First Nation Community Buildings Retrofit Program

Simon Geraghty  
Sr. Analyst, Energy Efficiency

Sura Adbul-Razzak  
Supervisor, Program Design and Innovation, Energy Efficiency
Webinar Participation (including audio)

• To interact, click the “Show Conversation” icon (message bubble symbol) to submit a written question or click on the “Raise hand” icon (hand symbol) at the top of the application window to indicate to the host you would like to speak.

• Audio should be muted at all times. To unmute audio, click on the microphone icon at the top of the application window.

• This webinar is conducted according to the IESO Engagement Principles.
Agenda

• Engagement and Design Process
• Key Engagement Takeaways
• Program Overview
• Program Participation Process
• Next Steps
Engagement and Design Process
Engagement and Design Process

- Oct. 22, 2020: Background, objective, and feedback
- Oct. 30, 2020: Survey Closed
- Nov. 20, 2020: Draft Program Design and feedback
- Jul. 20, 2021: Final Program Design
- Fall 2021: Program Launch
Key Engagement Takeaways
(From Oct-Dec 2020 engagement feedback)
Key Engagement Takeaways

• Generally, communities are aware of energy efficiency and available programs, however, communities have different needs, opportunities, and priorities when it comes to energy efficiency.

• Most commercial and institutional buildings are owned and operated by the band council.

• Communities are interested in energy efficiency and bill savings across a variety of building types.
Key Engagement Takeaways (cont’d)

• Community challenges that should be addressed in the program include:
  • Difficulty accessing sufficient funds for implementation of energy efficiency projects
  • Demonstrating the long-term financial and community benefits of energy efficiency upgrades (the “business case”)
  • Identifying specific retrofit opportunities in buildings
  • Identifying and securing contractors to purchase materials and/or install retrofit projects
  • Managing the installation process
First Nation Community Buildings Retrofit Program Overview
Program Overview

• Building on the feedback, the IESO will be launching a new program targeted at energy efficiency upgrades in band-owned buildings on reserve, the “First Nation Community Buildings Retrofit Program”

• A “Virtual Energy Manager” will provide technical assessment and project support, at no cost to communities

• Each participating community will receive up to $100,000 investment in energy efficiency projects
Program Overview (cont’d 2)

• “Virtual Energy Manager” Technical Support includes:
  • Energy Benchmarking – all band-owned buildings, based on energy data provided by community
  • Energy Assessments – in-person audits of up to four buildings
  • List of eligible project opportunities (with estimated energy savings, costs, and timing requirements) to help inform project selection by band council
  • Oversight of installation process and post project reporting
Program Overview (cont’d 3)

- IESO will provide up to $100,000 in funding for eligible projects identified in the Energy Assessment and selected by the band council that include:
  - Energy saving equipment that is offered through a Direct Install Track and/or Community Install Track, depending on the type of project.
  - Detailed Engineering Study by a third party to scope more complex projects in the Community Install Track (up to $10,000 out of the $100,000)
# Direct Install Track vs. Community Install Track

<table>
<thead>
<tr>
<th>Direct Install Track</th>
<th>Community Install Track</th>
</tr>
</thead>
<tbody>
<tr>
<td>IESO oversees the installation including procurement of equipment</td>
<td>Community does the installation (community can contract with a third party)</td>
</tr>
<tr>
<td>Standard direct-install efficiency measures (lighting, controls, thermostats, window</td>
<td>Customized measures (e.g. variable frequency drive, arena cooling)</td>
</tr>
<tr>
<td>air conditioners, fan motors, power strips)</td>
<td></td>
</tr>
<tr>
<td>Projects identified in the Energy Assessment</td>
<td>Projects identified in the Energy Assessment</td>
</tr>
<tr>
<td>Does not require a Detailed Engineering Study</td>
<td>May require a Detailed Engineering Study (up to $10,000 funded from the per community budget)</td>
</tr>
<tr>
<td>Projects funded from $100,000 per community budget</td>
<td>Projects funded from $100,000 per community budget</td>
</tr>
<tr>
<td>Benefit: standardized measures, streamlined approach, faster project implementation</td>
<td>Benefit: specialized projects requiring more detailed technical expertise</td>
</tr>
</tbody>
</table>

IESO: Independent Electricity Systems Operator
Program Participation Process
Program Participation Process

- **Program Application**
- **Benchmark**
  - All buildings
- **Energy Assessment**
  - Up to four buildings
- **List of Project Opportunities**
  - Choose your projects
- **Project Plan**
- **Project Installs**
  - Up to $100,000
Program Application

Eligibility
• All grid-connected First Nation Communities in Ontario
• Upgrades for band-owned buildings

Application Requirements
• Identify Community Coordinator
• Band Council Resolution (BCR)
• Provide building energy data for benchmark analysis

Community Coordinator Responsibilities
• Community member identified by the band council to act as liaison with the IESO
• Support the IESO’s Service Provider (e.g. provide building energy data, provide contractor access to buildings)
Benchmark all Band-Owned Buildings

Purpose
• Identifies which buildings use the most energy relative to other similar buildings and have the most opportunity for the greatest savings
• Use benchmark information to select buildings for the in-person Energy Assessment

Benchmark Metrics
• Electricity use per floor space (kWh/m²)
• Energy for heating per floor space ([heat fuel]/m²)
• Energy Costs per floor space (Cost/m²)

Data Requirements
• 12 consecutive months of electricity, heating fuel, and bills
Benchmark – Example that identifies big energy users

<table>
<thead>
<tr>
<th></th>
<th>kBtu/ft²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Band Office</td>
<td></td>
</tr>
<tr>
<td>Community</td>
<td></td>
</tr>
<tr>
<td>National Average</td>
<td></td>
</tr>
<tr>
<td>Band Office</td>
<td></td>
</tr>
<tr>
<td>School</td>
<td></td>
</tr>
<tr>
<td>Community</td>
<td></td>
</tr>
<tr>
<td>School</td>
<td></td>
</tr>
<tr>
<td>National Average</td>
<td></td>
</tr>
<tr>
<td>Waste-water Treatment</td>
<td></td>
</tr>
<tr>
<td>Community</td>
<td></td>
</tr>
<tr>
<td>National Average</td>
<td></td>
</tr>
</tbody>
</table>
# Energy Assessment (up to Four Buildings)

## Pre-Site Visit Interview
- Historical studies (e.g. energy plans), audits, or assessments
- Known energy efficiency opportunities
- Community building priorities
- Data availability (e.g. access to metered data vs. energy bills)
- Identify potential challenges to project implementation

## Site Visit (Facility Walk Through)
- **Purpose:** identify practical projects for implementation
- Observe and collect information and data on systems of interest
- Obtain input from facility staff as appropriate
- Identify additional low-cost/no-cost opportunities
- Supported by Project Coordinator
List of Project Opportunities

Direct Install Track

Community Install Track

Band council chooses which project opportunities to pursue, up to the $100,000 cap
List of Project Opportunities – Example (estimated from past projects, may not apply to your buildings)

<table>
<thead>
<tr>
<th>Project</th>
<th>Electricity Savings (kWh / year)</th>
<th>Bill Savings ($/year)</th>
<th>Project Cost ($)</th>
<th>Project Timing</th>
<th>Install</th>
</tr>
</thead>
<tbody>
<tr>
<td>Band Office Interior Lights</td>
<td>18,000 kWh/year</td>
<td>$2,750</td>
<td>$16,000</td>
<td>Spring 2023</td>
<td>Direct Install Track</td>
</tr>
<tr>
<td>School Interior Lights</td>
<td>22,000 kWh/year</td>
<td>$3,300</td>
<td>$26,000</td>
<td>Summer 2023</td>
<td>Direct Install Track</td>
</tr>
<tr>
<td>School Exterior Lights</td>
<td>11,000 kWh/year</td>
<td>$1,600</td>
<td>$12,750</td>
<td>Summer 2023</td>
<td>Direct Install Track</td>
</tr>
<tr>
<td>Waste Water Treatment VFD</td>
<td>50,000 kWh/year</td>
<td>$7,400</td>
<td>$47,000</td>
<td>Fall 2023</td>
<td>Community Install Track</td>
</tr>
</tbody>
</table>
Project Plan Details

Community Install Track
• May be informed by a Detailed Engineering Study (DES)
• Measures, shipping, storage, labour cost
• Detailed project schedule – shipping, storage, installs
• Milestone payments for project costs (outlined in the Participation Agreement)
• Plan details supported by the IESO

Direct Install Track
• Detailed project schedule
• Shipping/Storage/Logistics

Approval
• Approved by the band council and by the IESO (Project Plan applies to both Tracks)
Project Installation and Follow Up

• Post-project
  • IESO’s vendor will follow-up and provide support to ensure that measures have been installed and are being operated according to specifications
  • IESO’s vendor will recommend considerations for long-term operations and maintenance
Next Steps
Next Steps

Program Materials (Late Summer 2021)
• Prior to launch, IESO will publish all program documents and application materials

Program Launch (Fall 2021)
• IESO will be accepting program applications in the fall
Indigenous Energy Support Programs
Indigenous Energy Support Programs promote participation in the energy sector by supporting community capacity building.

In 2020, 61 Indigenous communities and organizations applied across the province – seven of which are taking part for the first time.

Continued collaboration and engagement with First Nation communities to understand and support future needs.
Indigenous Energy Support Programs

- Indigenous Community Energy Plan (ICEP)
- Education and Capacity Building Program (ECB)
- Indigenous Energy Projects Program (IEP)
- Community Energy Champion Program (CEC)

Application window is open until August 6, 2021 at 11:59 pm EDT.
Contact Us

Please visit our website for more information:  www.ieso.ca/funds

IESO Energy Support Programs Staff

ICEP@ieso.ca

ECB@ieso.ca

IEP@ieso.ca

CEC@ieso.ca

Telephone:  416-969-6317
Questions?