify the effectiveness of the measure and justify reported savings.		possibility of incorporating these additional QA/QC protocols and any associated cost effectiveness impacts.
11	[BizEnergySaver, Residential CoolSaver, Commercial CoolSaver]: Participant feedback indicates that one of the main barriers to additional program engagement is a lack of awareness about the full range of LIP offerings. Among residential participants, nearly half (49%, n = 72) were unaware of other LIP program offerings. Commercial customers showed similar levels of engagement, with 20% (n = 2) reporting that they were unaware of other LIP measure offerings.	[BizEnergySaver, Residential CoolSaver, Commercial CoolSaver]: To address low awareness of the full range of measures available under the LIP program, EcoMetric recommends developing a concise, user-friendly guide outlining all eligible measures, their benefits, and participation requirements. This should be proactively shared with customers through familiar channels (e.g., emails, social media, utility bill inserts) and with trade allies to generate greater LIP program engagement.	High	The IESO works to ensure a high level of awareness of Save on Energy to encourage enrollment across all types of programs. Since receiving negative feedback from trade allies when they were asked to promote other programs on site visits, the IESO has moved to targeted email marketing to participants of other programs. The free A/C tune-ups available in CoolSaver have been promoted to participants of the Energy Affordability Program, and Commercial CoolSaver has been cross-promoted to past participants of the Retrofit program in the LIP's eligible areas.
12	[BizEnergySaver, Residential CoolSaver, Commercial CoolSaver]: Interviews with program staff and delivery vendors suggested an understanding that contractors are primarily motivated to participate in the LIP because of the opportunity to build work pipelines and establish relationships with new customers.	[BizEnergySaver, Residential CoolSaver, Commercial CoolSaver]: EcoMetric recommends emphasizing the potential for business growth through program participation to trade allies, to encourage their engagement with new customers over getting incentives to customers that already intend to procure the service. Examples of growth incentives for allies could include	High	We have previously discussed with the CoolSaver and Commercial CoolSaver program delivery vendor about narrowing the list of contractors who participate in the program to those who are actively delivering the services. By

No.	Key Findings	2024 EM&V Recommendations	Impact	IESO Response
	Therefore, it was thought that these trade allies should be a primary driver in bringing in new program participants. However, only 56% (n = 5) of trade ally survey respondents (working as program-qualified contractors) reported joining the program to gain new work or expand their customer base as motivation.	offering tiered rewards, such as marketing funds, co-branding opportunities, or public recognition, for those who meet or exceed a defined new customer enrollment target.		doing so, support is provided only to those who are bringing in customers and helping to increase enrollment.

Appendix C. Survey Disposition Tables & Benchmarking

C.1 Participants

EcoMetric combined participant process surveys with NTG survey questions to minimize over contacting participants and streamline the data collection process. These surveys leveraged the impact and NTG samples detailed in Table 2 and gathered information on customer motivations and barriers to participating in programs, challenges with the participation process, marketing, and customer trust in program validity, their overall program experience, and opportunities to improve the delivery of the programs.

C.1.1 Survey Fielding

EcoMetric launched the web survey in March 2025, with a soft launch sent to approximately 10% of the population in advance of the full distribution to ensure that the survey logic was functioning properly. The IESO sent out introduction letters via email to notify participants in advance. Of the 1,322 participants invited to respond via email, 81 participated in BizEnergySaver, 1,232 participated in Residential CoolSaver, and nine participated in Commercial CoolSaver**.** EcoMetric contacted each participant four times or until a final disposition (e.g., survey completion or refusal) was reached. Four Residential CoolSaver participants directly contacted us and declined to participate. Of those invited to respond, 158 participants completed the survey. BizEnergySaver accounted for 10 full completions, Residential CoolSaver accounted for 147, and Commercial CoolSaver had none. Additionally, 37 participants partially completed the survey. There were 37 false completes where ineligible folks answered the survey, indicating they were unfamiliar with the LIP program and were screened out. Table 37 provides a disposition summary from the participant web survey.

Table 37: Disposition Summary from Participant Survey

Disposition	BizEnergySaver	Residential CoolSaver	Commercial CoolSaver	Total
Full Survey Completion	10	147	0	157
Partial Survey Completion	35	2	0	37
False Completes/ Ineligible	0	36	1	37
Emails Bounced	6	27	3	36
No Response	30	1,056	5	1,091
Refused / Declined	0	5	0	5
Total Number of Contacts	**81**	**1,232**	**9**	**1,322**

EcoMetric took the number of full survey completions divided by the total number of contacts after subtracting the emails bounced to calculate the response rate. The table below provides a response rate summary from the participant web survey.

Table 38: Response Rate Summary from Participant Survey

Program	Response Rate
BizEnergySaver	13.33%
Residential CoolSaver	11.93%
Commercial CoolSaver	0%

C.2 Program Trade Allies

EcoMetric conducted a web survey with the trade allies working as program-qualified contractors on one of the three major programs. These surveys gathered information on working with the program, the outreach or marketing methods used to promote the program(s), their overall program experience including adherence to program requirement on quality of work, and opportunities to improve the delivery of the three major programs.

C.2.1 Survey Fielding

EcoMetric fielded the trade ally web survey in March 2025. The IESO sent out introduction letters via email to notify trade allies in advance. Of the 43 trade allies invited to respond via email, 13 were program qualified contractors in the BizEnergySaver program, 21 were program qualified contractors in the Residential CoolSaver program, 6 were program qualified contractors in the Commercial CoolSaver program, and 3 were program qualified contractors in both the Commercial CoolSaver and Residential CoolSaver programs. The soft launch went out to 10 trade allies. The full launch went out the following week to the remaining 33 trade allies. The table below provides a summary from the trade ally web survey launch.

Table 39: Summary of Trade Ally Contacts for Survey

Program	Soft Launch	Full Launch	Total
BizEnergySaver	3	10	**13**
Residential CoolSaver	4	17	**21**
Commercial CoolSaver	2	4	**6**
Commercial CoolSaver + Residential CoolSaver	1	2	**3**
Total	**10**	**33**	**43**

EcoMetric contacted each trade ally four times or until a final disposition (e.g., survey completion or refusal) was reached. Of those who were invited to respond, 7 of them completed the survey in its entirety. The survey was partially completed by 1 trade ally. There was also 1 false complete where the respondent said they had no recollection of the program. The table below provides a disposition summary from the trade ally web survey.

Table 40: Disposition Summary from Trade Ally Survey

Disposition	BizEnergySaver	Residential CoolSaver only	Commercial CoolSaver only	Commercial CoolSaver + Residential CoolSaver	Total
Full Survey Completion	2	2	0	3	**7**
Partial Survey Completion	0	1	0	0	**1**
False Completes/ Ineligible	0	0	1	0	**1**
Emails Bounced	1	0	1	0	**2**
No Response	10	18	4	0	**32**
Refused / Declined	0	0	0	0	**0**
Total Number of Contacts	**13**	**21**	**6**	**3**	**43**

EcoMetric took the number of full survey completions divided by the total number of contacts, after subtracting the emails bounced to calculate the response rate. The table below provides a response rate summary from the trade ally web survey.

Table 41: Response Rate Summary from Trade Ally Survey

Program	Response Rate
BizEnergySaver	16.67%
Residential CoolSaver only	9.92%
Commercial CoolSaver only	0%
Commercial CoolSaver + Residential CoolSaver	100%

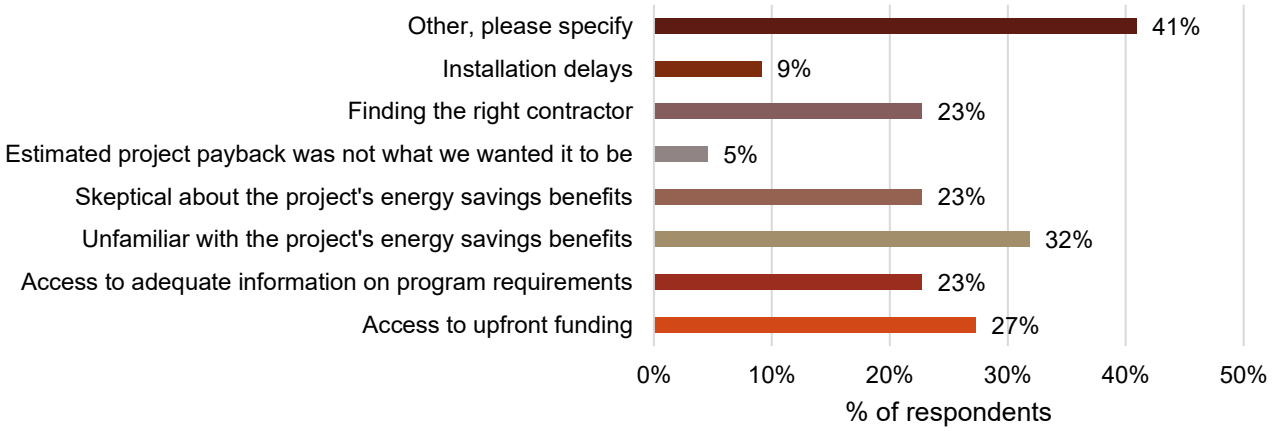
Appendix D. Additional Process Evaluation Results

D.1 Participant Survey Results

D.1.1 Program Experience

Of the Residential CoolSaver participants who experienced challenges, the most reported were **lack of familiarity with the project's energy savings and access to upfront funding.**

Table 42: PY2024 LIP Trade Ally Perception of Customer Motivations to Participate (n=9, 1 respondent ≈ 11.1%, multiple responses allowed, does not total 100%)

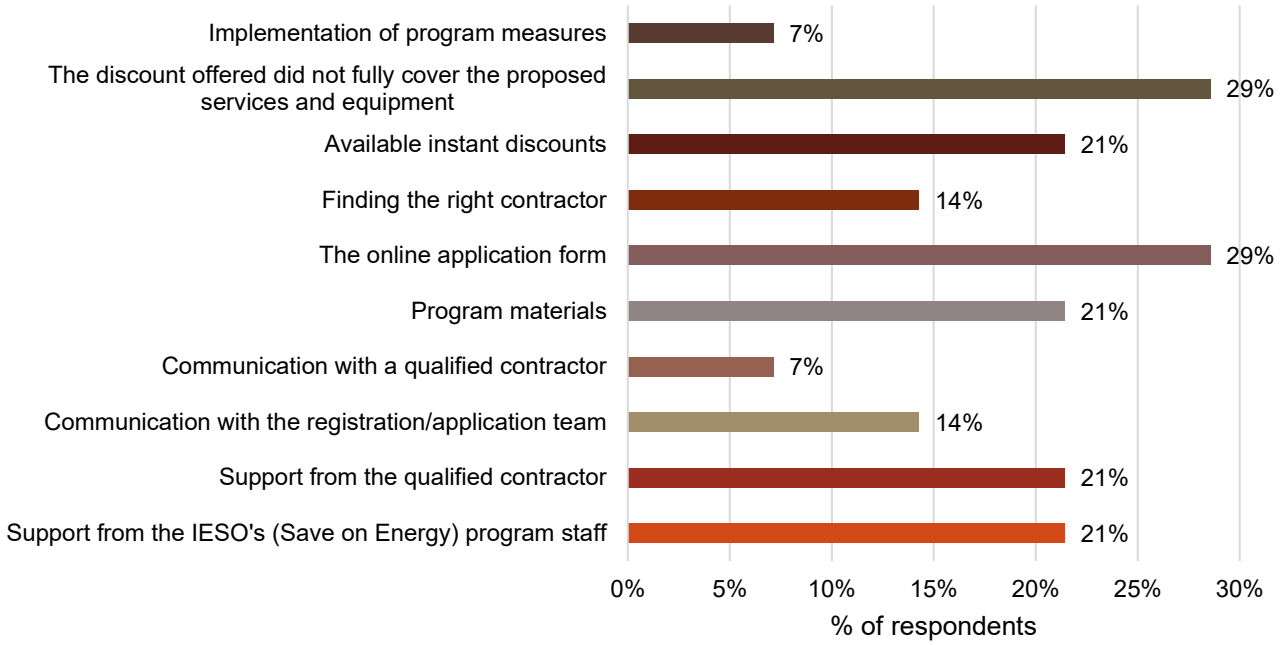


D.1.2 Improve Delivery

Residential CoolSaver participants had differing opinions on program improvements. Table 43 indicates 29% of respondents believe the online application form can be improved, and another 29% felt the discount offered did not fully cover the proposed services and equipment and could be improved. This differs from last year's evaluation[11], where Residential CoolSaver and BizEnergySaver respondents rated all program elements highly.

[11] The PY2024 sample size for Residential CoolSaver was significantly larger than in PY2023. Comparisons should be viewed as directional in nature.

Table 43: PY2024 Residential CoolSaver Program Improvements (n=14, 1 respondent ≈ 7.1%, multiple responses allowed, does not total 100%)

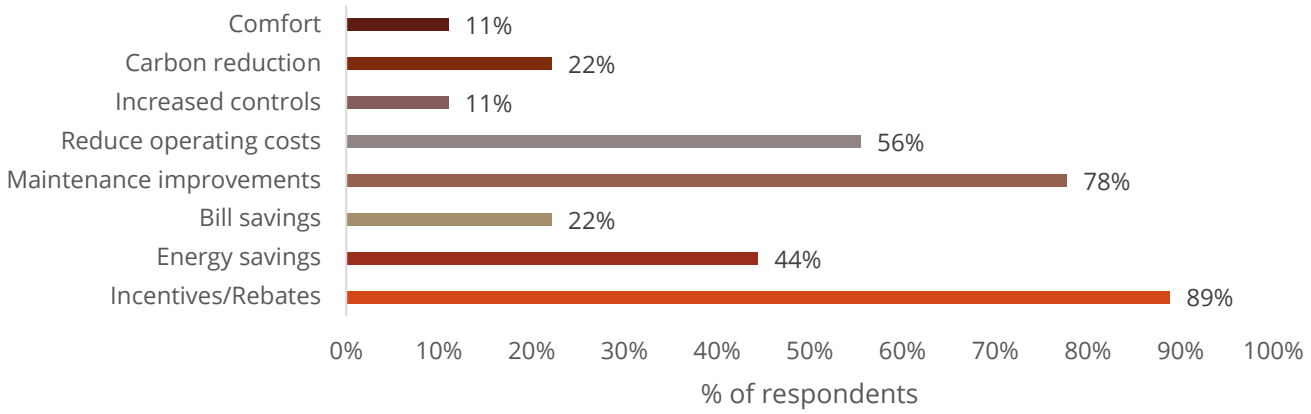


D.2 Trade Ally Web Survey Results

D.2.1 Motivations and Barriers

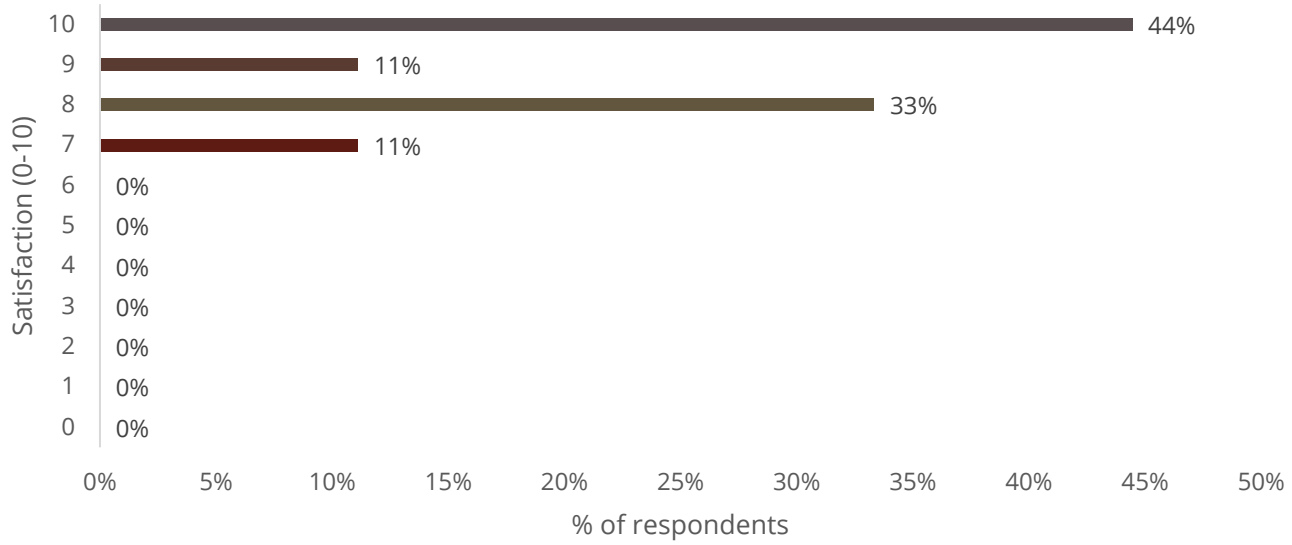
Trade ally respondents indicate that the primary reasons customers participate in the LIP programs are for the incentives/rebates. While incentives/rebates was the top response, Table 44 shows maintenance improvements and reducing operating costs were also among the top reasons. Saving money appears to be a recurring theme, with three of the top four responses focused on savings.

Table 44: PY2024 LIP Trade Ally Perception of Customer Motivations to Participate (n=9, 1 respondent ≈ 11.1%, multiple responses allowed, does not total 100%)



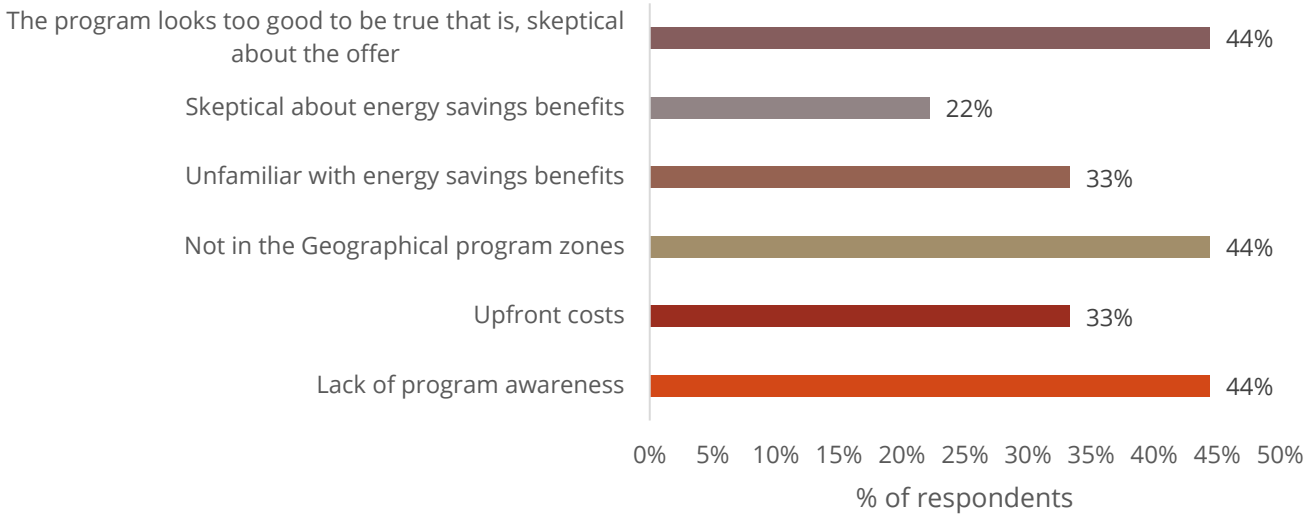
Trade ally respondents indicate that their customers are satisfied with the LIP programs. When asked on a scale of 0 to 10, with 0 being extremely dissatisfied and 10 being extremely satisfied, Table 45 shows that 44% of trade allies said their customers were extremely satisfied.

Table 45: PY2024 LIP Trade Ally Perception of Customer Satisfaction with LIP Programs (n=9, 1 respondent ≈ 11.1%)



Trade ally respondents perceived the main barriers to customer participation in the LIP programs as a three-way tie. Table 46 shows that lack of program awareness, geographical program zones, and the program being "too good to be true" are all tied at 44%. Upfront costs and unfamiliarity with energy savings benefits are the second largest concerns at 33%.

Table 46: PY2024 LIP Trade Ally Perception of Customer Barriers to Participate (n=9, 1 respondent ≈ 11.1%, multiple responses allowed, does not total 100%)

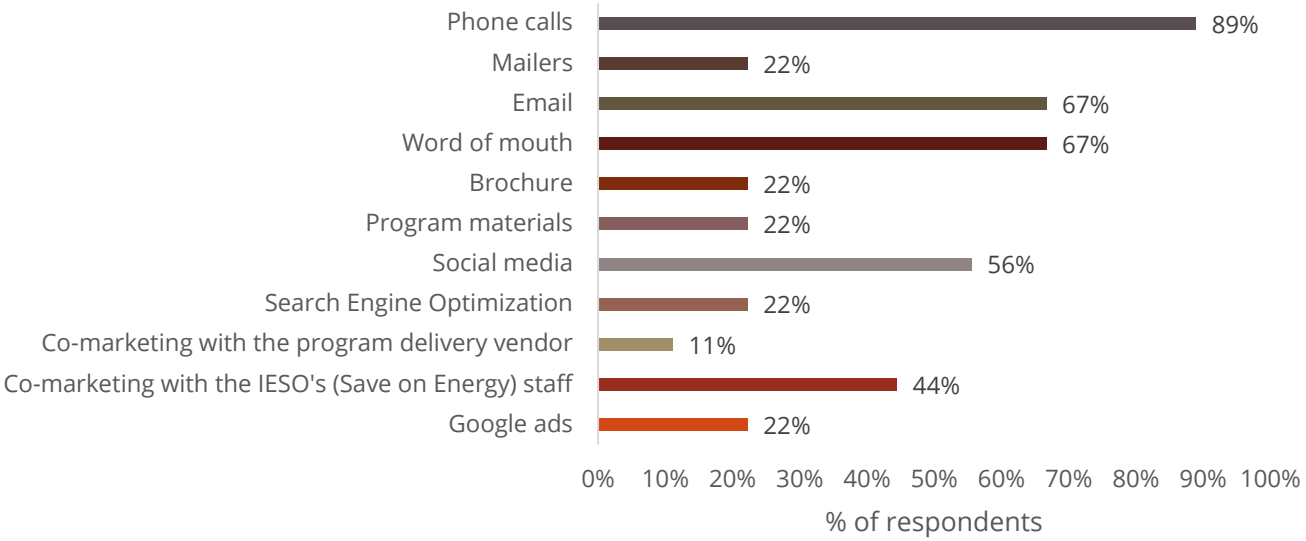


Trade ally respondents indicate customers are mostly trusting of the free and/or low-cost program offerings. 44% of respondents indicated they thought customers felt extreme trust (i.e., a rating of 10 on a 0-10 scale). The remaining responses vary, with two trade allies rating skepticism at 7, and three other trade allies selecting 5, 6, or 8. Overall, the majority of respondents thought customers show a high level of trust in the program offerings.

D.2.2 Driving Enrollment

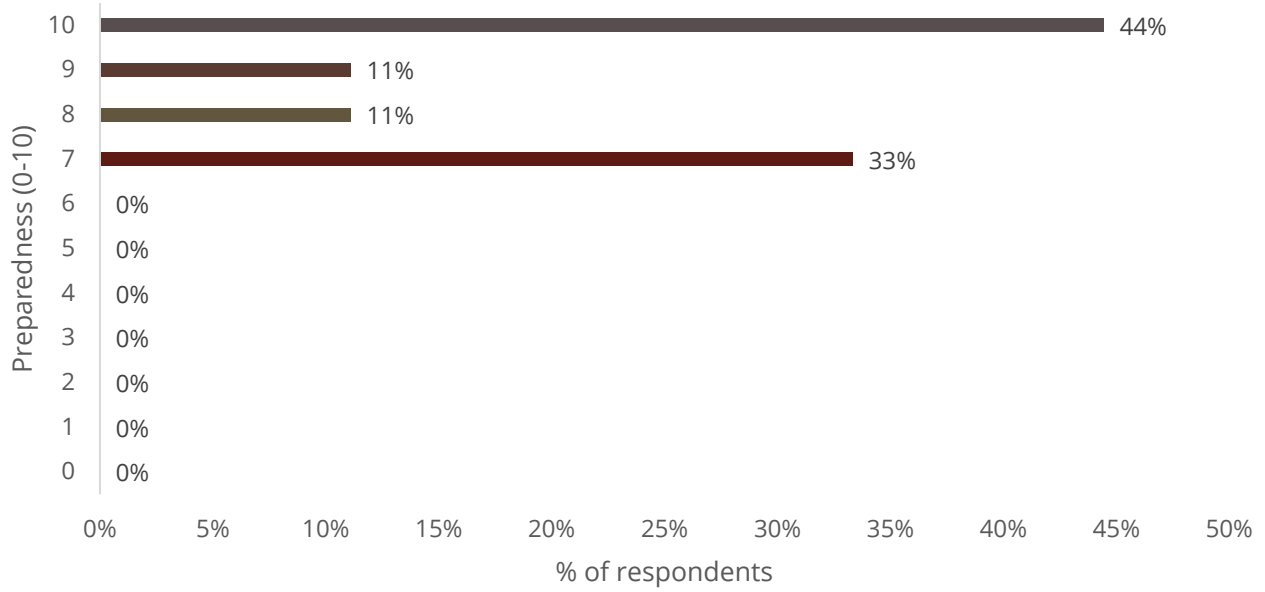
Trade ally respondents primarily use phone calls for marketing and outreach to drive enrollment, accounting for 89% of responses. Word of mouth and email are also popular methods, each used by 67% of respondents.

Table 47: PY2024 Forms of Marketing and Outreach to Drive Enrollment (n=9, 1 respondent ≈ 11.1%, multiple responses allowed, does not total 100%)



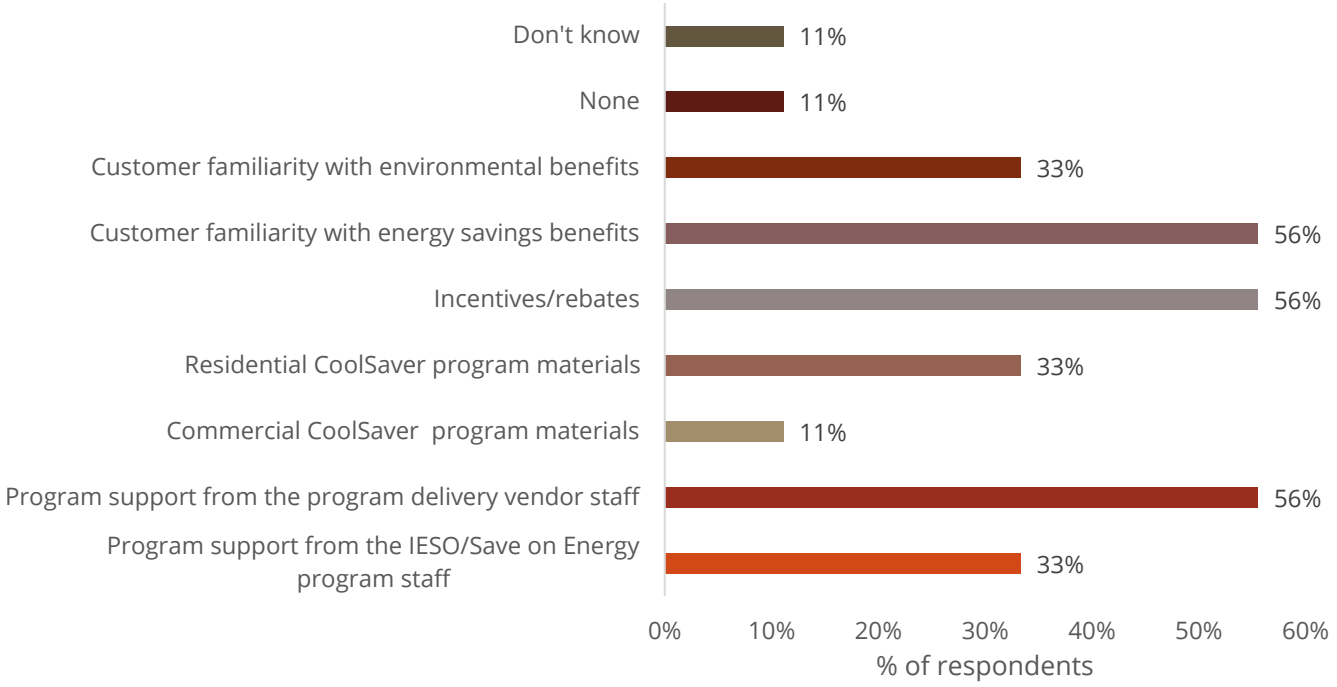
Trade ally respondents reported feeling well-prepared to enroll customers in the LIP programs. When asked to rate their level of preparedness on a scale of 0 to 10, with 0 indicating extreme unpreparedness and 10 indicating extreme preparedness, all responses were 7 or higher (Table 48).

Table 48: PY2024 LIP Trade Ally Preparedness of Enrolling Customers in LIP Programs (n=9, 1 respondent ≈ 11.1%)



Several program aspects contributed to trade ally respondents feeling prepared to drive enrollment. The top three factors, each at 56%, were program support from the program delivery vendor staff, incentives/rebates, and customer familiarity with energy savings benefits. Table 49 shows that 33% of respondents felt that program support from the IESO/Save on Energy program staff, program materials, and customer familiarity with environmental benefits were all going well. Additionally, one respondent said none and one said don't know.

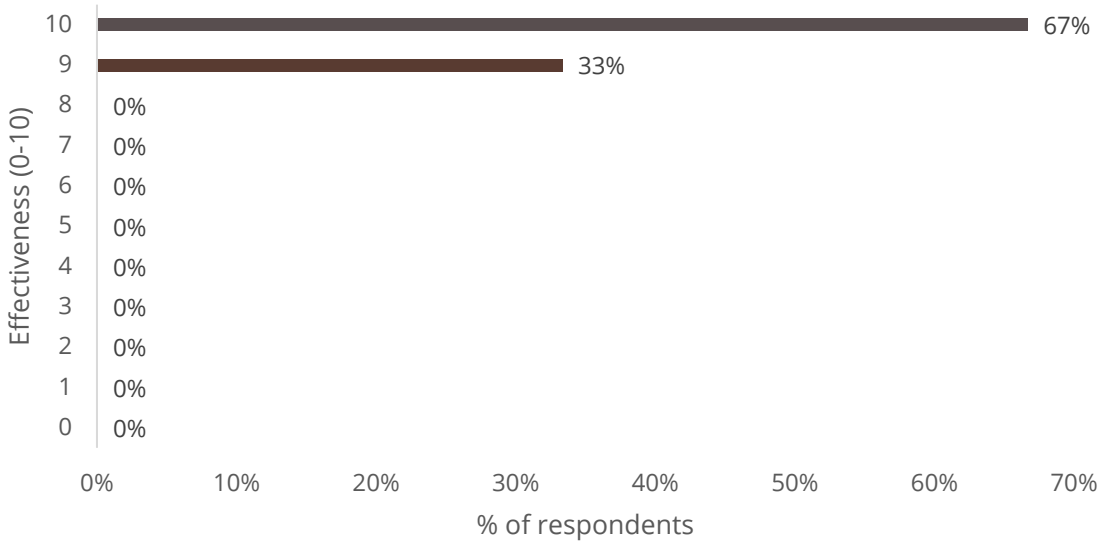
Table 49: PY2024 LIP Trade Ally Elements to Increase Preparedness of Enrolling Customers (n=9, 1 respondent ≈ 11.1%, multiple responses allowed, does not total 100%)



D.3 Quality Assurance/Quality Control

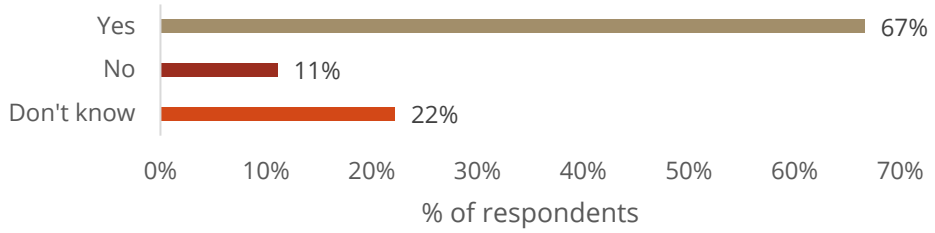
Most trade ally respondents indicated they were extremely satisfied with the program quality assurance/quality control (QA/QC) processes. As seen in Table 50, 100% of respondents found the QA/QC processes to be extremely effective and gave a rating of 9 or 10 on a scale of 0-10, with 0 being extremely dissatisfied and 10 being extremely satisfied.

Table 50: PY2024 Effectiveness of Program QA/QC Processes of LIP Programs (n=9, 1 respondent ≈ 11.1%)



Most trade ally respondents participated in QA/QC checks of their work as required by the program delivery vendor staff. Table 51 indicates that 67% of respondents recalled participating in these checks, while 11% did not. Additionally, 22% did not recall whether they participated.

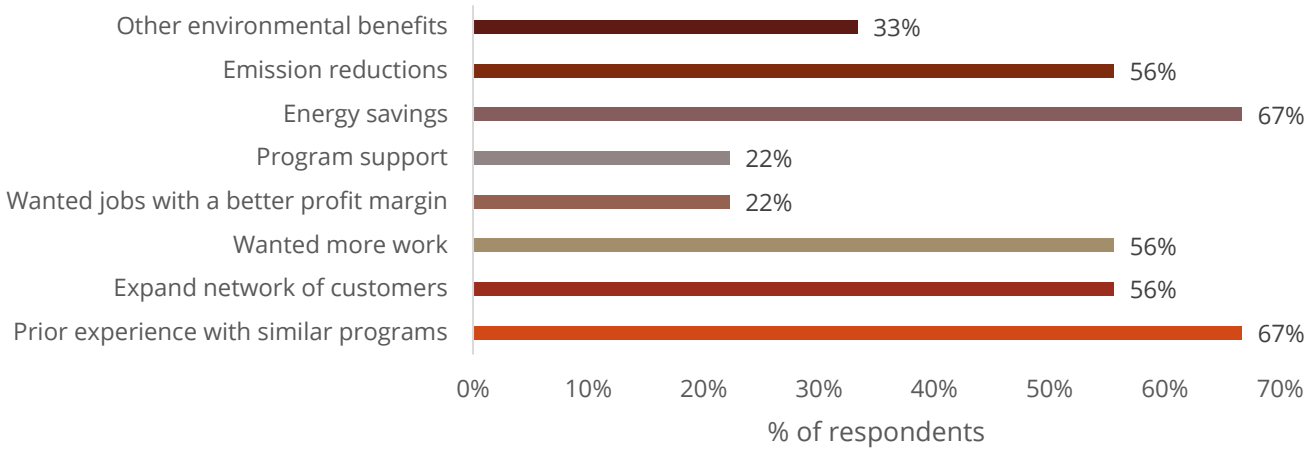
Table 51: PY2024 LIP Trade Ally QA/QC Checks by Program Delivery Vendor Staff (n=9, 1 respondent ≈ 11.1%)



D.4 Trade Ally Program Experience

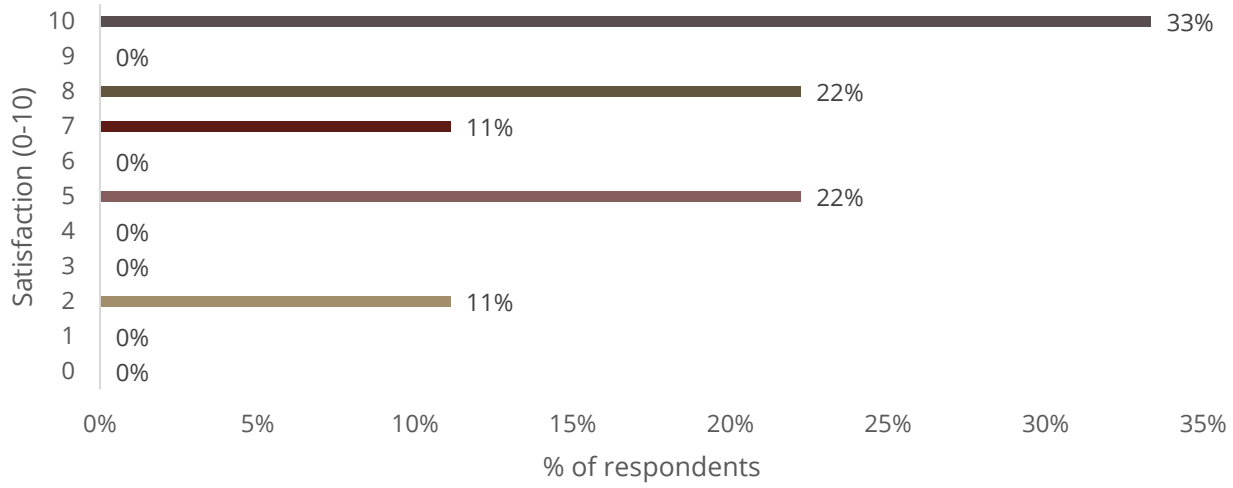
When asked about their motivations for becoming a qualified contractor, trade ally respondents indicated that **prior experience with similar programs and the potential for energy savings were their top motivations**, tied at 67% (Table 52).

Table 52: PY2024 LIP Trade Ally Motivation to Become a Qualified Contractor (n=9, 1 respondent ≈ 11.1%, multiple responses allowed, does not total 100%)



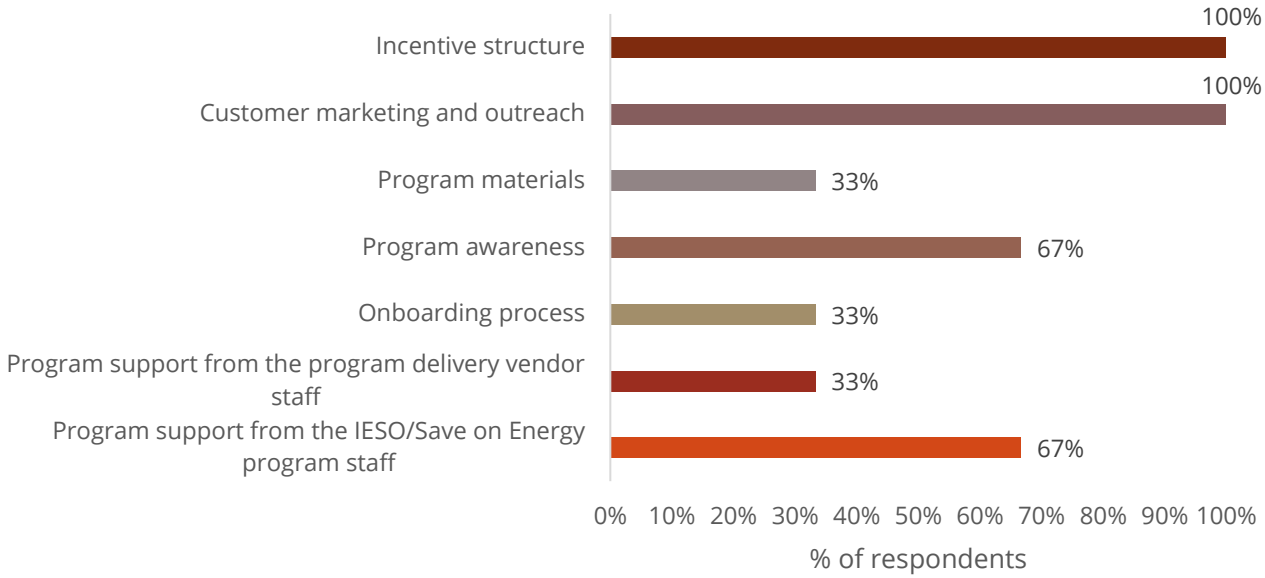
More than half of the trade ally respondents expressed satisfaction with the three LIP programs. Table 53 shows the scale of 0 to 10, with 0 being extremely dissatisfied and 10 being extremely satisfied.

Table 53: PY2024 LIP Trade Ally Satisfaction with LIP Programs (n=9, 1 respondent ≈ 11.1%)



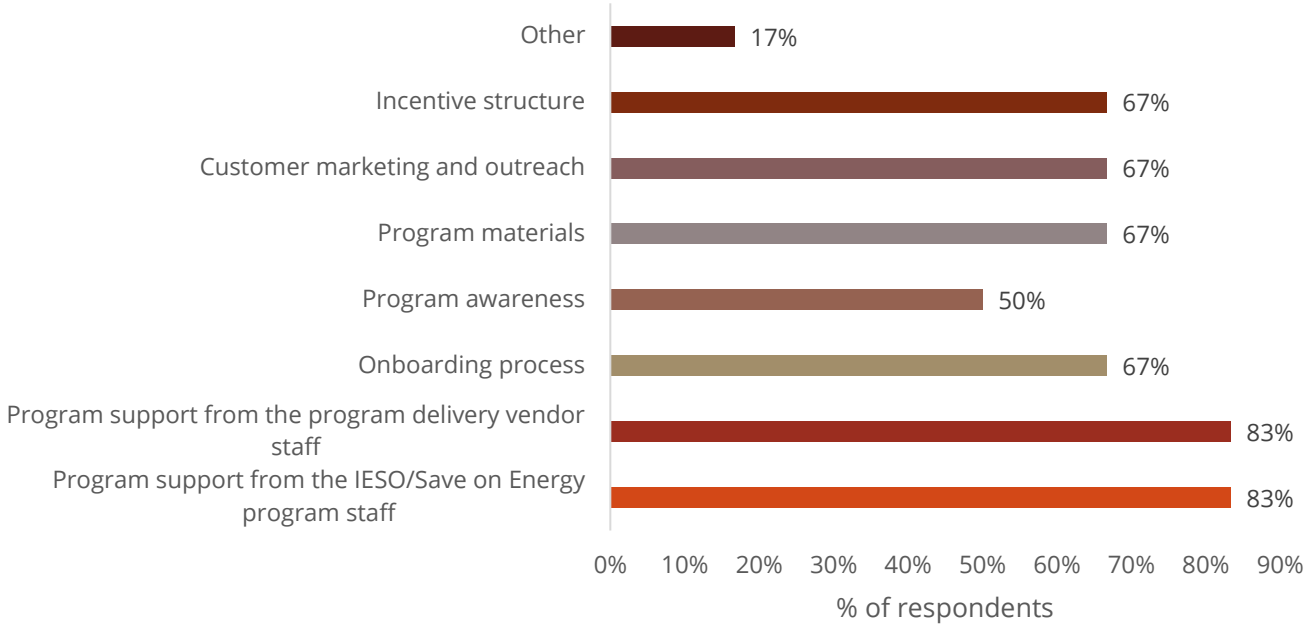
When dissatisfied trade ally respondents were asked what could be improved, 100% said the incentive structure, customer marketing, and outreach. The second most selected categories for improvement, at 67%, were program awareness and program support from the IESO/Save on Energy program staff (Table 54).

Table 54: PY2024 Improvements to Increase Trade Ally Satisfaction of LIP Programs (n=9, 1 respondent ≈ 11.1%, multiple responses allowed, does not total 100%)



When satisfied trade ally respondents were asked what was going well, 83% highlighted program support from the IESO/Save on Energy program staff, as well as program support from the program delivery vendor staff. Table 55 shows that 67% of respondents contradicted the dissatisfied respondents, indicating that the incentive structure, customer marketing and outreach, program materials, and the onboarding process were all going well.

Table 55: PY2024 Trade Ally Satisfactory Program Elements with LIP Programs (n=6, 1 respondent ≈ 16.7%, multiple responses allowed, does not total 100%)



Trade ally respondents reported no difficulty in becoming a qualified contractor for the LIP programs. When asked to rate the ease of the process on a scale of 0 to 10, with 0 being extremely difficult and 10 being extremely easy, all responses were 6 or above. Table 56 shows that 33% rated the process a 10, 22% rated it a 9, and 22% rated it a 7, while 11% rated it an 8 and another 11% rated it a 6.

Table 56: PY2024 LIP Trade Ally Ease of Becoming a Qualified Contractor (n=9, 1 respondent ≈ 11.1%)