

EVALUATION REPORT

2021-2024 CDM FRAMEWORK INDUSTRIAL ENERGY EFFICIENCY PROGRAM PY2023

Date: 12 July 2024

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The Independent Electricity System Operator (IESO) retained EcoMetric Consulting, LLC (EcoMetric) and subcontractor DNV Energy Insights USA Inc. (DNV), collectively referred to as the EcoMetric team, to evaluate the Industrial Energy Efficiency Program (IEEP) in the 2021-2024 Conservation and Demand Management (CDM) Framework. This report details specific objectives, activities, results, and recommendations for the process evaluation of IEEP for program year 2023 (PY2023).

E.1 PROGRAM DESCRIPTION

IEEP provides financial support for the implementation of energy efficiency and system optimization projects for facilities that are intrinsically complex and capital-intensive. The program offers participating organizations up to \$5 million in financial incentives for each project accepted into the program. The program requires a two-stage application process where the IESO first reviews the proposed projects for eligibility and then approves a detailed estimation of savings and incentive proposed by the participant.

E.2 EVALUATION OBJECTIVES

The primary objectives of EcoMetric's evaluation of the IEEP were to:

- Monitor the overall effectiveness and comprehensiveness of key program elements.
- Analyze and make recommendations to improve the program.
- > Determine customer motivations and experience.
- > Identify improvements to program delivery procedures and protocols.

As the program is in the early stage of implementation, current IEEP projects are still underway and not yet ready for evaluation. EcoMetric will conduct the first impact evaluation and cost effectiveness analysis for IEEP as part of the PY2024 evaluation in the 2025 calendar year.

E.3 EVALUATION APPROACH SUMMARY

The EcoMetric team based process evaluation findings on literature reviews and primary data from interviews with a wide range of program actors including IESO staff, program participants, and program non-participants1.

E.4 SUMMARY OF RESULTS

Most participants heard about the program through online methods, and incentives were the main motivation for program participation. Program participants found the first application stage to be straightforward and manageable, but the second application stage proved to be difficult for all participants. Specifically, customers reported challenges pertaining to completing the M&V plan. While the respondents had little difficulty obtaining the necessary data for the plan, project cost and timeline issues made it difficult for respondents to complete the plan.

Program participants had an overall positive program experience. This may be because of the program resources readily available on the IESO website. Program participants highly valued these resources and found them helpful, easy-to-use, and error-free.

No program participants reported that the two-stage application process impacted their decision to participate. However, 50% of non-participants stated that the two-stage application played a factor in their decision to not apply, with two of the four non-participant interviewees stating that the two-stage application process was very time-consuming and therefore did not justify participation. Program non-participants reported additional reasons for their non-involvement, including concerns about meeting program requirements and obtaining the necessary data to complete an M&V plan.

Interviews with program staff from the IESO project suggest that this program will not meet the savings goal targets. Program staff believe that the program may not meet the savings goal targets because customers are more focused on reducing greenhouse gas emissions than reducing their energy savings. This is likely due to current organizational goals and market conditions. Although the EcoMetric team did not complete an impact evaluation this year, concern from program staff highlights a need for tracking progress towards meeting savings goal targets to be monitored closely during the PY2024 evaluation cycle.

¹ Program non-participants included respondents who participated in the now sunset Process & Systems Upgrade Program (PSUP) but are not participating in the IEEP.

Most participants and non-participants have many additional projects planned for the next two years. Some of these projects include converting diesel-powered equipment into electricity-powered equipment, metering all electricity-consuming equipment in facilities, and implementing building automation systems.

Participants provided several suggestions for non-financial support that they hope the IESO will offer in the future. For example, the IESO should consider partnering with other organizations that could provide incentives for gas-reduction that are more aligned with corporate goals. They believe this collaboration will make it easier for them to receive a green light to complete more projects, even if fewer or lesser incentives were available. Other interviewees wish for more technical/engineering support from the IESO to aid with the M&V plan, and a couple of interviewees would like to see the M&V plan and application process become more streamlined. Further, respondents indicated that IESO could enhance the program by providing support in the following areas: reducing minimum energy savings thresholds required to enter the program and extending project completion timelines.

E.5 KEY FINDINGS AND RECOMMENDATIONS

Finding 1: Participants find the cash flow and the risk profile of the program's pay-for-performance structure unattractive for specific reasons. First, they are required to cover the cost of the energy study upfront without knowing the study's findings or actual savings. Additionally, they must cover the full cost of M&V planning, with acceptance beyond their control and no assurance of eventual recovery. Moreover, participants receive no incentive or assurance of an incentive until after the M&V period, an unattractive combination no matter the size of the offered incentive.

Interviewees specifically were put off by the need to obtain internal funding approval multiple times before possibly receiving an incentive. As one interviewee noted, "we struggled…because I had to get funding to do the M&V before the project or incentive was approved." Furthermore, the eventual payment is viewed as all downside and no upside, with no payment for up to 49% of projected savings and no extra payment for over 100% of savings. The payment streams and risk are discouraging customers and causing concern among the IESO program staff that the program will not likely meet its projected savings goals.

Recommendation 1: Align incentive payments more with cash flow and performance. Pay a portion of the incentive after earlier stage completion to aid cash flow and make the remainder proportional to performance. Detailed design of incentive structure and levels is beyond the scope of the evaluation and would be best done by program staff, but consider focused research, such as testing customer response to other incentive options within an experimental design. This would (1) improve participant cash flow, (2) enable the project champion to demonstrate internal financial success to

gain support for subsequent stages, (3) avoid the penalty-oriented step payment structure, and (4) give performance upside opportunity to the participant at a cost-effective benefit to the IESO with minimal added risk to the IESO.

Finding 2: Participants indicate that the participation timeline has been quite lengthy. Respondents noted reasons both in and out of the IESO's control such as many iterations and back and forth on the M&V plan with the technical reviewer and long lead times to receive measures necessary for project implementation. For some respondents, this is causing issues with their funding since their capital budgets are on a 1-year cycle.

Recommendation 2: For issues within the IESO's control (e.g., having many iterations of participant M&V plans with the technical reviewer), ensure adequate communication is provided to participants and expectations are set up front. Provide estimates of how many iterations of the M&V plan will be necessary and the length of time it will take from the first submission to final acceptance of the M&V plan, on average. As much as possible, ask all questions at once, rather than going to the customers three or four times, as one respondent described.

Finding 3: Previous Process & Systems Upgrade Program (PSUP) participants provided multiple reasons as to why they are not currently participating in the IEEP. These include: a) having completed all necessary upgrades at their facility, b) opting to participate in other, more lucrative programs, and c) concerns that the minimum savings requirement is too cumbersome. While projects can be summed up to meet the minimum savings requirement, one respondent noted that this provides a high level of administrative burden.

Recommendation 3: Investigate programs offered by other administrators (e.g., the Decarbonization Incentive Program offered by the Government of Canada) to determine how, if at all, other programs can be supplemental with the IEEP. Market the program accordingly to potential participants.

1.1 PROGRAM DESCRIPTION

IEEP provides financial support for the implementation of energy efficiency and system optimization projects for facilities that are intrinsically complex and capital-intensive. The program offers participating organizations up to \$5 million in financial incentives for each project accepted into the program. The program requires a two-stage application process where the IESO first reviews the proposed projects for eligibility and then approves a detailed estimation of savings and incentives proposed by the participant.

To be accepted by the program, projects must involve an energy efficiency improvement applied to an industrial process and meet a minimum electricity savings of 2,000 MWh per year representing a reduction of at least 15% of the baseline electricity use of the industrial process. Multiple projects applied to the same industrial process can be combined to meet the minimum savings threshold, as long as each individual project delivers at least 500 MWh of electricity savings per year.

1.2 EVALUATION OBJECTIVES

The primary objectives of EcoMetric's evaluation of IEEP were to:

- Monitor the overall effectiveness and comprehensiveness of key program elements.
- Analyze and make recommendations to improve the program.
- Determine customer motivations and experience.
- > Identify improvements to program delivery procedures and protocols.

As the program is in the early stage of implementation, current IEEP projects are still underway and not yet ready for evaluation. EcoMetric will conduct the first impact evaluation and cost effectiveness analysis for IEEP as part of the PY2024 evaluation in the 2025 calendar year.

This report contains the process evaluation results for IEEP in PY2023.

This section of the report outlines the methodologies used in the PY2023 evaluation of IEEP. Interview instruments are included in Appendix A.

2.1 PROCESS EVALUATION APPROACH

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In the PY2023 evaluation, the EcoMetric team conducted a compact process evaluation by conducting a literature review and collecting primary data from IESO program staff, six program participants, and four program non-participants. Program non-participants included respondents who participated in the now sunset Process & Systems Upgrade Program (PSUP) but are not participating in the IEEP, as the IESO wants to understand the reasons why they are not engaging to the extent hoped for. For the literature review, the EcoMetric team reviewed all available online materials (including webpages detailing information about the program). In-depth interviews (IDIs) for all primary data collected were conducted via phone or video calls by the EcoMetric team. Table 1 shows the total number of IDIs conducted.

Table 1: PY2023 IEEP Sample Frame

Component	Population	Completed
IESO Program Staff	3	2 ²
Participants	16 ³	6
Non-Participants	25 ⁴	4

2.1.1 RESEARCH QUESTIONS

Following a discussion of the evaluation and IEEP with the IESO team, the EcoMetric team developed these PY2023 research questions:

Is the IESO on track to meet savings goals for this program within the current framework?

² One interview was conducted with one member of the IESO program staff team, and a second group interview was conducted with the two other members of the IESO program staff team.

³ The EcoMetric team considered the population to be participants in the second application stage of the program. 4 The EcoMetric team considered the population to be previous PSUP participants who had not submitted a stage 1 application to the IEEP.

- What are the challenges related to the program? The following will be asked: 1) why there are only two fully executed projects in the program, and 2) the measurement and verification requirements.
- What are the participant motivations and barriers to participating in the IEEP program?
- If data are available for relevant customers, why were past PSUP participants not interested in IEEP?
- How is the participant program experience?
- Where are the opportunities to improve the delivery of IEEP?
- How can the IESO increase program participation in future, similar programs?

2.1.2 DATA COLLECTION

2.1.2.1 IESO and Program Delivery Vendor Staff

The EcoMetric team conducted two interviews with three members of the IESO's IEEP team. One interview was a group interview with two members of the team. The other interview included only one member of the IESO's team. Both interviews focused on topics relating to the research questions – including marketing and outreach to potential customers, the program application process, tracking and providing required measurement and verification documentation, QA/QC practices, and challenges and barriers for participants to be involved with the IEEP program.

2.1.2.2 Participants and Non-Participants

The EcoMetric team conducted interviews with up to six IEEP participants. Screening questions were asked of interviewees to ensure they had direct and intimate knowledge of the project's origin and the influence of IESO incentives before carrying out the conversation. The EcoMetric team also planned to conduct interviews with up to six IEEP non-participants. However, only four interviews were completed after making five outreach attempts (three emails and two phone calls) or until a final disposition was met (e.g., a refusal to participate) with all 25 contacts who previously participated in the PSUP program. These interviews gathered information on customer motivations to participate in the program, how easy it was for them to navigate the application process, the usability of resources including measurement and verification documentation, motivations behind energy efficiency investments, future investment plans, and how well program activities are addressing their needs. Non-participant interviews investigated why previous PSUP program participants were not interested in IEEP.

3.1 RESULTS

Findings from the program staff, program participants, and program non-participant IDIs are included in this results section.

3.1.1 PROGRAM OUTREACH AND PARTICIPATION MOTIVATIONS

Most participants heard about the program through online methods. Five of the six interviewees reported hearing about the program through an online webinar/presentation or an email/newsletter blast. One additional respondent reported knowing about the program due to previous participation in another program sponsored by the IESO.

Incentives are the main motivation for program participation. Interviews with the program staff from the IESO predicted that the main customer motivation for participating in IEEP included cost savings from decreasing energy usage and program incentives. Program participant interviews confirmed these projections – as all six interviewees noted that incentives played a significant or main role in their organization's decision to participate. Three respondents also noted that corporate sustainability goals played a part in their decision to participate. However, all three indicated that their corporate goals primarily revolve around greenhouse gas emissions and a desire to prioritize the reduction of fossil fuel/natural gas consumption, not electricity.

3.1.2 PROGRAM PARTICIPATION CHALLENGES

Program participants found the first application stage to be easy and manageable, but they found the second application stage to be quite challenging. All six interviewees noted that the first application stage was "easy" or "straightforward." The second application stage, however, was difficult. All six interviewees said that the M&V plan was their main source of challenge with the second application stage. Three of the six interviewees described the timeline of the back and forth with staff from the IESO reviewing the M&V plan to be lengthy, with one participant describing it as a "marathon."

> "This [the second application stage] is a bit more of a marathon. The M&V plan is the heart of the stage 2 application. I hadn't formally prepared a M&V plan before, and that you are given the discretion to create your own template as long as it meets the international

standard...I had to learn the formalities of the plan formulation on the fly when preparing the submission."

Each of these three interviewees described a difficult process in going back and forth with the IESO to make changes following multiple rounds of feedback on the M&V plan.

Completing the M&V plan was reported to be the single biggest challenge to program participation for 50% of interviewees. Three of six interviewees declared the M&V plan to be their single biggest challenge in program participation. Program staff from the IESO indicated in interviews that they thought participants might find M&V development to be challenging but noted that there are market resources available to help. However, only one of six interviewees indicated that they outsourced to a third-party consultant for assistance with the M&V plan.

> "We ended up hiring an outside consultant to do the M&V portion...we would never do this ourselves – it was too complex."

Two of six interviewees said that project cost, even including the incentive, was the largest barrier to program completion. Both indicated that their organizations felt that the upfront investment required was "risky" since program incentives are not assured after completing the applications. One interviewee said the project timeline was the biggest challenge to their successful participation. Interviewees noted minimal difficulty obtaining data required for the M&V plan but instead found completion of the plan itself to be challenging.

3.1.3 PROGRAM EXPERIENCE

Program participants value program resources available on the IESO website. Five out of six interviewees reported utilizing at least one resource available to them on the IESO website. All five reported that the tools were free of error, easy to use, and helpful. One interviewee noted appreciation that they were easily accessible from the IESO website and that they did not need to request them.

3.1.4 BARRIERS TO PROGRAM PARTICIPATION

While no program participants reported that the two-stage application process had an impact on their decision to participate, 50% of non-participants stated that the two-stage application played a factor in their decision to not apply. All six program participants reported a belief that a two-stage application process was reasonable to receive a large incentive. In fact, one respondent even said that "if it was three stages, we would probably still participate." However, two of four nonparticipant interviewees said that the two-stage application process was thought to be more timeconsuming and therefore too hard to justify participation.

Program non-participants report a variety of reasons for not participating in the program. One interviewee noted that they had completed all necessary updates in their facilities. As such, they would not be interested in future program participation. Another noted that they had not previously heard about the program and would need to do additional research to determine if it might be a fit for their organization. This interviewee said that they would be open to participating in the future. A third had concerns about obtaining data necessary for and completing an M&V plan. This respondent said they would not be interested in future participation, as they were engaging with other programs offering incentives for both gas and electricity savings requiring less project documentation.

"We have been introduced to other programs. For example – through the Ministry of Natural Resources of Canada. They have a different stream with incentives that have lesser requirements. For example, the DIP (decarbonization incentive program). Their approaches have been way easier for us to handle compared to the IESO programs."

Finally, a fourth non-participant noted concern about meeting the minimum energy savings requirement. They noted it is unlikely they will participate in the future, as they have plenty of other smaller projects they can complete through other incentive programs.

3.1.5 FUTURE GROWTH OPPORTUNITIES

Interviews with program staff from the IESO project indicate that this program will not meet the savings goal targets. While the EcoMetric team did not complete an impact evaluation this year, concern from program staff indicates that progress towards meeting the savings goal targets is a topic to be monitored during the PY2024 evaluation cycle.

Most participants and non-participants have many additional projects in their pipeline for the **next two years.** Four out of six IDI participants indicated that their organizations have, cumulatively, more than 150 additional projects planned for the next two years. Some projects mentioned include converting diesel-powered equipment into electricity-powered equipment, metering all electricity-consuming equipment in facilities, and implementing building automation systems. Three of four

non-participants said that they have a list of projects they plan to implement. Examples include energy-saving pump installations, lighting controls, and building automation and ventilation projects.

Participants offered a variety of suggestions for non-financial support that they would like to see the IESO provide. Interviews with the IESO staff predicted that respondents would have competing priorities due to decarbonization goals. This was highlighted in two interviews, as participants suggested that the IESO consider partnering with other organizations that could provide incentives for gas-reduction that are more in line with their corporate goals. They believe this collaboration will make it easier for them to receive a green light to complete more projects, even if fewer incentives are available.

"Collaboration is something that the IESO may wish to consider...the vast majority of my peers are applying for natural gas incentives or electricity incentives. Can we have a collaboration for this project with both electricity and natural gas with a ratio? Can we develop a systemic way of collaborating the utilities? This would be helpful."

Two interviewees desired more support from the IESO on a technical/engineering basis to aid with the M&V plan. Additionally, two interviewees asked for the M&V plan and application process to be more streamlined. Two respondents desired to see the minimum energy savings thresholds reduced to enter the program. One interviewee requested more relaxed timelines for project completion. Finally, one interviewee recommended creating a streamlined approach to participate in multiple programs. For example, they are participating in both SEM and IEEP. They requested having just one reviewer partner with them across all their projects, or one phone number to reach out with questions about either of the programs. **Finding 1:** Participants find the cash flow and the risk profile of the program's pay-for-performance structure unattractive for specific reasons. First, they are required to cover the cost of the energy study upfront without knowing the study's findings or actual savings. Additionally, they must cover the full cost of M&V planning, with acceptance beyond their control and no assurance of eventual recovery. Moreover, participants receive no incentive or assurance of an incentive until after the M&V period, an unattractive combination no matter the size of the offered incentive.

Interviewees specifically were put off by the need to obtain internal funding approval multiple times before possibly receiving an incentive. As one interviewee noted, "we struggled…because I had to get funding to do the M&V before the project or incentive was approved." Furthermore, the eventual payment is viewed as all downside and no upside, with no payment for up to 49% of projected savings and no extra payment for over 100% of savings. The payment streams and risk are discouraging customers and causing concern among the IESO program staff that the program will not likely meet its projected savings goals.

Recommendation 1: Align incentive payments more with cash flow and performance. Pay a portion of the incentive after earlier stage completion to aid cash flow and make the remainder proportional to performance. Detailed design of incentive structure and levels is beyond the scope of the evaluation and would be best done by program staff, but consider focused research, such as testing customer response to other incentive options within an experimental design. This would (1) improve participant cash flow, (2) enable the project champion to demonstrate internal financial success to gain support for subsequent stages, (3) avoid the penalty-oriented step payment structure, and (4) give performance upside opportunity to the participant at a cost-effective benefit to the IESO with minimal added risk to the IESO.

Finding 2: Participants indicate that the participation timeline has been quite lengthy. Respondents noted reasons both in and out of the IESO's control such as many iterations and back and forth on the M&V plan with the technical reviewer and long lead times to receive measures necessary for project implementation. For some respondents, this is causing issues with their funding since their capital budgets are on a 1-year cycle.

Recommendation 2: For issues within the IESO's control (e.g., having many iterations of participant M&V plans with the technical reviewer), ensure adequate communication is provided to participants and expectations are set up front. Provide estimates of how many iterations of the M&V plan will be necessary and the length of time it will take from the first submission to final acceptance of the M&V

plan, on average. As much as possible, ask all questions at once, rather than going to the customers three or four times, as one respondent described.

Finding 3: Previous Process & Systems Upgrade Program (PSUP) participants provided multiple reasons as to why they are not currently participating in the IEEP. These include: a) having completed all necessary upgrades at their facility, b) opting to participate in other, more lucrative programs, and c) concerns that the minimum savings requirement is too cumbersome. While projects can be summed up to meet the minimum savings requirement, one respondent noted that this provides a high level of administrative burden.

Recommendation 3: Investigate programs offered by other administrators (e.g., the Decarbonization Incentive Program offered by the Government of Canada) to determine how, if at all, other programs can be supplemental with the IEEP. Market the program accordingly to potential participants.

Appendix 1

A.1 IESO's IEEP Program Staff Interview Guide

A.1.1 Instrument Overview

Objective: The Evaluation Team will interview IESO IEEP program staff. The purpose of these interviews is to obtain a more detailed understanding of how the IEEP program has been promoted and communicated to potential participant organizations, and what challenges staff faced in scaling the IEEP program in the 2021-2024 Conservation and Demand Management (CDM) Framework.

Table 2 documents research objectives and associated questions.

Anticipated timing (interview length): 45 minutes - 1 hour

Method of data collection: Phone interview

Table 2: Research Objectives Mapped to Questions in this Instrument

Research Objectives	Questions
Is the IESO on track to meet savings goals for this program within the current framework?	Q2- Error! Reference source not found.
What are challenges related to the program? We will inquire about: 1) why there are only two fully executed projects in the program, and 2) the measurement and verification requirements (including tracking and QA/QC practices).	Q9, Q12, Q13
How is the participant program experience? What is included in the application process?	Q5 - Q7
What are the participant motivations and barriers to participating in the IEEP program?	Q15, Q16
What marketing and outreach methods were utilized for potential participants?	Q8
Why were past PSUP participants not interested in IEEP?	Q10
What are the opportunities to improve the delivery of IEEP?	Q13, Q14
How can the IESO increase program participation in future, similar programs?	Q17, Q18

INTERVIEW

[INTERVIEWER: Send an email introducing yourself, explaining the purpose of the interview, and scheduling a time for the interview.]

Email Introduction

[INTERVIEWER ADAPT EMAIL IF NEEDED]

Subject: IEEP program discussion

HI [INPUT CONTACT NAME],

As you may already be aware, we are starting the evaluation of the Industrial Energy Efficiency Program (IEEP).

We would like to speak to you about your role in IEEP and opportunities for future, similar program growth. We expect our discussion to take 45 minutes to an hour.

Please let us know when it would be a good time to talk. Below is my availability for the next two weeks:

[OFFER SEVERAL TIME SLOTS FOR THE INTERVIEW]

Respectfully Yours,

[INTERVIEWER NAME, TITLE, AND COMPANY SIGNATURE]

INTERVIEW

Today, we'll be discussing your role in the IESO IEEP and opportunities for future, similar program growth. Your comments are confidential. If I ask you about areas you don't know about, please feel free to tell me that and we will move on. Also, if you want to refer me to specific documents to answer any of my questions, that's great – I'm happy to look things up if I know where to get the information.

I would like to record this interview for my note-taking purposes. Do I have your permission?

Roles and Responsibilities

Q1. Can you briefly describe your role in IEEP and provide your current job title?

Savings Goals and Key Metrics

First, I would like to ask you about savings expectations and metrics.

- Q2. What were the forecasted program savings goals (MWh and/or MW) within the current framework?
 - a. Do you have any concerns towards meeting that goal?
- Q3. How are the program savings being tracked?
 - a. Have there been any challenges in tracking savings thus far? (Probes: data protocols/processes, reporting procedures)
- Q4. Besides savings, what other key metrics are you tracking to indicate program success?
 - a. If any, what are your goals for those metrics?
 - b. If there are goals, are you on track to meet those goals? Why or why not?

Program Design

Next, I would like to ask you about program design related to IEEP.

- Q5. We see that there was a two-stage application process for each proposed project, including a review for eligibility followed by a review of the detailed estimation of savings and incentive proposed by the participant. Why was a two-stage application process implemented?
- Q6. We see that projects must involve an energy efficiency improvement applied to an industrial process with a minimum electricity savings of 2,000 MWh per year representing a reduction of at least 15% of baseline energy usage. How were these minimums established? (Probe: what was the rationale for the minimum savings threshold)
- Q7. We see that participating organizations were capped at a \$5 million financial incentive. Was this incentive allowance appropriate? Please elaborate.

Program Processes, Participation, and Opportunities for Future Growth

My next set of questions relate to the IEEP processes, participation, and opportunities for future program growth.

Q8. How was IEEP marketed to potential participants? (Probe: how was this the same or different compared to PSUP?)

- Q9. We learned there were only two fully executed projects in the program. Were these the only projects undertaken within IEEP?
 - a. If yes: what are the reasons for such low participation?
 - b. If no: why were only two projects fully executed? And how many projects are in progress?
- Q10. How many projects, either completed or in progress, are from previous PSUP participants?
 - a. If applicable: why were previous PSUP participants not interested in participating in IEEP?
- Q11. What challenges, if any, have you heard from participants regarding the two-stage application process?
 - a. Were there any challenges faced with received applications? (Probes: errors, if any were rejected and why, if there have been delays in approving the applications)
- Q12. What concerns, if any, have you heard from participants about providing required program documentation? (Probes: issues with tracking and undergoing QA/QC)
- Q13. Has there been technical review of any completed projects?
 - a. If yes, please describe current QA/QC practices.
 - b. Have there been any challenges in completing technical review?
- Q14. Have any IEEP participants received incentives?
 - a. If yes, have there been any challenges with incentive fulfillment?
- Q15. What do you think is the primary motivation for customers to participate in IEEP?
- Q16. What do you think is the primary barrier stopping more customers from participating in IEEP?

Wrap-up

- Q17. Besides what we have already discussed, do you see any opportunities to increase participation in future, similar programs?
- Q18. What would you like to learn from the program evaluation?

IESO's IEEP Participant and Non-Participant Interview Guide

Date:	May 13, 2024
To:	Gavin Zheng and Alice Herrera; IESO
From:	Mersiha McClaren, Kora Dreffs, Jon Maxwell, Salil Gogte, and Jake Fuller; DNV and EcoMetric Team
Re:	IEEP program: Participants and Non-Participants Interview Guide

INSTRUMENT OVERVIEW

Objective: The Evaluation Team will interview both (i.e., two) IESO IEEP program participants with fully executed projects and up to four applicants (i.e., those who have submitted at least a stage one application). The team will also attempt to interview up to six past PSUP program participants who did not indicate interest in IEEP to learn why they are not interested. The purpose of these interviews is to obtain a more detailed understanding of customer motivations to participate in the program, future energy efficiency investment plans, and how well program activities are addressing their needs.

Table 3 documents research objectives and associated questions.

Anticipated timing (interview length): 45 minutes – 1 hour

Method of data collection: Phone interview

Research Objectives	Questions
What are challenges related to the program? We will inquire about: 1) why there are only two fully executed projects in the program, and 2) the measurement and verification requirements (including tracking and QA/QC practices).	Q11, Q12
How is the participant program experience, including how well the program activities are addressing their needs? What is included in the application process and how easy is it to navigate? How usable are program resources?	Q7, Q8, Q9
What are motivations and barriers to participating in the IEEP program?	Q2, Q10
What motivations do customers have behind energy efficiency investments? What future investment plans do they have?	Q3, Q5
What marketing and outreach methods were utilized for potential participants?	Q6
Why were past PSUP participants not interested in IEEP?	Q4
What are the opportunities to improve the delivery of IEEP?	Q13
How can the IESO increase program participation in future, similar programs?	Q14

Table 3: Research Objectives Mapped to Questions in this Instrument

INTERVIEW

[INTERVIEWER: Send an email introducing yourself, explaining the purpose of the interview, and scheduling a time for the interview.]

Email Introduction

[INTERVIEWER ADAPT EMAIL IF NEEDED]

Subject: IEEP program discussion

HI [INPUT CONTACT NAME],

DNV is conducting research on behalf of the IESO to evaluate the Industrial Energy Efficiency Program (IEEP).

We would like to speak to you about your [FOR PARTICIPANTS: participation, FOR NON-PARTICIPANTS: decision to not participate] in IEEP and opportunities for future program growth. We expect our discussion to take 45 minutes to an hour.

Please let us know when it would be a good time to talk. Below is my availability for the next two weeks:

[OFFER SEVERAL TIME SLOTS FOR THE INTERVIEW]

Respectfully Yours,

[INTERVIEWER NAME, TITLE, AND COMPANY SIGNATURE]

INTERVIEW

Today, we'll be discussing your [FOR PARTICIPANTS: participation, FOR NON-PARTICIPANTS: decision to not participate] in the IESO Industrial Energy Efficiency Program (IEEP) and opportunities for future, similar program growth. Your comments are confidential. If I ask you about areas you don't know about, please feel free to tell me that and we will move on. Also, if you want to refer me to specific documents to answer any of my questions, that's great – I'm happy to look things up if I know where to get the information.

I would like to record this interview for my note-taking purposes. Do I have your permission?

Roles and Responsibilities

Q1. Can you [FOR PARTICIPANTS: briefly describe how you were engaged with the IEEP and] provide your current job title? (Probe for participants: confirm the interviewee has knowledge

of project origin and familiarity with the project incentives before proceeding with the discussion; if not, obtain information for more appropriate party at organization)

IEEP Program Participation Motivation/Non-Participation Reasons

Let's begin with why your organization [FOR PARTICIPANTS/APPLICANTS: decided to participate, FOR NON-PARTICIPANTS: decided to not participate] in the IEEP.

- Q2. [ASK PARTICIPANTS AND APPLICANTS] What was the main motivation for your organization to participate in the IEEP? (Probes: corporate sustainability goals, energy savings, bill/cost savings)
- Q3. [If not covered in previous question:] Why did your organization want to implement energy reduction behaviors and/or invest in energy efficiency measures? (Probes: corporate sustainability goals, energy savings, bill/cost savings, tenant/occupant comfort)
- Q4. [ASK ONLY NON-PARTICIPANTS] What are the reasons your organization is not participating in the IEEP? (Probes: other priorities, lack of capital funding, poor payback/ROI for installing program measures, worker shortage, already made all the upgrades in our building)
 - a. What was the single biggest reason?
 - b. [IF THEY PLAN TO PARTICIPATE IN THE FUTURE] When do you plan to participate?
 - c. [IF PAYBACK/ROI IS THE BIGGEST BARRIER] What is the minimum payback you need to participate in the IEEP (that is, to invest in energy efficiency upgrades)?
- Q5. [ASK ALL] What plans, if any, does your organization have to invest in additional energy reduction behaviors and/or energy efficiency measures in the next two years?
 - a. If none, why not?

Program Marketing/Application Process

Next, I would like to ask you about how you learned about the IEEP and the application process.

- Q6. [ASK ALL] How did you first learn about the IEEP? (Probes: email/marketing from the IESO, a contractor, other industry contacts/word of mouth)
- Q7. There is a two-stage application process for each project.
 - a. [ASK ONLY PARTICIPANTS AND APPLICANTS] How easy was it for you to complete the first application stage? (Probe if needed: what would have made it easier for you to complete this stage which includes submitting company information, a summary

description of the project, estimated cost of the project, an estimate of electricity savings to be delivered by the project with supporting calculations, the proposed participant incentive, and a declaration form uploaded to the IEEP portal)

- b. [ASK ONLY PARTICIPANTS AND APPLICANTS] How easy (for participants: was it, for applicants: is it) for you to complete the second application stage? (Probe if needed: what would have made it easier for you to complete this stage which includes a detailed description of the project, an estimate of electricity savings with detailed supporting calculations and the effective useful life, projected contribution to summer peak demand reduction, proposed participant incentive, evidence demonstrating the incentive is necessary to implement the project, a project budget, identification of third-party funding, credentials of the team implementing the project, risk analysis, baseline data and baseline mode, proposed M&V plan, a signed declaration, a release, waiver, and consent form uploaded to the IEEP portal)
- c. [ASK ONLY NON-PARTICIPANTS] Prior to this discussion, were you aware that the IEEP application process was two stages?
- d. [ASK ALL PARTICIPANTS AND NON-PARTICIPANTS WHO ANSWERED YES TO THE ABOVE QUESTION] Did the two-stage application process impact your [FOR PARTICIPANTS: decision to participate, FOR NON-PARTICIPANTS: decision to not participate] in any way? Please elaborate.
- Q8. [ASK IF PARTICIPANT COMPLETED STAGE TWO]: How easy was it for you to complete the participant agreement process? (Probe: what would have made it easier for you to complete this)

Program Processes [ASK ONLY PARTICIPANTS WHO HAVE COMPLETED THE SECOND APPLICATION STAGE]

My next set of questions relate to the IEEP processes.

- Q9. How easy to use are program resources? (Probes: using the cost test calculator, understanding provided IPMVP documentation, completing the program release form)
 - a. If response indicates not very easy, what would have made it easier for you to use program resources?
- Q10. What are the most significant challenges to completing your program project(s)? (Probes: staff turnover, other priorities, financial constraints)
 - a. What is the single biggest challenge to completing your program project(s)?

- b. Besides larger incentives, is there anything the program could do to help your organization undertake even more projects?
- Q11. What, if any, challenges have you faced in providing required program documentation? (Probes: issues with tracking, administrative effort to complete program documents)
- Q12. What, if any, challenges have you faced in completing technical review of your program documentation? (Probes: hiring an external contractor to provide support in filling out M&V documents, challenges undergoing the QA/QC process with the IESO)
- Q13. Besides what we have already discussed, do you see any opportunities to improve the delivery of the IEEP?

Wrap-up [ASK ALL]

Q14. Finally, do you have any suggestions for how the IESO can increase participation in the IEEP or future, similar programs?

Those are all the questions I have. Unless you have any questions for me or additional feedback, we are finished. Please feel free to reach out via email or phone if you think of anything we did not cover during our discussion today.