

# PY2020 Interim Framework (IF) Home Assistance Program (HAP) Program EM&V Key Findings and Recommendations

No.	PROGRAM	KEY FINDINGS	2020 EM&V RECOMMENDATIONS	IMPACTS	IESO RESPONSES
1.	Home Assistance Program	<p>The HAP program saw the largest amount of participation and the largest amount of net verified savings in PY2020 since before 2016. In 2020, the HAP program completed upgrades in 11,402 homes. The increase in participation highlights the efforts and success of the program in maintaining its offerings to eligible participants despite the COVID-19 global pandemic. The program achieved first year net verified energy savings of 11,765 (MWh) and 1.16 MW of first year net verified demand savings. Verified savings on a per-project basis increased in PY2020 by 19% from PY2019 (from 866 kWh to 1,028 kWh per project) despite shrinking baselines, such as those associated with lighting end-uses which contribute to the majority of HAP savings.</p>	<p>Continue to promote and deliver deeper savings measures to HAP participants like weatherization, appliances, and smart power bars. There may be an opportunity for the HAP program to conduct a postal code analysis to determine if the HAP program is effectively serving communities that are historically underserved, and in homes that may provide greater opportunities for savings on a per-project basis. This analysis may help inform targeted efforts by HAP to deliver energy-efficiency products and improvements to participant homes while maximizing savings on a per-project basis.</p>	High	<p>The IESO is currently undertaking an outreach and marketing campaign to target customers in regions which have historically seen a lower rate of uptake than would be expected based on the region's demographics. The results of this campaign will help inform future outreach and marketing activities as well as support a better understand of the program barriers to participation.</p>

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2.	Home Assistance Program	<p><b>PY2020 weatherization projects increased in quantity and deepened in savings compared to PY2019.</b> Gross verified savings for weatherization measures were higher on a per-unit basis in PY2020 compared to PY2019 (2,400 kWh in PY2020 vs. 1,939 kWh in PY2019). This is in part due to increased savings associated with weatherization measures on a per-project basis (3,669 kWh in PY2020 vs. 3,240 kWh in PY2019). The savings from weatherization measures increased by nearly 800,000 kWh from PY2019.</p>	<p>Weatherization upgrades can provide important savings opportunities and health upgrades for participants. It will be important for the program to emphasize and implement weatherization upgrades to participants as savings from lighting measures continue to diminish over time. The program may consider pushing shell insulation, especially attic insulation, to increased levels of efficiency to further deepen savings and increase occupant comfort.</p>	High	<p>Identifying viable weatherization projects continues to be a priority for the IESO. The IESO will continue to work with the vendor to reach eligible electrically-heated customers who could benefit from the program.</p>
3.	Home Assistance Program	<p><b>Clearly communicating measure eligibility is critical.</b> Of the 6% of surveyed participants who offered recommendations for improving the program, the most common recommendations were to ensure customers receive all measures they are told they will receive (24%) and to relax the eligibility requirements for specific upgrades (22%). Depending on their heating fuel type, some customers may not have been eligible to receive certain heating-related upgrades. Additionally, program delivery vendor staff noted that multiple similar programs exist in the market (e.g., there are separate CDM programs for natural gas and electricity). These two issues are likely to lead to customer confusion about measure eligibility in some instances.</p>	<p>Accurately set participants' expectations regarding upgrades. Clearly communicate with the customer about eligibility requirements for upgrades prior to the audit and ensure that auditors are trained to clearly communicate eligibility requirements as well. Help customers to understand why they may not be eligible for certain measures depending on their fuel type. Train auditors to not overpromise on measures for which customers may not be eligible. Help customers understand the differences between HAP and other programs offered in the market.</p>	High	<p>Similar to PY2019, the IESO understands that expectation-setting with HAP participants is important and will continue to work with its Service Providers to ensure participant expectations are being managed appropriately while also communicating the benefits of participating in the program.</p>

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4.	Home Assistance Program	<p><b>Additional program promotion opportunities exist.</b> Common program barriers identified by IESO program staff, program delivery vendor staff, and auditors and contractors were the relatively minimal marketing and a reported lack of program awareness for HAP. Auditors and contractors reported that the greatest barriers to program participation were lack of awareness that the program exists and skepticism that the program is indeed free. Some auditors and contractors offered specific marketing suggestions, such as advertising the program in hydro bills, mail, radio, and social media. Program improvement suggestions mentioned by IESO and program delivery vendor staff included finding meaningful ways to collaborate with gas utilities and addressing gaps in marketing resources and program awareness.</p>	<p>Consider additional ways to market and promote the program, such as through potential collaborations with gas utilities or increased province-wide marketing (such as through social media campaigns, targeted advertisements).</p> <p>Include a variety of customer testimonials in marketing materials, offering materials in multiple languages, and collaborating with local community-based organizations to help address concerns about the program's legitimacy.</p>	High	<p>Program awareness-building and marketing campaigns are currently underway in the new framework. These campaigns are testing effective ways of reaching prospective participants in a targeted and cost-efficient manner. The outcomes of these activities will inform future outreach and marketing activities.</p> <p>The IESO will also continue to engage local agencies and community organizations directly. The IESO established the Energy Affordability Roundtable to help build credibility and drive participation in the new program and build relationships within the sector. The IESO also intends to collaborate with Enbridge Gas to more effectively reach shared customers.</p>
5.	Home Assistance Program	<p><b>Savings attributed to lighting measures are decaying over time.</b> Gross verified savings for lighting measures were lower on a per-unit basis in PY2019 and PY2020 due to deemed savings values (also referred to as substantiation sheet adjustments throughout the report). These adjustments included lowered baseline wattage values, lowered hours of use (HOU), and the application of in-service rate (ISR) results from participant surveys. The proportion of HAP program savings attributed to lighting end-uses decreased from 67% to 54% of total program savings in PY2020.</p>	<p>As savings from lighting measures continue to decay over time, the program will need to reallocate resources to push alternative cost-efficient measures and focus on deep-energy savings. These may include weatherization measures (as noted in Recommendation 2), smart power bars, smart thermostats, and clothes drying racks.</p>	Medium	<p>Identifying viable weatherization projects continues to be a priority for the IESO. The IESO will continue to work to reach eligible electrically-heated customers whom could benefit from the program.</p> <p>The IESO will consider opportunities to add non-lighting measures to the program over time.</p>

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6.	Home Assistance Program	<p><b>Project costs remained generally well below the program cap.</b> Sixty-six percent of the projects in PY2020 had an incentive less than \$1,000 and 89% of the projects had an incentive less than \$2,000, while the program's total measure cost cap per home was \$13,000. This observation mirrors what was found for PY2019 projects (including PY2019 true ups). Sixty-seven percent of PY2019 projects had an incentive less than \$1,000 and 90% had an incentive less than \$2,000. Since the program provides all eligible measures that each participant can receive, this finding suggests that there may be additional savings opportunities for measures not currently offered by the program.</p>	<p>Consider expanding the measures offered by the program, as this may provide deeper savings per home. Findings 2, 5 and 9 provide insight on new measures or services to consider adding to the program.</p>	Medium	<p>Measures are provided through HAP based on the technical conditions of the home (e.g. efficiency of existing equipment) and participant-willingness to accept eligible measures – that is, all eligible and accepted measures are provided to participants.</p> <p>Following a program-review in late 2020, the IESO determined that the HAP measure composition is appropriately balanced in providing participants with attractive measures and impactful energy savings while meeting program and policy objectives and managing costs.</p> <p>As measure opportunities and customer-needs evolve, the IESO will continue to review opportunities to add new measures to ensure that the program offer is optimized to deliver participant-benefit and meet program and policy objectives.</p>
7.	Home Assistance Program	<p><b>Energy-efficiency education activities are likely resulting in savings.</b> Just under two-thirds (65%) of all responding participants said their auditor discussed additional ways to save energy at the time of the audit or left educational materials behind (66% and 57%, respectively), and of these participants, two-thirds (69%) said they had tried at least one of the additional ways to save energy since having the audit performed.</p>	<p>Consider ways to analyze and quantify the energy savings resulting from the program's energy education activities.</p>	Medium	<p>The IESO will work with evaluators to identify ways to capture additional savings from the program's education activities.</p> <p>IESO's ongoing non-energy benefit study may also offer opportunities to capture benefits from these activities where savings are difficult to quantify.</p>

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8.	Home Assistance Program	<b>Participants, auditors, and contractors recommended offering additional equipment through the program.</b> Nearly one-half (45%) of surveyed participants provided a total of 415 recommendations for additional energy-efficiency equipment or services for inclusion in HAP. Participants most often recommended various appliances (35% of recommendations), such as clothes washers/dryers, refrigerators, and freezers; windows (12%); heating equipment (12%); doors (3%); and water heaters (3%). Over one-half (57%) of auditors and contractors recommended additional equipment or services, including clothes washers/dryers, stoves, and air source heat pumps.	Consider offering additional types of equipment, such as clothes washers and dryers, windows, doors, heating and cooling equipment (such as air source heat pumps), and water heating equipment. Refer to Recommendations 2, 5 and 6 for additional insight on equipment considerations.	Medium	The IESO has reviewed opportunities to expand the HAP measure composition, and has considered the inclusion of the equipment listed in this finding.  Following this review, the IESO determined that the HAP measure composition is appropriately balanced in providing participants with attractive measures and impactful energy savings while meeting program and policy objectives and managing costs.
9.	Home Assistance Program	<b>Participants recommend offering higher-quality products and offering replacements when issues arise.</b> Offering higher quality products was mentioned by one-fifth (17%) of participants with improvement recommendations. Several participants who received refrigerators, freezers, and power bars commented that they were not satisfied with the measures they received, with one participant noting that their request for a replacement or repair of their program-installed refrigerator was denied.	Provide higher-quality products through the program where feasible and replace products when issues arise. Ensure customers are well-trained on proper use of equipment received through the program and that they are aware of the process for requesting replacements of faulty measures. Doing so will help address customer experience issues and will help ensure that persistence of program savings is achieved over time.	Medium	Refrigerators, freezers, and power bars provided through the program are high quality and are warranted.  Through the IESO's Customer Satisfaction surveys, 'quality' of appliance measures are often noted as an opportunity for improvement by participants; however, most of these comments reflect the fact that the IESO provides basic appliance replacement (e.g. basic white fridge with no ice maker), which Participants may take issue with if they currently use a deluxe appliance model. Participants are always provided with the opportunity to refuse replacement of any measure, including appliances.
10.	Home Assistance Program	<b>Power bar measures had extremely high RRs.</b> The NMR team found discrepancies with smart power bar savings values. The reported energy savings for smart power bars applied a savings value associated with the power bar with timer measure, which is no longer delivered by the HAP program. In addition, there were no demand savings reported for smart power bars, which prevented a demand RR from being calculated for smart power bars. These discrepancies were also observed in PY2019.	Ensure that auditors are installing the tier-2 smart power bars with audiovisual (AV) equipment (or include installation location in the data collection form). Verify that the correct energy savings values are applied to the correct measure.	Low	The IESO will continue to work with the Service Provider to ensure that power bars are installed with AV equipment and correct savings are being applied to measures.

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11.	Home Assistance Program	<p><b>HAP had direct, positive impacts to employment in Ontario from PY2020 activities.</b> These impacts would propagate to other provinces and across a broader set of industries in a normal economy. The analysis estimated that HAP will create 212 total jobs in Canada, of which 194 will be in Ontario. Of the 212 estimated total jobs, 104 were direct, 65 were indirect, and 43 were induced. All of the 104 direct jobs were in Ontario. A slightly smaller share of the indirect and induced jobs was in Ontario, with 53 out of 65 indirect and 37 out of 43 induced total jobs within the province. This indicates that under normal economic conditions (i.e., without the disruptions from COVID-19), one would expect the impacts from the program to propagate through the economy via indirect and induced effects—and have positive job impacts outside of Ontario.</p>	<p>Continue using the Statistics Canada (StatCan) Input-Output (IO) in concert with in-depth surveying to understand the impacts on job creation and compare from year to year. The benefits of using macroeconomic models often lie in the users' ability to compare across different time periods or different shocks—and not simply in the one-time point estimate of impacts. Using the recommended approach would allow a continued comparison across program years.</p>	Low	<p>The IESO will work with the evaluator to continue using StatCan input-output (IO) model and explore methods such as in-depth surveying to understand the job impacts of the program.</p>
12.	Home Assistance Program	<p><b>The overall program RR for energy savings was driven by lighting measures.</b> Lighting savings accounted for over one-half (54%) of the overall program gross energy savings. Given the volume of energy savings attributed to lighting, the lower RR for lighting measures (76%) lowered the RR of the program. Other measures, such hot water pipe insulation, indoor clothes drying racks, aerators, and showerheads, also contributed to the lower RR. High RRs for weatherization measures, appliances, and smart power bar end-uses alleviated some of the impacts on program savings.</p>	N/A*	N/A*	N/A*

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13.	Home Assistance Program	<p><b>Discrepancies in reported demand savings that were observed in PY2019 were largely corrected in PY2020.</b> The primary driver for the low demand savings RR in PY2019 was the use of connected demand savings values instead of the evaluation measurement and verification (EM&amp;V) peak demand savings values for reported demand savings for some measures. In PY2020, these discrepancies have largely been corrected in the reported savings, with the exception of certain measures, such as weatherization and smart power bars.</p>	N/A*	N/A*	N/A*
14.	Home Assistance Program	<p><b>Participant were largely satisfied with the program and its elements.</b> Participants reported high satisfaction with the program overall (average rating of 4.4 on a scale from 1 to 5, where 1 meant "not at all satisfied" and 5 meant "completely satisfied") as well as with the professionalism of their auditor (average rating of 4.7). While energy savings from the upgrades had the lowest average satisfaction rating, this aspect of the program still had a relatively high rating, at 4.2.</p>	N/A*	N/A*	N/A*

\*Key Findings 12 through 14 are impact and process evaluations key findings that do not need recommendations.