

# 2020 Interim Framework (IF) Industrial Portfolio Program EM&V Key Findings and Recommendations

No.	PROGRAM	KEY FINDINGS	2020 EM&V RECOMMENDATIONS	IMPACTS	IESO RESPONSES
1.	Energy Manager	Many of the technical review analyses were well documented and followed industry-standard methods. Around 15% of analyses were rudimentary and failed to correct basic mistakes in energy manager savings calculations.	<p>Encourage better documentation from the energy managers. Details were generally lacking on how the baseline and post-project conditions were quantified and how annualized electricity savings were estimated. Sometimes referenced supporting documentation was not made available by the program vendor. At the very least, project documentation should include the spreadsheet analyses used to calculate energy and peak demand savings for each project.</p> <p>Increase the level of detail for non-incented project documentation for projects estimated to achieve less than 100 MWh/year. Provide energy managers with clearer guidelines on the type of information required to accurately verify the savings for common measure types.</p>	High	<p>The IESO will continue to work with energy managers to identify barriers to project documentation and strategies to overcome identified barriers. As the IF Energy Manager program is now winding down, the IESO will also incorporate learnings into new program offerings in the 2021-2024 CDM Framework.</p> <p>The IESO provided energy managers with guidelines for reporting non-incented savings in 2020. The impacts of these guidelines may not have been seen in time for this round of evaluation. The IESO will revisit the effectiveness of these guidelines and make adjustments as necessary.</p>
2.	Energy Manager	The impact of IESO-funded energy managers on the IESO savings goals goes far beyond the non-incented measures detailed in this report. IESO-funded energy managers were responsible for 23,970 MWh reported energy savings in PY2020, accounting for 11% of total reported energy savings across the Business Retrofit, PSUP, and EM non-incented programs. Organizations with IESO-funded energy managers also have 34 Process and Systems Upgrade Program (PSUP) projects under contract that are not yet in service, so their share of IESO portfolio savings is expected to greatly increase in the next evaluation reports.	Develop a Reporting Template to track the verified savings achieved from projects implemented by IESO-funded energy managers across the entire portfolio.	High	The IESO appreciates the insights into the broader impacts, beyond non-incented savings, of the Energy Manager program across the Save on Energy portfolio of programs. The IESO will leverage these findings as it considers ways to identify and record the holistic impacts of the Energy Manager program as it evolves in the 2021-2024 CDM Framework, including an enhanced reporting template.

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3.	Energy Manager	Eighty-one percent of participants surveyed indicated that they would keep their energy manager employed in the absence of an incentive. In order to keep the role, many participants said the energy manager would need to expand their responsibilities and maintain a broader focus than just energy efficiency. Without an incentive for a full-time energy manager, participants would benefit most from technical assistance from the IESO to complete applications, create baselines, and calculate potential energy savings.	Encourage participants to make a broader commitment to energy efficiency by adopting a Strategic Energy Management (SEM) approach. Consider developing tools and providing training and education to organizations so they can take ownership of and manage energy efficiency throughout their organization.	High	The IESO recognizes the importance of participants highly valuing the contributions of energy managers on their teams. The IESO's Capability Building and training initiatives have been and continue to be available to support businesses and market transformation in this regard. The IESO will continue to find ways to demonstrate the value energy managers bring to their organizations through various support mechanisms such as training and education resulting in shifts in organizational culture and supporting new energy efficiency champions within organizations. The IESO will also endeavour to obtain more accurate information on energy manager retention in the absence of an incentive to ensure the accuracy and persistence of these findings.
4.	Energy Manager	Most projects assumed that energy consumption was unaffected by the COVID-19 pandemic. Several energy managers implemented optimization measures in March 2020 to modify the lighting and HVAC schedules of buildings. These measures were analyzed using IPMVP Option C regression models in RETScreen using pre-pandemic consumption data as the baseline. Energy and peak demand savings were calculated using consumption data from March 2020 onward when varying levels of COVID-19 restrictions were in place. The energy manager and technical reviewer clearly documented the implicit assumption that building operation (occupancy, hours of operation) did not change due to the COVID-19 pandemic, which is not always accurate as the effects of the pandemic are far-reaching and complex, and the effect on organizations varied widely by industry.	Ensure consistency from energy managers and technical reviewers with respect to adjustments for Non-Routine Events (NREs) such as the COVID-19 pandemic. Adjustments for NREs can be achieved by normalizing the data across pandemic-impacted periods or extending baseline and performance periods to include "normal" operations.	Low	The IESO recognizes that COVID-19 has impacted Save on Energy participants. The IESO will continue to support energy managers with resources when adjustments for NREs are identified.

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5.	Energy Manager	Energy managers achieve savings across several fuel types, but only kWh and kW savings are reported by the IESO. Energy managers suggest that more information such as case studies and calculators would support the identification and reporting of all types of savings they achieve.	<p>Develop case studies, training, calculators, and other reference materials to support energy managers in achieving, calculating, and reporting all savings in their organizations, including water and fossil fuels. Publish a measure substantiation sheet that includes fuel and water savings to be included with the IESO's Measures and Assumptions List (MAL).</p> <p>Consider updating the Energy Manager Quarterly Submission document to include sheets for reporting water and fossil fuel savings achieved. Consider including water and fossil fuel impacts in the Energy Manager cost effectiveness calculations to provide a better review of the program.</p>	Low	The IESO will continue to investigate the potential to implement the strategies recommended for supporting energy managers in calculating and reporting savings beyond kWh and kW.
6.	Energy Manager	Overall program satisfaction was high among Energy Manager program participants. However, participants were least satisfied with reporting requirements and the technical review process. A common theme was related to the turnaround time it takes to receive feedback on the reports being very lengthy. Energy managers were also least satisfied with reporting and technical review processes.	<p>Ensure IESO and technical review staff set clear expectations with participants regarding the review process and timeline to avoid participant frustration.</p> <p>Coordinate with technical review staff to ensure there are set goals for technical review timelines.</p>	Low	The IESO will strive to address these issues with technical review timelines and will communicate expected review timelines as clearly as possible.
7.	Energy Manager	Energy managers expressed moderate levels of satisfaction with the overall program. Energy managers are satisfied with technical reviewers, but satisfaction declines once the energy managers have to calculate and report savings they achieve. Pain points include the support for non-incented project savings calculations, reporting requirements, and technical support.	<p>Work to develop technical review and program support staff that are experts in common industries that participate in the EM program, such as manufacturing, mining, and universities. These industries have vastly different patterns in energy usage, facilities, and business needs which result in vastly different energy-saving projects and calculations. By developing experts to work with energy managers in specific industries, the savings calculation, reporting, and technical review process should be less burdensome as experts leverage lessons learned and commonalities from similar situations.</p>	Low	The IESO appreciates that the technical review process could be streamlined with sector-specific program supports and will continue to focus on allocating resources to this program that will improve customer satisfaction.

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8.	Energy Manager	Energy managers believe that increased training and engagement from the IESO with senior management at their participating organizations would allow the organizations to build internal capacity to improve operational efficiency.	Consider creating training and educational resources aimed at senior management to encourage the development of internal capacity to increase efficiency of operations. Resources for senior management should be more strategic than technical, focusing on energy efficiency as an operational resource.	Low	As part of its efforts to increase recognition of the value energy managers bring to their organizations, the IESO will focus efforts on targeting program communications toward the senior management of participants. IESO's Capability Building and training initiatives have and continue to provide support to this segment of the industry. These efforts will also support the transition from funded Energy Managers to a Strategic Energy Management program.
9.	Process and Systems Upgrade Program	Project documentation for several projects did not include sufficient information for evaluators to determine how project savings were calculated.	Project documentation should include not only a spreadsheet-based savings analysis but a clear and logical explanation for how the ex-ante savings were calculated and rationale for any assumptions involved.	High	The IESO will work with its Technical Reviewer to ensure that the project documentation provided to the evaluator will be sufficient to verify savings in the next evaluation cycle.
10.	Process and Systems Upgrade Program	Nearly half of the surveyed participants indicated that in order to apply to future programs, their organization needed moderate or high certainty that the project would be accepted to the program. Additionally, most participants indicated that their organizations do not have a set threshold for fast-tracked project approval.	Provide current PSUP participants and interested parties with case studies and examples of projects that can be accepted by the current 2021-2024 Conservation and Demand Management Framework programs.  Continue to gather feedback from current and former participants on what types of program offerings and projects they would be most successful in.	High	The IESO appreciates these insights and will endeavour to design future industrial programs with them in mind.
11.	Process and Systems Upgrade Program	Participants are most interested in a pay-for-performance program structure where the organization receives a set dollar amount per kWh or kW of savings. Other program structures like strategic energy management were less popular.	Highlight the benefits of the Energy Performance Program for current PSUP participants. Provide training and technical support to industrial customers to pass EPP baseline modeling requirements.  If the IESO offers new programs for industrial customers that follow PSUP, program planners should consider a pay-for-performance program that incentivizes kWh savings and includes kW and GHG reductions. Ensuring that industrial customers can pursue a variety of measures will appeal to that customer segment. Additionally, strategies learned from the transition to the interim framework to streamline application processes, and Measurement and Verification (M&V) requirements can be repurposed for any new program rollouts.	High	The IESO will investigate the potential to providing additional support to industrial customers interested in participating in the Energy Performance Program.  The IESO will also take into consideration the recommendations to design future programs with a wide variety of eligible measures and with strategies to mitigate pain points identified in the Interim Framework.

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12.	Process and Systems Upgrade Program	Technically reviewed summer peak demand savings for a few projects were either not calculated or calculated incorrectly. For example, one project used the average demand savings as the reported summer peak demand savings.	The technical reviewer should always strive to calculate demand savings for the summer peak period defined by the IESO, regardless of the time of year that the performance data comes from. If there is no data from the peak summer period, various methods could be employed to estimate peak summer demand savings, including: <ul style="list-style-type: none"> <li>- Weather variable-based (i.e., outside air temperature) regression</li> <li>- If the measure is not weather-dependent, assume the peak summer demand savings is the same as the peak demand savings from the period that the performance data comes from.</li> </ul>	Low	The IF PSU program was designed to mainly focus on energy savings as was the priority at the time. Nonetheless, the IESO will strive to ensure project documentation is complete and sufficient to verify savings with a particular focus on summer peak demand savings. This is especially important as their importance grows as seen in the 2021-2024 CDM Framework.
13.	Process and Systems Upgrade Program	The Energy Manager Program was successful at bringing projects into PSUP.	Consider leveraging energy managers to drive participation from industrial sector participants as they adjust to the new 2021-2024 Conservation and Demand Management Framework. Energy managers are a critical conduit between the participant organization and program delivery staff and know how program offering changes will affect their organization specifically. Strategies include developing webinars on program updates and processes, case studies on successful projects, and training focused on getting buy-in from decision-makers.	Low	The IESO will continue to look for opportunities to highlight successes through case studies to help remove barriers to participation.  The IESO will also leverage learnings from past successes such as energy manager support services and energy manager awards in encouraging deeper energy savings and participation across Save on Energy programs.
14.	Process and Systems Upgrade Program	Participants expressed moderate to high satisfaction with PSUP; however, they were least satisfied with the domain knowledge of technical reviewers and the M&V requirements, indicating that establishing baselines was difficult and that the M&V process was often burdensome in the amount of data required. Participants also indicated that although there were application changes that helped reduce timelines, and at times, the application process was overly complicated.	Communicate the program requirements and changes at each critical stage more clearly: the engineering study, application, and the M&V plan. Establishing clear communication patterns can help streamline project requirements and be vital when new programs are rolled out.	Low	The IESO regularly communicates with participants to ensure a smooth experience in participating in PSUP and all Save on Energy programs. The IESO will endeavour to streamline communication of program changes and along each critical step of the remainder of the current program and in future programs.