

PY2021 EM&V Key Findings and Recommendations IF First Nations Conservation Program (FNCP)

No.	KEY FINDINGS	2021 EM&V RECOMMENDATIONS	IMPACT	IESO RESPONSE
1.	<p>The number of projects completed under FNCP during the Interim Framework (2019-2021) was 784. The size of the FNCP program population suggests that this is a relatively small program and participants are likely hard-to-reach.</p>	<p>Conduct an analysis to understand the remaining potential size of the First Nations population that could be supported by program activities. This could include a postal code analysis based on income levels and estimated housing counts to understand both the potential for the program and whether any of the First Nation communities remain underserved by IESO programming.</p>	High	<p>The IESO can do outreach in the areas with the help of the Indigenous Relations group to understand the size and needs to better serve the community.</p>

2. **The FNCP measure offerings are limited compared to other income eligible direct-install programs in IESO territory.** There were no weatherization projects completed in FNCP participant homes during the Interim Framework. The FNCP program still distributes power bars with timers rather than smart power bars to participants. In addition, measures such as indoor clothes drying racks, programmable thermostats, and smart thermostats were not provided to participants. While some measures may not be appropriate for all homes, these measures can help reduce the energy burden of FNCP participants and provide additional savings opportunities for FNCP. These measures are represented in the Measures and Assumptions List (MAL) already and are actively distributed to participants in similar income-eligible direct install programs.

The following are recommended:

High

The recommendations are accepted and the proposed measures have been adopted in the Energy Affordability Program (EAP), First Nations Community Building Retrofit Program (FNCBRP) and Remote First Nations Program (RFNP).

- Weatherization upgrades can provide important savings opportunities and health upgrades for participants. Including weatherization upgrades as an offer for participants may be an important measure to help deepen energy savings on a per-unit basis. The FNCP could emphasize and implement weatherization upgrades to both auditors and participants if the program is made available in the future.
- Consider offering smart power bar products to eligible FNCP participants in the future. These are typically the tier-2 smart power bars and are installed with audiovisual (AV) equipment. These measures may provide greater savings to FNCP participants. If included in the FNCP offering, ensure that the location of these power bars is documented if not installed with AV equipment.
- Consider offering eligible participants indoor clothes drying racks. These products provide the participants with dryers an opportunity to reduce energy through passive means.
- Consider offering either programmable or smart thermostats for eligible participants. Removing old, manual thermostats with smart or programmable thermostats offer both energy savings and increased thermal controls for FNCP participants.
- Further consider the relative cost effectiveness (CE) of these potential new measures. Referencing the PY2021 HAP evaluation, the above recommended measures typically were near to or above the median measure-level TRC ratio of 0.81 in the HAP. Specifically, the measure-level TRC ratios from

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		<p>HAP were: weatherization (0.83-0.98), smart power bar (0.72), indoor drying rack (2.02), and programmable thermostats – low voltage (1.66-2.11). The exception to the high measure-level CE performance were line voltage thermostats, having a TRC ratio range of 0.26 to 0.28.</p>		
3.	<p>FNCP program tracking data includes completed projects and installed measures along with unique identifiers for each. However, the tracking data does not typically include key characteristics that are collected during audits such as building or equipment type. This information can be used to better estimate savings impacts and to provide insights for future program offerings. These data points are often collected and included in the data collection forms that are used during in-home audits. However, only in some cases is this information captured in the program tracking data. For example, 94% of FNCP participant records were missing building type information and no mechanical equipment details are included in the data. If additional programming for First Nations Communities is offered in the future, additional measures such as cold-climate heat pumps or heat pump water heaters may be offered through the program. Having these additional data points will be valuable for program staff, vendors, and the evaluation team to assess the impacts of any new measures. The program tracking data did include completed projects and installed measures, including variables to identify unique projects and measures. These unique identifying variables are critical for impact accounting over multiple years in a framework.</p>	<p>The following are recommended:</p> <ul style="list-style-type: none"> • Continue to include variables that can be used to identify unique projects and measures within the tracking data. If possible, limit the annual program tracking data to projects that are fully completed. • Work with program staff and implementation contractors to incorporate additional details into the tracking data such as building type and mechanical equipment (e.g., type and fuel) and any additional data that are collected on-site (e.g., efficiency, capacity). This could include revising the IESO's Field Audit Support (Fast) Tool program or supporting the development of a new uniform electronic data collection form for auditors to fill out on-site which can then be uploaded directly into the tracking data. 	High	<p>The IESO can explore reporting changes to only include completed projects. Building types and mechanical equipment (e.g. type and fuel) and any additional on-site data (e.g. efficiency and capacity) can be collected by the delivery vendor and included into the reporting going forward for the new programs.</p>

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4.	<p>Participants, contractors, IESO staff, and delivery vendor staff recommended offering additional equipment if the program is offered in the future. Nearly two-thirds (62%) of surveyed participants provided recommendations for additional energy-efficiency equipment or services for inclusion. These participants most often recommended windows and door (21%), stoves (20%), and water heating (15%). The surveyed contractor was least satisfied with the number and types of equipment incentivized through the program, and recommended several new measures for inclusion, including clothes washers and dryers, and dishwashers. IESO staff and delivery vendor staff noted the importance of properly ventilated homes, with staff suggesting that ventilation improvement support be considered. Staff also recommended identifying potential ways to offer heat pumps to customers in the future, potentially in partnership with other programs or funding streams.</p>	<p>The following are recommended:</p> <ul style="list-style-type: none"> • Consider offering additional types of equipment, such as windows and door, water heating, clothes washers and dryers, dishwashers, and heat pumps. Refer to Recommendation 2 for additional measure recommendations. • Consider the feasibility of offering ventilation improvement support in the future, especially for homes receiving weatherization or heating upgrades. • Look for opportunities to offer heat pumps to customers, potentially in partnership with other programs or funding streams. • Further consider the relative cost effectiveness (CE) of these potential new measures. Household appliances have yielded the lowest measure-level TRC ratios (0.02 to 0.20). Space heating and cooling measure-level TRC ratios fared better (TRC ratios 0.14 to 0.43) but are still well below 1.0. Conversely, as stated in Key Finding #2 above, using the HAP as a reference, weatherization measures tended to pull up program-level CE, having measure-level TRC ratios above the program’s median measure-level TRC ratio. 	High	<p>Completed the review of appliances (fridges & freezers) size categories and bridged the gap to meet the market needs. The IESO is currently reviewing the appliance replacement criteria.</p>

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5.	<p>Directly engaging with community members is critical to the success of the program.</p> <p>Distrust of government agencies and outside organizations or individuals was a barrier to participation mentioned by both IESO staff and delivery vendor staff. To help address this, the program hired and trained local community members and a First Nations-affiliated delivery vendor. The surveyed program contractor stressed the importance of having First Nation community members involved in participant recruitment, noting that it is critical to generating leads and alleviating skepticism about the program. IESO staff and delivery vendor staff stressed this as well, and indicated that the community-based enrollment events the vendor held prior to the pandemic were well-received by community members and helped to build relationships and trust.</p>	<p>If the program is offered in the future, continue to hire and train local community members as canvassers, auditors, and contractors and continue to engage with the community through in-person enrollment events.</p>	High	<p>The First Nations Community Building Retrofit Program (FNCBRP) relies on First Nations led organizations to carry out outreach and engagement efforts and compiling of benchmarking reports. In-person enrollment events are encouraged but pose to be a challenge since many communities still have Covid restrictions in place.</p> <p>The IESO engages Community Energy Champions (CECs) to support First Nations communities. The IESO is looking to hire designated CECs within FN communities to help plan, implement and evaluate energy-related priorities.</p>
6.	<p>Appliances and weatherization were impacted by supply chain disruptions and rising costs. As a result of COVID-19 and other economic conditions, supply chain disruptions and rising costs have had major impacts on program measure costs in recent years. IESO staff reported that these cost increases and supply chain issues have meant that the weatherization cost caps often did not cover the cost of the installations. The delivery vendor staff indicated that they were locked into pre-pandemic supply cost agreements which were difficult for suppliers to meet given increasing costs and availability constraints. The interviewed contractor cited rising measure costs and increasing operating costs as having impacts on their bottom line.</p>	<p>If the program is made available in the future, perform measure-related cost caps reviews, including additional market research and cost evaluations of relevant program measures (e.g., appliances, weatherization).</p>	Medium	<p>The IESO is considering a regular measure cost cap review under the new Energy Affordability Program (EAP). The measures under EAP are aligned with FNCP.</p>

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7.	<p>Energy-efficiency education activities are likely resulting in savings. Just over one-half (56%) of participants said the auditor discussed additional ways to save energy in the home, and of these participants, nearly three-fourths (74%) said they had tried at least one of the additional ways to save energy since having the audit performed.</p>	<p>Encourage more auditors to discuss additional ways to save energy with participants.</p>	<p>Medium</p>	<p>Capability building is a foundational principle for FNCBRP. Delivery vendors will be asked to present audit findings in-person where possible to educate community members on energy efficiency. This can include job shadowing during the installation process.</p>