QUEST

Net-Zero Communities Accelerator Program

Results of the Net-Zero Communities Accelerator Pilot Program

June 2023

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QUEST

HISTORICAL CONTEXT

2019

A seed has been planted. How does QUEST Canada package together what it knows about energy, climate, and communities; as well as our tools and services, to build something to accelerate community action on the path to net-zero?

2020

Launch of the Smart Energy Communities Benchmark - a first of its kind tool that measures where communities are on their energy-smart journey based on the policies, processes, and programs they have in place; and provides practitioners with a tool to measure impact and organizational change

2021

QUEST Canada officially launches the Net-Zero Communities Accelerator Pilot Program (known as the 'Smart Energy Communities Accelerator' when initially launched)

2021

QUEST Canada approves its inaugural Theory of Change, integrating and formalizing net-zero and justice principles into our work; principles now incorporated into the tools and services of the Net-Zero Communities Accelerator Pilot Program

2023

The Net-Zero Communities Accelerator Pilot Program successfully completes its initial scope of work

2023-2024

The Net-Zero Communities Accelerator Pilot Program is extended by 1 year to integrate and update community energy and emissions plans after numerous amalgamations occur in New Brunswick

HISTORICAL CONTEXT

Over 15 years ago, QUEST Canada started to build understanding across the nation of how important communities are to reducing energy use, determining what type of energy is used, and reducing emissions. Surpassing the initial goal of building awareness and facilitating collaborative action, QUEST Canada initiated a national movement, engaging a network of leaders across Canada interested in ensuring that as we transition our energy systems to address climate imperatives that energy in communities remains affordable, reliable, environmentally sound and sustainable.

In 2019 we began to research gaps that existed in the community energy and emissions support landscape and determined that there was a need for a program focused on energy (as the largest influencer of GHG emissions), worked with *all* stakeholders (beyond only local governments or businesses), and focused on the foundational supporting structures for lasting change while applying a systems approach to energy and emissions reductions. Shortly after, the Net-Zero Communities Accelerator Pilot Program was born.

As much QUEST Canada's work revolves around building capacity at the local level, we worked with a developmental evaluator, in addition to performing our own evaluations, to ensure that the program was going to result in individual and organizational changes that were durable and would continue beyond the 3 years we would be working with the participating communities. Using ongoing and various evaluation methodologies also enabled QUEST Canada to make adjustments to the Net-Zero Communities Accelerator Pilot Program in real time.

Though we are fortunate enough to extend the Net-Zero Communities Accelerator Pilot Program in New Brunswick by another year to integrate and update community energy and emissions plans post-amalgamation, this presentation contains results and findings from our initial 3-year scope of work.

The findings show that QUEST Canada is poised to be an instrumental accelerant and enabler of the local action required to achieve net-zero emissions across the Canadian economy.

EXECUTIVE SUMMARY

While there are many significant global challenges being faced by governments and communities around the world today, the need to address climate change has become a mainstay and continues to increase in importance. Domestically, Canada's motivation and actions to implement solutions to reduce emissions is not only seen as a climate objective, it is seen as an opportunity for social reform such as reconciliation, equity, diversity and inclusion, poverty reduction and economic growth as we emerge from the pandemic.

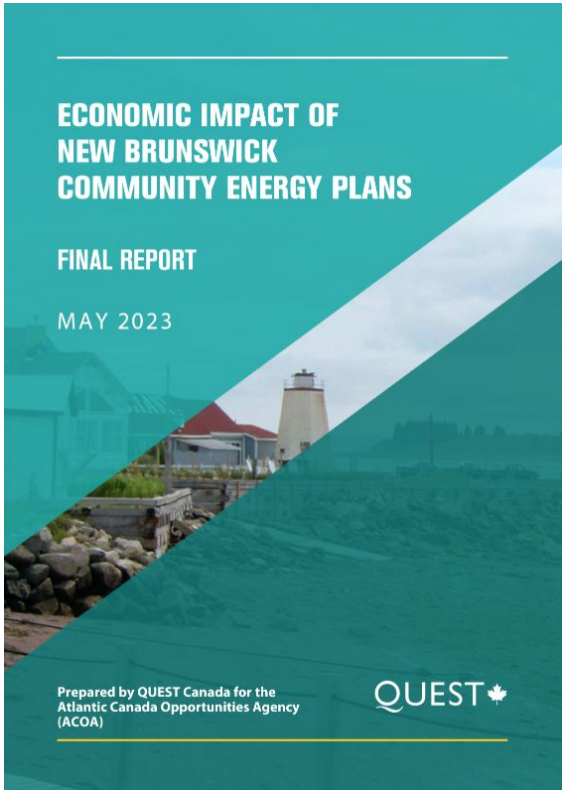
In Canada, energy use by the multiple sectors at work in communities, from housing to transportation to local industry, account for 60 percent of total energy consumption and half of Canada's emissions. As a result, the pathway to net-zero emissions in Canada is through the leadership of local governments as drivers of change. The challenge is that they don't have the capacity - knowledge, tools, resources and financing - to do their part. The Net-Zero Communities Accelerator Program addresses this challenge.

QUEST Canada aims to dramatically increase the number of communities that are prepared for and starting to thrive as a result of having built the capacity and ability to implement net-zero emissions strategies by enabling informed energy decision-making and successfully advocating for supportive energy policy structures.

The following provides information about the organizational capacity built, and actions taken as a result, that our pilot communities in New Brunswick accomplished as a result of participation in the Net-Zero Communities Accelerator Pilot Program. Also included is an analysis of the pilot program itself and QUEST Canada's use of the collective impact model to conduct this work. What you won't find in the results are GHG emissions reduction figures, as this was out of scope of the pilot program. Happy reading!

EXECUTIVE SUMMARY - KEY DELIVERABLES AND OUTCOMES

- 9 implementable Community Energy Plans (CEPs)
- 8 Community Case Studies assessing the economic impact of their CEPs
- An economic impact analysis of job creation for New Brunswick if *all* communities had *and* implemented community energy and emissions plans shows that could up to ~160,000 jobs direct, indirect, induced jobs could be created
- Federation of Canadian Municipalities Partner for Climate Protection Milestones 1-3 achieved by several communities
- Updating of all program tools, with reviews from subject matter experts, to apply the following lenses:
  - Climate resilience
  - Low-income energy consumers
  - Indigenous realities
  - Equity, diversity and inclusion



EXECUTIVE SUMMARY - KEY DELIVERABLES AND OUTCOMES

Below is a sampling of programs, projects or policies launched and/or implemented during course of Pilot Program.

- **Alignment** - Improved strategic alignment within electric utility (NB Power) due to their new Municipal Climate Action Support Strategy; Integration of CEPS into Master Plans and other strategic documents
- **Strategy** - All participants now have CEPs to guide their work into the future; Updates to Municipal Plans and Bylaws to enable smarter energy use; Succession planning at the electric utility, including for staff in municipal support roles.
- **Enhanced Human Resource Capacity** - Hiring of new staff to coordinate CEP implementation; Formation of Net-Zero Climate Change Action committee; Municipal Climate Change Support Program and dedicated staff at electrical utility.
- **Data** - Reports to Energy and Utilities Board annually using a standard template, showcasing consumption for each community they serve.

EXECUTIVE SUMMARY - KEY DELIVERABLES AND OUTCOMES

- **Increased Support** - Increased funding for the provincial low-income efficiency program; New incentives for fuel switching.
- **Built Environment** - Adopted energy efficiency performance standards for existing and/or new corporate buildings and for new developments; Feasibility analysis of Solar PV farm and funding identified; New pedestrian and cycling pathways to promote active transportation; Dense and high-efficiency multi-unit housing development; New plant-based sewer system (lower energy usage, no chemicals); Mixed use and denser zones created; E-charging network expanded; Stormwater infrastructure upgrades
- **Financials** - Green Procurement Strategies; Economic Impact Assessment completed for several communities; Increased local government investment in active transportation, electric vehicles, and fleet greening.
- **Awareness Raising** - Increased public education on climate change and energy nexus; Information in bill inserts; Multiple participants collaborating with utilities to share information about programs.

EXECUTIVE SUMMARY - COLLECTIVE IMPACT

- The Pilot Program's developmental evaluator found that:
  - 2 of the 3 preconditions for success under the collective impact model were in place prior to program launch.
  - 5 of the 5 conditions for supporting and sustaining actions were realized.
  - There was marked increase in collaboration and networking within and amongst institutions and organizations.
  - QUEST Canada took action on feedback from participants and the developmental evaluator and responded with additional tools and increased support throughout the pilot program.
  - The Pilot Program delivered high-quality services and created the knowledge, skills and expertise needed with participants to create and implement CEEPs.
  - The Net-Zero Communities Pilot Program provided high quality services to New Brunswick municipalities, giving participants the knowledge, skills and expertise they needed to create their own individual Community Energy Plans. **The Plans and the resulting integration into longer-term planning documents, policy development and built environment changes will sustain the shift into the future.**

EXECUTIVE SUMMARY - OVERALL SMART ENERGY COMMUNITIES BENCHMARK SCORES

Highest Score
Largest % Improvement
Lowest Score
Smallest % Improvement

Community	Perth-Andover	Woodstock	Florenceville	Quispamsis	Sussex	Saint Andrews	St. Stephen	Oromocto
Participant Type	Leader	Doer	Doer	Doer / Leader	Doer	Seeker	Seeker	Seeker
Initial Overall Score	55%	65%	68%	70%	57%	51%	45%	46%
Final Overall Score	71%	73%	79%	79%	72%	70%	60%	66%
Total Change	↑ 16%	↑ 8%	↑ 11%	↑ 9%	↑ 15%	↑ 19%	↑ 15%	↑ 20%

+ Average improvement of 14% (target was 10%)
+ Indicator showing the largest improvement - Strategy
+ Indicator showing the smallest improvement - Land Use

PILOT PROGRAM
OVERVIEW

PILOT PROGRAM OVERVIEW

- **Purpose**: to establish a community energy planning accelerator to assist 10 New Brunswick communities by equipping them with the tools and knowledge to develop and continuously implement community energy plans, and understand the net economic benefit they can provide.
- **Timeline**: October 2020 - March 2023
- **Funders**:

NEW BRUNSWICK
SMART ENERGY COMMUNITIES
ACCELERATOR PILOT PROGRAM

Note that the Pilot Program was called the 'Smart Energy Communities Accelerator'

Atlantic Canada Opportunities Agency | Agence de promotion économique du Canada atlantique
New Nouveau Brunswick CANADA
Énergie NB Power
Stantec
Liberty
SUNCOR | SUNCOR ENERGY FOUNDATION
McConnell

PARTICIPATING COMMUNITIES

Participants of 3-year Pilot Program

- Town of Florenceville-Bristol
- Town of Oromocto
- Village of Perth-Andover
- Town of Quispamsis
- Town of Saint Andrews
- Town of Woodstock
- St. Mary's First Nation
- Town of St. Stephen
- Town of Sussex

1 community was unable to participate for the entire length of the program therefore only 9 communities are displayed here, and included in the results.

Participants of 1-year Pilot Program

- Village de Ste-Marie-St-Raphaël
- Village de Saint-André
- Village de Cap-Pelé
- Village de Saint-Isidore
- Village of Nigadoo

A truncated version of the pilot program was offered in partnership with L'Association francophone des municipalités du Nouveau-Brunswick. These communities were not part of the evaluation.

SERVICES OFFERED TO PARTICIPANTS

Smart Energy Communities Benchmark Assessment (initial and final)	An assessment that evaluates how a community is progressing across 10 key Smart Energy Community indicators
Community Energy Mapping workshop	A multi-stakeholder exercise that identifies energy strengths and opportunities using an interactive map
CEP Development workshop	Provides an overview of the key considerations in developing a Community Energy Plan
Virtual CEP Course for Planning Professionals	A course that builds awareness and capacity for energy and climate planning among community planners
Land-based Renewable Energy Mapping Assessment	A technical analysis of renewable energy potential for utility or community scale applications and an analysis of the social acceptability of siting options for these installations (Example: Saint John)
CEP Implementation workshop	Helps communities establish a governance framework, communications strategy, key performance indicator framework, and strategies to implement their CEP
CEP Economic Impact Analysis	Assessment of the economic development and job creation potential of the community's Community Energy Plan
Navigation services and Personalised coaching	Ongoing community support services and resources
Powered by Communities	A platform to share success stories
Webinar Series	Throughout the pilot program 21 webinars were offered to foster knowledge-sharing and peer-to-peer networking

CEP = Community Energy Plan. An evolution from the pilot program has resulted in integration of more climate considerations and the new plan and process will now be referred to as 'Community Energy and Emissions Plan(ning) or CEEP.

PARTICIPANT TYPES

- **Seeker**
  - Curious about community energy planning but hasn't invested many resources into actioning it
  - May be a community champion interested getting started
  - Communities without a Community Energy & Emissions Plan (CEEP)
- **Doer**
  - Someone in the community has responsibility for CEEP development and some work has been done
  - May or may not be moving work forward in an uncoordinated, unsupported fashion
  - May or may not have a CEEP
  - May or may not have an implementation-ready initiative
- **Leader**
  - Well on their way to becoming a net-zero community
  - Dedicated resources and plan exists to action CEEP
  - Requires highly customized services
  - Likely has implementation-ready initiatives

DEVELOPMENTAL EVALUATION AND COLLECTIVE IMPACT

WHAT IS DEVELOPMENTAL EVALUATION?

- An evaluation methodology used in complex and/or emergent initiatives
- Monitors and supports systems change and social innovations where multiple partners work together to identify and action strategic learnings
- Combines rigour of evaluation with the flexibility and imagination required for development
- Occurs in real-time, is continuous, improvement made during operation

CREATING CHANGE

- The energy transition and climate change are complex social problems
- Solutions require
  - Working in a multi-sectoral fashion
  - Understanding systems
  - Understanding the conditions that impede or enable
- Shifting the conditions that hold the problems in place

COLLECTIVE IMPACT

- A framework to coordinate change efforts across multiple systems and levels
- Breaks down common community barriers and silos
- Newer methodology, but showing promise
- Large-scale social change comes from better cross-sector coordination than isolated intervention from individual organizations

COLLECTIVE IMPACT

3 Preconditions in place prior to launching a collective impact initiative

1. **Urgency for change** - a crisis created a breaking point to convince people that an entirely new approach is needed.[1]
2. **Adequate financial resources** - must be adequate financial resources to last for at least two to three years, generally in the form of at least one anchor funder.[2]
3. **Influential champions** - the most critical of the three pre-conditions is an influential champion (or a small group of champions) who command the respect necessary to bring cross-sector leaders together and keep their active engagement over time.[3]

[1] *Hanleybrown, F., Kania, J. & Kramer, M. (2012). Channeling Change: Making Collective Impact Work.*
[2] *Ibid.*
[3] *Ibid.*

COLLECTIVE IMPACT

5 Conditions for supporting and sustaining efforts

1. **Common agenda** - organizations deliberate together, and seek to understand one another's perspectives, interests, and constraints, [to] lay the foundation for negotiating agreement on goals for the systems change initiative.[1]
2. **Continuous communication** - consistent and frequent communication to develop trust.
3. **Shared measurement systems** - Collecting data and measuring results consistently on a short list of indicators at the community level and across all participating organizations not only ensures that all efforts remain aligned, but it also enables the participants to hold each other accountable and learn from each other's successes and failures.[2]
4. **Mutually reinforcing activities** - collective impact initiatives depend on a diverse group of stakeholders working together, not by requiring that all participants do the same thing, but by encouraging each participant to undertake the specific set of activities at which it excels in a way that supports and is coordinated with the actions of others.
5. **Backbone organization** - to coordinate and take responsibility for collective impact initiatives because often participating organizations do not have time to spare. A lack of this supporting infrastructure is one of the most frequent reasons for failure.[3]

[1] *Kania & Kramer (2011). Collective impact. Stanford Social Innovation Review.*
[2] *Ibid.*
[3] *Ibid.*

RESULTS:
KEY DELIVERABLES AND OUTCOMES

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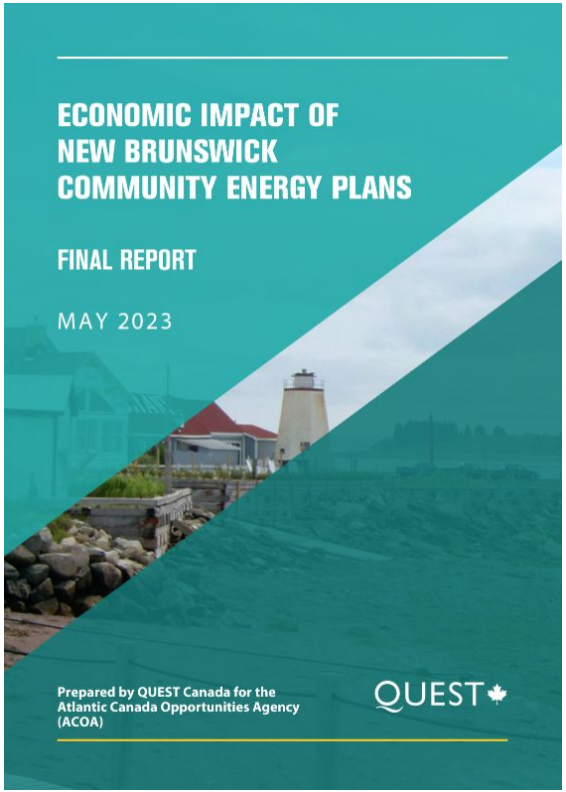

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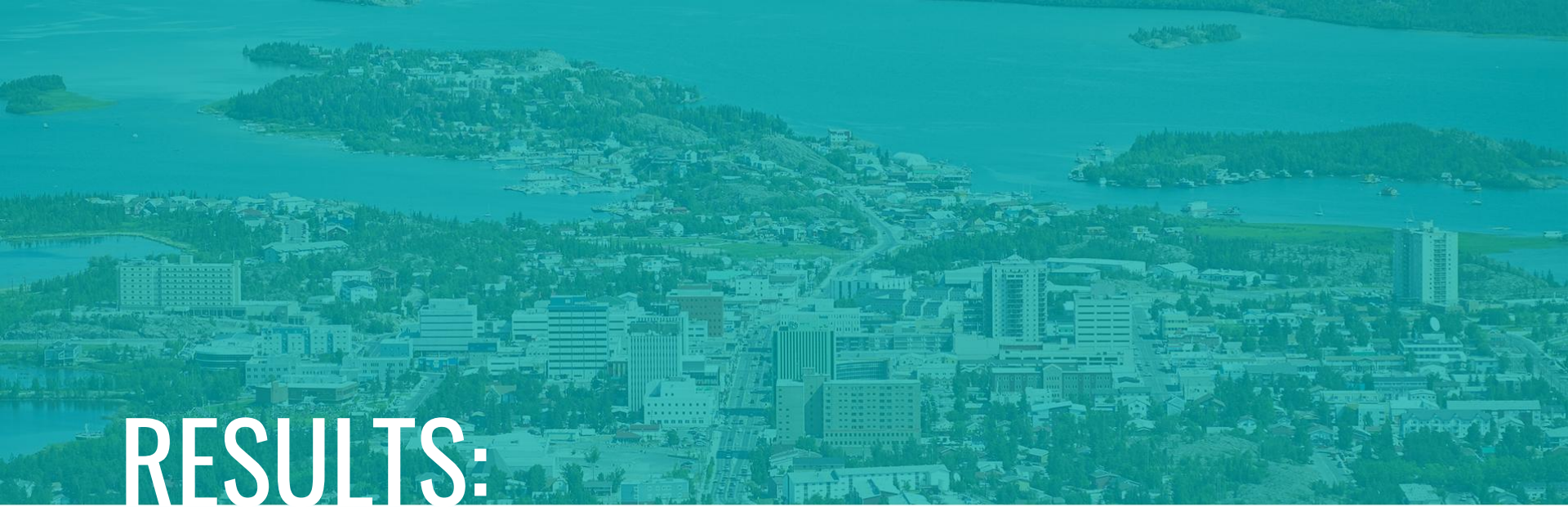


RESULTS:
LASTING CHANGE

LASTING CHANGE

There is no one silver bullet solution that will ‘fix’ complex and wicked problems like climate change.

Bringing all levels of governments, multiple cross sector organizations and stakeholders, and the public together is needed to “shift the conditions that are holding the problem in place”. Building capacity through knowledge, skills and expertise is needed to start the shift, but intentional long-term changes are required to sustain it. Coffman[1] and Latham[2] describe systems change as needing both a sufficient supply of quality programs and services (parts/pathways) and linkages, integration and cross system coordination (relationships/pathway connections) to affect change.

Our developmental evaluator found that the Net-Zero Communities Pilot Program provided high quality services to New Brunswick municipalities, giving participants the knowledge, skills and expertise they needed to create their own individual Community Energy Plans. The Plans and the resulting integration into longer-term planning documents, policy development and built environment changes will sustain the shift into the future.

[1] *Coffman (2007). A framework for evaluating systems initiatives. Build Evaluation Symposium.*
[2] *Latham (2014). A Practical Guide to Evaluating Systems Change in a Human Services System Context.*

LASTING CHANGE

QUEST Canada used the Smart Energy Communities Benchmark and an external evaluator to validate lasting organizational and systems changes that occurred as a result of the Pilot Program. In this section you will find evidence that the shifts communities have made throughout the program are durable and will enable them to continue taking action on their paths to net-zero for years to come.

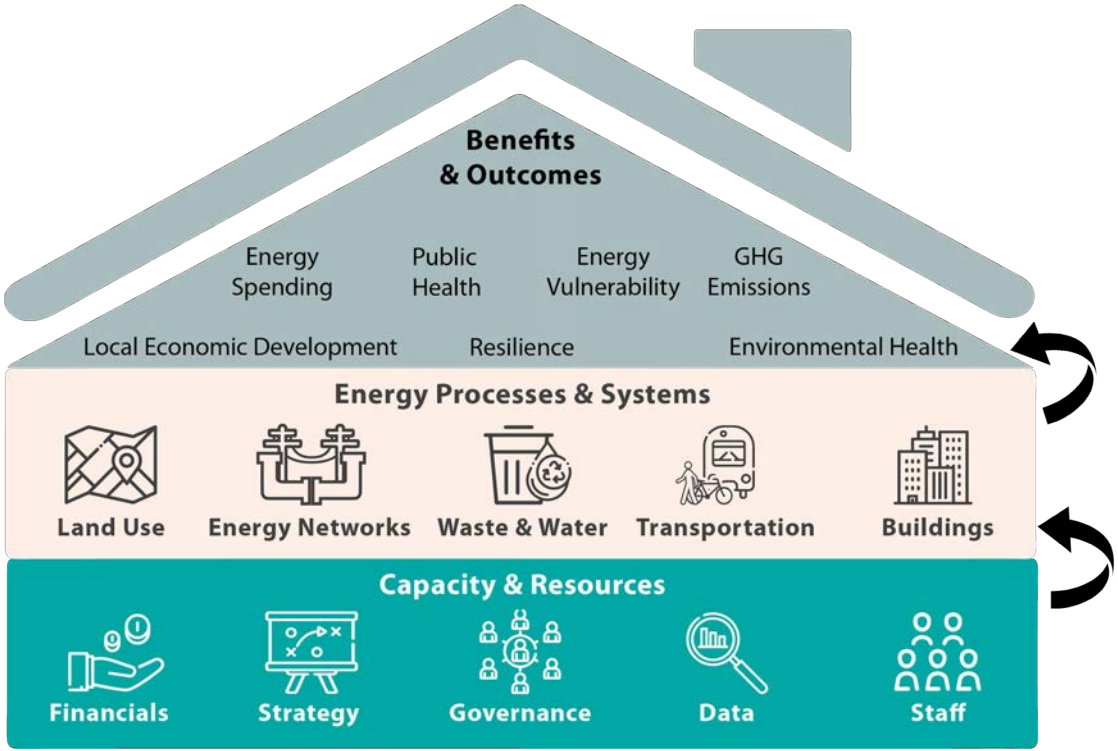
Themes:

- Organizational capacity
- Policy changes
- Built environment
- Increased resources
- Collaborative network

But first, a quick refresher on the Smart Energy Communities Benchmark

HOW TO MEASURE SMART ENERGY* PROGRESS

- The Smart Energy Communities Benchmark measures where a community stands relative to Canadian best practices on ten indicators that, taken together, constitute the core characteristics of a Smart Energy Community
- Measures local capacity and resources that need to be in place, as well as the effective management and integration of infrastructure to use, move and source energy as efficiently and locally as possible
- Helps communities to assess where they stand on a range of actions that have been proven to strengthen economies, reduce energy costs and emissions, and boost community resilience



** Version 2 of the Smart Energy Communities Benchmark will be released in summer 2023. It integrates and formalizes climate resilience and justice principles.*

WHAT & WHO IS MEASURED

- **What** - “Practice”: Processes, policies, projects, programs

  Implementation Focused - Looking at initiative implementation, and the factors underlying implementation

- **Who** - Groups who have influence over the above, primarily municipal governments and utilities, but also broader public sector, civil society, private sector

  Community-Wide - Looking beyond local government initiatives in the community, to consider utilities and actions undertaken by other organizations

INDICATORS FOR COMMUNITY CAPACITY AND RESOURCES

Governance - Governance models support cross-sector leadership

Staff - Staff capacity is in place

Data - Information and data is available to support decision making and accountability

Financials - Funding and financial mechanisms support local energy objectives

Strategy - Community energy planning is structured to support implementation

INDICATORS FOR COMMUNITY ENERGY PROCESSES AND SYSTEMS

Land Use - Land use planning supports energy and climate resilience objectives

Energy Networks - Energy delivery systems are optimized to improve efficiency, ensure reliability, and local energy integration

Waste & Water - Water and waste management promotes conservation, energy efficiency, and energy recovery

Transportation - Mobility and fleet planning prioritizes active transportation, public transportation, and alternative fuel use

Buildings - Buildings are efficient and incorporate local energy options

OVERALL SEC BENCHMARK SCORES

Highest Score
Largest % Improvement
Lowest Score
Smallest % Improvement

Community	Perth-Andover	Woodstock	Florenceville	Quispamsis	Sussex	Saint Andrews	St. Stephen	Oromocto
Participant Type	Leader	Doer	Doer	Doer / Leader	Doer	Seeker	Seeker	Seeker
Initial Overall Score	55%	65%	68%	70%	57%	51%	45%	46%
Final Overall Score	71%	73%	79%	79%	72%	70%	60%	66%
Total Change	↑ 16%	↑ 8%	↑ 11%	↑ 9%	↑ 15%	↑ 19%	↑ 15%	↑ 20%

+ Average improvement of 14% (Pilot Program target was 10%)

GOVERNANCE SCORES

Highest Score
Largest % Improvement
Lowest Score
Smallest % Improvement

Community	Perth-Andover	Woodstock	Florenceville	Quispamsis	Sussex	Saint Andrews	St. Stephen	Oromocto
Participant Type	Leader	Doer	Doer	Doer / Leader	Doer	Seeker	Seeker	Seeker
Initial Governance Score	91%	78%	74%	65%	65%	83%	48%	41%
Final Governance Score	91%	78%	74%	83%	74%	91%	66%	79%
Change	0	0	0	↑ 18%	↑ 9%	↑ 8%	↑ 18%	↑ 38%

+ Average improvement of 11%

GOVERNANCE ACTIONS

- Improved strategic alignment within electric utility (NB Power) due to their new Municipal Climate Action Support Strategy.
- All communities participated in the NB-PEI Municipal Working Group, some already were members prior to the pilot program.
- All communities participated in the CEP Implementation workshop, and identified Governance structure improvements.
- Some communities established or assigned committees to coordinate CEEP implementation:
  - Quispamsis - Municipal Planning Committee members (which include residents) participated in QUEST Canada workshops, and work on land use planning and bylaws. Also, the Town continues to facilitate a Climate Change Committee with staff and council members.
  - St. Stephen - Inclusion of community energy initiatives into the Senior Management Committee.
  - Oromocto - Senior Management team (town staff) meets monthly, and CEEP is now an ongoing item on the agenda. The Town also established a climate change net zero action committee, which includes staff as well as council, and stakeholders in the community.

STAFF SCORES

Highest Score
Largest % Improvement
Lowest Score
Smallest % Improvement

Community	Perth-Andover	Woodstock	Florenceville	Quispamsis	Sussex	Saint Andrews	St. Stephen	Oromocto
Participant Type	Leader	Doer	Doer	Doer / Leader	Doer	Seeker	Seeker	Seeker
Initial Staff Score	40%	41%	40%	53%	47%	53%	41%	38%
Final Staff Score	67%	59%	73%	68%	71%	88%	73%	71%
Change	↑ 27%	↑ 18%	↑ 33%	↑ 15%	↑ 24%	↑ 35%	↑ 32%	↑ 33%

+ Average improvement of 27%

STAFF ACTIONS

- NB Power (electric utility) has new dedicated account managers for communities.
- Liberty Utilities' (natural gas utility) Key Account Managers have been assigned to each community. There are now quarterly contact meetings.
- Municipal and Utility Staff attend several training sessions and workshops per year, including for building inspectors and planners.
- NB Power - Succession planning at the electric utility, including for staff in municipal support roles.
- Some communities - Strategy is now in place to facilitate the succession of local government staff who manage community energy initiatives.
- Several communities have newly dedicated staff to oversee CEEP implementation:
  - Quispamsis - applied to NB Environmental Trust Fund to hire a climate change coordinator in 2023.
  - Saint Andrews - Community now has designated full time staff for community energy initiatives.
  - St. Stephen - Community now has designated staff for corporate energy initiatives.
  - Oromocto - Director of Planning is designated the CEP Coordinator for the town, with Council support.
  - Sussex - Facilities Manager acts as secretariat for the leadership team, and leads and coordinates community engagement activities. Hiring new staff.
  - Perth - Hiring new staff (communications).

DATA SCORES

Highest Score
Largest % Improvement
Lowest Score
Smallest % Improvement

Community	Perth-Andover	Woodstock	Florenceville	Quispamsis	Sussex	Saint Andrews	St. Stephen	Oromocto
Participant Type	Leader	Doer	Doer	Doer / Leader	Doer	Seeker	Seeker	Seeker
Initial Data Score	61%	65%	61%	71%	72%	30%	45%	38%
Final Data Score	78%	83%	70%	80%	83%	65%	73%	60%
Change	↑ 17%	↑ 18%	↑ 9%	↑ 9%	↑ 11%	↑ 35%	↑ 28%	↑ 22%

+ Average improvement of 19%

DATA ACTIONS

- Communities participated in a CEP Implementation Workshop where they identified and selected key performance indicators, data sources, and methodology for collecting data.
- 2 communities without GHG inventories and targets established them.
- 2 communities updated their climate hazard maps.
- NB Power recently produced a report that shows monthly emissions, and intensity, by the facility. It also includes detailed analysis and methodology.
- NB Power has created a corporate Environmental Policy and created a corporate GHG Management Plan.
- Liberty reports to Energy and Utilities Board annually using a standard template, showcasing consumption for each community they serve.
- Municipal corporate and community energy inventories and methodology are public (some munis published it on their websites, some make it available on request).

FINANCIALS SCORES

Highest Score
Largest % Improvement
Lowest Score
Smallest % Improvement

Community	Perth-Andover	Woodstock	Florenceville	Quispamsis	Sussex	Saint Andrews	St. Stephen	Oromocto
Participant Type	Leader	Doer	Doer	Doer / Leader	Doer	Seeker	Seeker	Seeker
Initial Financials Score	78%	79%	83%	72%	58%	62%	50%	70%
Final Financials Score	91%	83%	87%	80%	78%	63%	63%	82%
Change	↑ 13%	↑ 4%	↑ 4%	↑ 8%	↑ 20%	↑ 1%	↑ 13%	↑ 12%

+ Average improvement of 9%

FINANCIAL ACTIONS

- Economic Impact Assessment completed for several communities.
- NB Power - administers Federal Greener Homes loans which is a new repayment mechanism.
- NB Power - Increased funding for the provincial low-income efficiency program. Eliminated waiting list for service.
- Liberty now provides incentives (e.g. up to $2,000) for converting to NG from oil/propane, in communities they serve.
- Three communities are now investing in active transport (other communities already do, in their initial benchmark scoring):
  - Sussex - The local government is committed to funding a multi-use trail project as a part of active transportation infrastructure through operating budget allocation.
  - Saint Andrews - The Town increased funding/investment in active transportation infrastructure.
  - Oromocto - The town uses their operating budget and capital budget for active transportation improvements.

STRATEGY SCORES

Highest Score
Largest % Improvement
Lowest Score
Smallest % Improvement

Community	Perth-Andover	Woodstock	Florenceville	Quispamsis	Sussex	Saint Andrews	St. Stephen	Oromocto
Participant Type	Leader	Doer	Doer	Doer / Leader	Doer	Seeker	Seeker	Seeker
Initial Strategy Score	44%	65%	75%	53%	75%	13%	0	0
Final Strategy Score	75%	82%	88%	82%	100%	75%	56%	69%
Change	↑ 31%	↑ 17%	↑ 13%	↑ 29%	↑ 25%	↑ 62%	↑ 56%	↑ 69%

+ Average improvement of 38%
+ This indicator showed the largest score improvements

STRATEGY ACTIONS

- Communities participated in a CEP Implementation Workshop where they identified and selected key performance indicators, data sources, and methodology for collecting data.
- Multiple communities integrated CEPs into other strategic documents.
- NB Power recently produced a report that shows monthly emissions, and intensity, by the facility. It also includes detailed analysis and methodology.
- NB Power has created a corporate Environmental Policy and created a corporate GHG Management Plan.
- Liberty reports to Energy and Utilities Board annually using a standard template, showcasing consumption for each community they serve.
- Municipal corporate and community energy inventories and methodology are public (some munis published it on their websites, some make it available on request).

LAND USE SCORES

Highest Score
Largest % Improvement
Lowest Score
Smallest % Improvement

Community	Perth-Andover	Woodstock	Florenceville	Quispamsis	Sussex	Saint Andrews	St. Stephen	Oromocto
Participant Type	Leader	Doer	Doer	Doer / Leader	Doer	Seeker	Seeker	Seeker
Initial Land Use Score	57%	81%	87%	56%	38%	79%	63%	55%
Final Land Use Score	57%	81%	87%	60%	57%	79%	74%	59%
Change	0	0	0	↑ 4%	↑ 19%	0	↑ 11%	↑ 4%

- Average improvement of 5%
- This indicator showed the smallest score improvements. This is likely due to the fact that land use planning takes time, and municipal reform and amalgamation took precedence for many participants.
- Now that Municipal Reform has been completed, there is a timely opportunity to revisit land use plans and bylaws. QUEST Canada has received a 1-year extension to assist participating communities post-amalgamation to assist with integrating and updating CEPs, during which land use will be discussed.

LAND USE ACTIONS

- Quispamsis - The Town adopted energy efficiency performance standards for existing and/or new corporate buildings and for new developments.
- Sussex - The Town included the new mixed-use developments as part of the Official Plan.
- St. Stephen - The municipal plan has been updated to include mixed-use zones and infills to increase density along major transportation corridors.
- Sussex - Mixed-used development is now included as part of the Official Plan now, tree planting and/or protecting the urban forest program, with the goal to enhance social benefits and preserve biodiversity.
- Saint Andrews - The Town has committed to planting new native shade trees in the community along trails and greenspaces. There are initiatives that have been proposed to expand community garden spaces and processes.
- Land Use Renewable Energy Mapping Assessment for Upper River Valley - including Perth-Andover, Florenceville-Bristol, Woodstock.

ENERGY NETWORKS SCORES

Highest Score
Largest % Improvement
Lowest Score
Smallest % Improvement

Community	Perth-Andover	Woodstock	Florenceville	Quispamsis	Sussex	Saint Andrews	St. Stephen	Oromocto
Participant Type	Leader	Doer	Doer	Doer / Leader	Doer	Seeker	Seeker	Seeker
Initial Energy Networks Score	47%	74%	71%	75%	69%	69%	90%	76%
Final Energy Networks Score	71%	79%	94%	82%	86%	86%	90%	88%
Change	↑ 24%	↑ 5%	↑ 23%	↑ 7%	↑ 17%	↑ 17%	0	↑ 12%

+ Average improvement of 13%

ENERGY NETWORKS ACTIONS

- The majority of improvement in this indicator comes as a result of actions taken the electric utility.
- NB Power is expanding its e-charge network, and is now offering incentives for the purchase of EV vehicles and at-home charging stations.
- NB Power continues to consider climate risk in its operations and continues to pilot Smart Grid initiatives.
- Liberty Utilities now offers incentives for clean heat conversion in the communities it serves.
- All local governments and utilities increased collaboration on public education.

WATER AND WASTE SCORES

Highest Score
Largest % Improvement
Lowest Score
Smallest % Improvement

Community	Perth-Andover	Woodstock	Florenceville	Quispamsis	Sussex	Saint Andrews	St. Stephen	Oromocto
Participant Type	Leader	Doer	Doer	Doer / Leader	Doer	Seeker	Seeker	Seeker
Initial Water and Waste Score	30%	57%	54%	76%	37%	37%	15%	33%
Final Water and Waste Score	43%	62%	54%	82%	55%	46%	22%	43%
Change	↑ 13%	↑ 5%	0	↑ 6%	↑ 18%	↑ 9%	↑ 7%	↑ 10%

+ Average improvement of 9%

WASTE AND WATER ACTIONS

- Woodstock - The Town conducts water infrastructure initiatives, such as pressure-reducing valves, and retrofit programs to conserve water, such as targeting rainwater collection.
- Quispamsis - The Town is implementing a new pumping / treatment system with more energy efficient pumps.
- Saint Andrews - The Town will convert to digital water meters by 2023 and move away from equal water billings. This will encourage conservation for all users.
- St. Stephen - The Town has developed rain gardens and completed stormwater infrastructure upgrades and enacted a backflow prevention system by-law for all new construction.
- Oromocto - The Town encourages new developments to have net-zero stormwater runoff.
- Sussex - Information about water conservation and water quality is now part of the bill inserts.

TRANSPORTATION SCORES

Highest Score
Largest % Improvement
Lowest Score
Smallest % Improvement

Community	Perth-Andover	Woodstock	Florenceville	Quispamsis	Sussex	Saint Andrews	St. Stephen	Oromocto
Participant Type	Leader	Doer	Doer	Doer / Leader	Doer	Seeker	Seeker	Seeker
Initial Transportation Score	57%	74%	77%	84%	62%	67%	49%	51%
Final Transportation Score	81%	77%	81%	90%	67%	81%	49%	61%
Change	↑ 24%	↑ 3%	↑ 4%	↑ 6%	↑ 5%	↑ 14%	0	↑ 10%

+ Average improvement of 8%

TRANSPORTATION ACTIONS

- NB Power is expanding its fleet of electric vehicles and is in discussions with Cities about doing an electric bus pilot.
- Several communities / regions are establishing rideshare, carpooling, and electric vehicle sharing programs:
  - Perth, Florenceville, Woodstock - Regional Service Commission is in the process of starting a rideshare program. This could include options for mobility for low-income households.
  - Quispamsis passed a bylaw to enable Ride-Share programs, if drivers are licensed they can offer the service in town.
  - Florenceville - The Town has assessed a carpooling program which will be implemented in January, 2023.
  - Saint Andrews - There is a fully operational EV car sharing program in Saint Andrews (Project Village).
  - Oromocto -The region has an urban-rural rides program (a carpool or rideshare program). Includes subsidies for low-income families.
- Several communities are investing in electric vehicles and/or fleet greening:
  - Perth - Council wants staff to use a green lens on all procurement, including fleet vehicles.
  - Quispamsis - Town is undertaking a fleet vehicle assessment, to determine what/when to replace with EVs.
  - Sussex - A green procurement policy for the fleet has been adopted.
  - Saint Andrews - The Town has purchased a hybrid vehicle for Public Works and is starting the transition to more hybrid fleet vehicles, as they become viable.
- Saint Andrews has created a new by-law called By-Law 22-03 to Regulate Non-Vehicular Transportation.

BUILDINGS SCORES

Highest Score
Largest % Improvement
Lowest Score
Smallest % Improvement

Community	Perth-Andover	Woodstock	Florenceville	Quispamsis	Sussex	Saint Andrews	St. Stephen	Oromocto
Participant Type	Leader	Doer	Doer	Doer / Leader	Doer	Seeker	Seeker	Seeker
Initial Buildings Score	50%	47%	50%	84%	41%	40%	35%	38%
Final Buildings Score	54%	51%	72%	87%	50%	48%	35%	41%
Change	↑ 4%	↑ 4%	↑ 22%	↑ 3%	↑ 9%	↑ 8%	0	↑ 3%

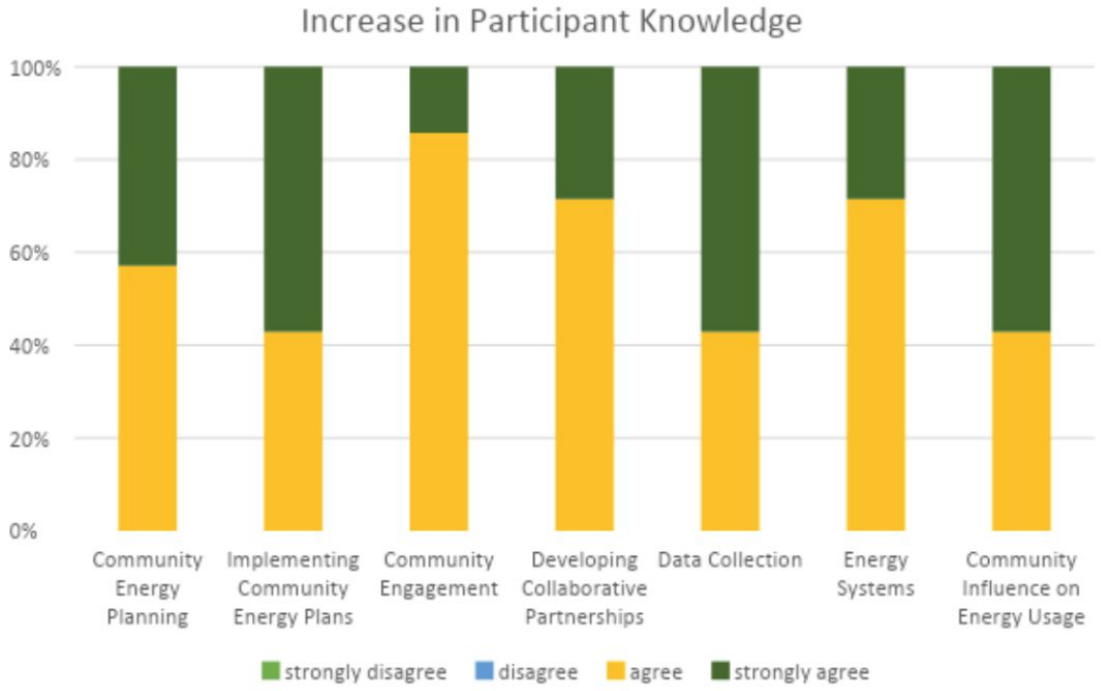
+ Average improvement of 7%

BUILDING ACTIONS

- NB Power started using Portfolio Manager to Benchmark all their buildings.
- Florenceville-Bristol and Quispamsis are now distributing energy efficiency kits provided by NB Power.
- Florenceville-Bristol reviewed each corporate facility for efficiency improvements and heat conversion as part of the asset management plan.
- A large employer implemented a renewable heat/electricity and is now exploring further renewable energy possibilities.

INCREASED KNOWLEDGE

- All participants increased their knowledge, a positive indicator for built capacity and lasting change in and of itself, in all 7 topic areas the Net-Zero Communities Accelerator team tracked.



EXISTING GAPS

- **Governance** - Lack of community energy leadership team.
- **Staff** - No succession planning for staff involved in community energy initiatives.
- **Data** - Utility data requests are still processed in an ad-hoc fashion, usually within 3 to 4 weeks.
- **Financials** - Several communities have not adopted modern financing mechanisms, many communities have not yet determined the financial viability of individual measures within their CEEPs, lack of green procurement policy or fleet renewal/greening programs.
- **Strategy -** Some communities don't yet consider socio-economic factors in CEEP.
- **Land Use** - Many communities have yet to formally adopt new land use plans or bylaws which encourage efficiency, clean energy, active transportation, densification / mixed use development, and protecting green space. This is largely due to the municipal reform process which took place in 2022. Many of these communities will be revisiting their plans and bylaws beginning in 2023.
- **Transportation** - Given low traffic counts, some communities have no transportation demand management or transit related initiatives.
- **Buildings** - No efficiency incentive programs for multi-unit residential buildings exist in the province, several communities do not yet have a formal process in place for corporate facilities, several communities have not yet adopted bylaws to encourage high performing new builds in the community. Difficulty in determining how many provincial government-owned buildings and commercial buildings undertook efficiency retrofits, installation of clean energy, and/or benchmarking. This is largely due to the fact that the provincial government does not break down their energy efficiency improvements by community, and there is no tracking actions in the commercial sector. It is possible that NB Power would have some data based on their incentive programs, but it may be difficult to share due to privacy concerns.

EXISTING GAPS - COMMUNITY ENGAGEMENT

- The lack of knowledge about how to effectively engage the community at large, and having the resources to do so, deserves a special mention.
- Some communities expressed discomfort and lack of knowledge about how to engage with marginalized communities.
- Of the knowledge gained, the 'Community Engagement' component showed the weakest increase in knowledge acquisition with two participants noting that their "agree" responses were "on the low end of agree." One of the reasons given had to do with capacity: while they did learn about community engagement, they did not have the staffing resources to implement any of the methods. Another said that they had this knowledge from other projects they had worked on but had not given this component the time and energy it needed.[1]
- There is a perception from local government staff that there is a lack of of community awareness and buy-in to CEEP, coupled with resistance.
- Participants relayed the need for an organization to organize public workshops and forums to raise public awareness and share knowledge about what other communities are doing to adapt and mitigate climate change.

[1] *Brown, S. (2023). QUEST Canada's New Brunswick Smart Energy Communities Accelerator Pilot Program Final Developmental Evaluation Report.*

RESULTS:
COLLECTIVE IMPACT

COLLECTIVE IMPACT

- The Pilot Program's developmental evaluator found that:
  - 2 of the 3 preconditions for success under the collective impact model were in place prior to program launch.
  - 5 of the 5 conditions for supporting and sustaining actions were realized.
  - There was marked increase in collaboration and networking within and amongst institutions and organizations.
  - QUEST Canada took action on feedback (from participants and the developmental evaluator) and responded with additional tools and increased support throughout the pilot program
    - Mini conference on community engagement
    - Hiring of subject matter experts to integrate equity considerations into all tools
    - Information sheets for councillors
    - Onboarding to the Partners for Climate Protection Program to widen connections and inform participants about additional supports
  - The Pilot Program delivered high-quality services and created the knowledge, skills and expertise needed with participants to create and implement CEEPs.

3 PRECONDITIONS

1. **Urgency for change**
   - Only 2 participating communities identified CEEP work as urgent ***but*** all participants stated that recent weather events brought climate change to the forefront for community members
   - *Recommendation:* There may be a need to define 'urgency' in the context of this work
2. **Adequate financial resources**
   - QUEST Canada secured 3 years of funding prior to program delivery, with no to low cost to participants
   - Participants noted that funding was critical to their participation
   - *Recommendation:* Identify and work with participants to secure funding to hire staff to support continuation of this work
3. **Influential champions**
   - Strongest pre-condition met for the Pilot Program
   - Most influential champions consisted of CAOs, mayors and/or councillors
   - *Recommendation:* Inform participants about importance and provide direction on finding, recruiting and orienting champions at very beginning of program

5 SUSTAINING CONDITIONS

1. **Common agenda**
    - Multi-sectoral approach was built into program design from beginning, enabling participants to understand the contexts and perspectives of one another and identify common agendas.
2. **Continuous communication**
    - Participants said that the sharing of information between NB Power and the SECA municipalities was beneficial to both.
    - NB Power was also able to use the networks and relationships that developed out of SECA to raise awareness of the services that they can offer municipalities.
3. **Shared measurement systems**
    - The Smart Energy Communities Benchmarking process was one of the components of the NB SECA program and it provided this shared measurement system, along with the developmental evaluation, across participants.
    - Key performance indicators in the CEEPs.

5 SUSTAINING CONDITIONS

1. **Mutually reinforcing activities**
    - Workshops and benchmarking reinforced each other in the creation of community energy plans, with built-in measurement systems to track progress.
    - CEPs help utilities with infrastructure planning.
2. **Backbone organization**
    - Pilot Program staff were recognized across measures as providing clear and continuous support for communities through the execution of core workshops, presentations to Council and through program processes like benchmarking.
    - All of the communities agreed that the major benefit to the program was working with QUEST Canada.
    - NB Power focus group participants felt that QUEST Canada's third-party credibility in the New Brunswick communities helped them build their own relationships with municipalities because QUEST Canada had invited them to the table and QUEST Canada was highly regarded.

TESTIMONIALS

"The QUEST Canada Accelerator Program has aided the Town of Saint Andrews, through the development of the Community Energy Emissions Plan (CEEP), to achieve our community net-zero goals. As a municipality with a population of approximately 3,000, QUEST Canada understood and embraced our limited staff resource capabilities in energy management and energy reduction strategic planning. Utilizing QUEST's dedicated staff, resources, knowledge, and expertise, we have jointly planned and developed a community strategy to execute our goals of achieving net zero before 2050."

PAUL NOPPER
Clerk – Senior Administrator, Town of St. Andrews

“The Town of Oromocto’s partnership with QUEST Canada enabled us to develop a robust and realistic community energy and emissions plan (CEEP). QUEST Canada’s knowledge and experience make it possible for small municipalities like ours to develop a plan that reflects our own unique characteristics and moves us towards a net-zero future. Through the partnership with QUEST Canada [,] the Town of Oromocto significantly increased our benchmark scoring and reached Step 3 of the FCM Partners for Climate Protection Milestone Framework within one year. “

DALLAS GILLIS, RPP, MCIP
Director of Planning and Compliance, Town of Oromocto

"…without organisations like QUEST [Canada], we would not have been able to advance our goals of improved environmental and financial stability for our community."

TREVOR MURRAY
Building Inspection Superintendent, Town of Quispamsis

“The Smart Energy Communities Accelerator helped us step by step and worked with us to build our plan, expanding over two years was helpful because of municipal reform. They built the plan on our data; we couldn’t have done that ourselves. This process is better than hiring a consultant, they showed us how to do it, how to build the plan and how to use the data. That was so valuable especially for small communities that struggle with staffing resources.”

Key informant interview participant

ADDITIONAL INFORMATION

KEY STAKEHOLDERS IN COMMUNITY ENERGY & EMISSIONS PLANNING

Local Government

- CAO, Chief and Councillors
- Land use planners
- Facilities managers
- Financial controllers
- Sustainability staff
- Community and economic development staff
- Emergency Management

Other

- Utilities
- Energy service providers
- Provincial / territorial government reps
- Local developers
- Indigenous partners
- Key employers / businesses
- Regulators
- Public (across demographic / vulnerable groups)
- University, or Institutes, Technical Colleges
- Local community groups / non-profits
- Local Emergency Service providers (Fire, Police, Health/EMS)
- Neighbouring community officials

WHAT IS A SMART ENERGY COMMUNITY?

A Smart Energy Community seamlessly integrates local, renewable, and conventional energy sources to affordably, cleanly, and efficiently meet its energy needs.

Smart Energy Communities understand the importance of:

- Climate change policy built on a foundation of sound energy policy
- Driving technological change while avoiding technological determinism
- Maximizing the value of our infrastructure assets, both existing and new
- Emphasizing institutional innovation
- Reducing policy uncertainty through alignment and sense of community
- Restoring public trust and confidence in decision-making institutions

WHY DO COMMUNITIES MATTER?

Smart Energy Communities leverage what matters to Canadians:

- Economic opportunities,
- Improved local environmental quality,
- Sustainability,
- Resilient infrastructure, and
- Affordability

as an entry point to rational discussions about energy and climate.

PRINCIPLES FOR SMART ENERGY COMMUNITIES

TECHNICAL PRINCIPLES

- Improve efficiency
- Optimize quality energy use
- Manage heat
- Reduce waste
- Use renewable energy resources
- Use energy delivery systems strategically

POLICY PRINCIPLES

- Match land use needs and mobility options
- Match energy options to local context
- Send clear and accurate price signals
- Manage risks and be flexible
- Emphasize performance and outcomes in policy and regulations
- Pursue policy and program stability

COMMUNITY PRIORITIES

Community	Priority 1	Priority 2	Priority 3
Cap Pelé	Energy Efficiency and clean heat	Public education	Replace municipal vehicles with hybrids
Florenceville-Bristol	Energy Efficiency and clean heat	Renewable energy mapping	Public education on clean transport
Nigadoo	Energy Efficiency and clean heat	Public education	Establish regional transit
Oromocto	Energy Efficiency	Commercial solar	Active and Fuel-Efficient Transportation
Perth-Andover	Energy Efficiency and clean heat	study community retrofit or efficiency financing program	Optimize electric utility operations
Quispamsis	Energy Efficiency	Update zoning bylaws for efficiency and clean energy	Conduct a pilot solar PV array
Saint André	Energy Efficiency and clean heat	Public education	Replace municipal vehicles with hybrids
Saint Andrews	Energy Efficiency and clean heat	District heat feasibility study	Car share/EV/Active transport
Sainte Marie / Saint Raphaël	Energy Efficiency and clean heat	Public education	Regional transit
St. Mary's First Nation	Energy Efficiency	Geothermal / heat exchange	Community education
St. Stephen	Public education	Municipal building level energy efficiency/fuel switching	EVs and active transportation
Sussex	Clean heat conversion	Update policies for energy efficiency	Include clean energy in Land Use Plan
Woodstock	Energy efficiency in building code bylaw	Clean energy conversion	Renewable energy mapping assessment
Saint Isidore	Energy Efficiency and clean heat	Public education	Regional transit