



SMART ENERGY COMMUNITIES ACCELERATOR

MUNICIPAL DISTRICT OF ST. STEPHEN

FINAL SUMMARY REPORT

February 2024

ACKNOWLEDGMENTS

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About QUEST Canada

QUEST Canada is a registered Canadian charity that supports communities in Canada on their pathway to net-zero. Since 2007, QUEST has been facilitating connections, empowering community champions and advising decision-makers to implement efficient and integrated energy systems that best meet community needs and maximize local opportunities. QUEST develops [tools and resources](#), convene stakeholders and rights holders, and advise decision-makers — all with the goal of encouraging, assisting and enabling communities to contribute to Canada's net-zero goals.

QUEST Canada recognizes communities that have embraced these principles by referring to them as Smart Energy Communities.

Learn more and join the network at questcanada.org.

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EXECUTIVE SUMMARY

QUEST Canada's [New Brunswick Smart Energy Communities Accelerator \(NB SECA\)](#) Pilot Program launched in 2020, assisting 14 New Brunswick communities by equipping them with the tools and knowledge to develop and implement community energy and emissions plans (CEEPs) (also known as climate action plans or community energy plans), and understand the net economic benefit they can provide. The former Town of St. Stephen is one of 14 communities that participated in this program.

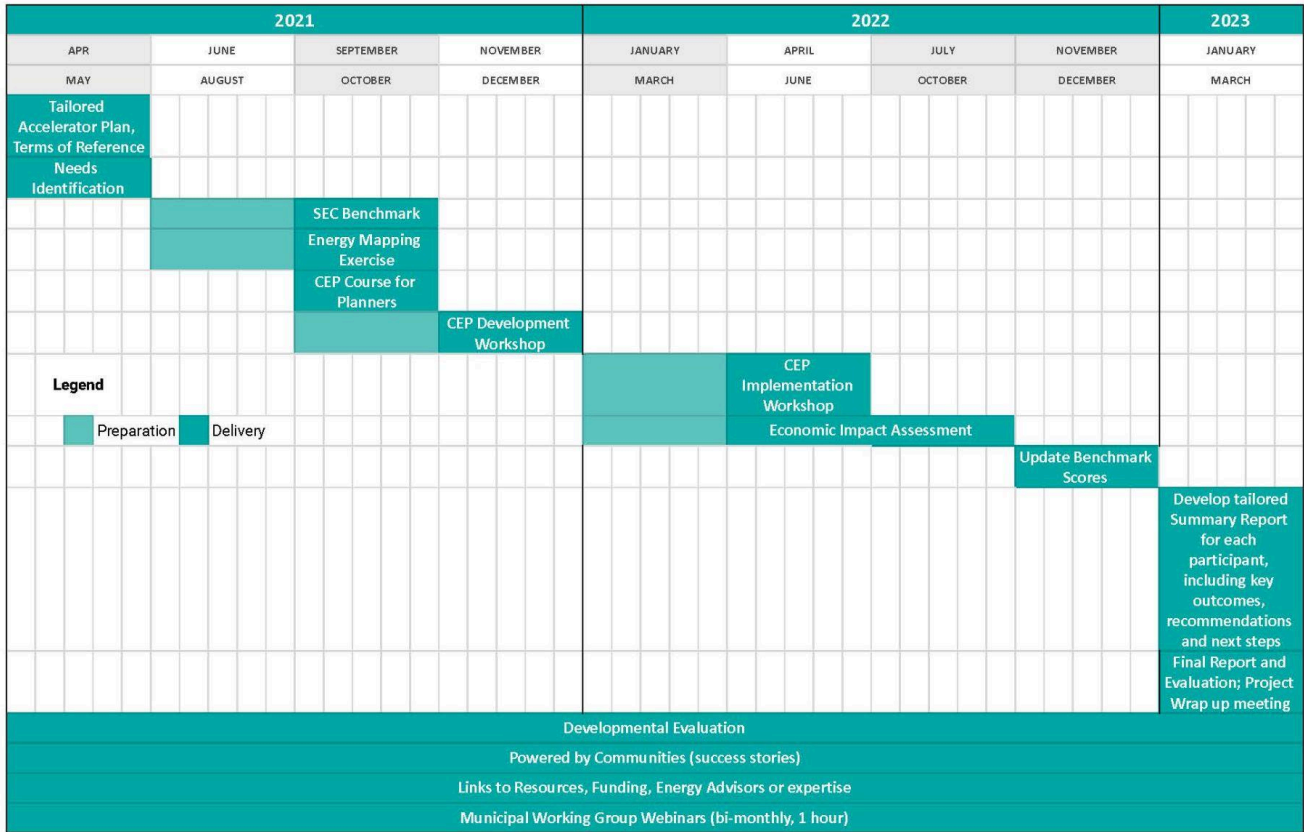
The Town of St. Stephen is also a member of the Partners for Climate Protection (PCP) Program, from the International Council for Local Environmental Initiatives (ICLEI) and the Federation of Canadian Municipalities (FCM). As of 2020, the Town completed Milestones 1 - 2 of the PCP Program. As a result of QUEST Canada's CEEP Development workshop, the community is currently developing a CEEP to achieve Milestone 3. The proposed Community Energy and Emissions Plan would contain 38 action strategies or projects with potential reductions contributing to the overall community target recommended in the GHG Inventory of a 30 per cent reduction in community GHG emissions below 2015 baseline levels. All actions will be implemented in both the corporate sector and throughout the community.

Results and next steps are summarized in this final report. QUEST Canada will continue to work with the new municipal entity post-reform, to ensure the community energy and emissions plan and implementation strategy are updated and adopted.

ACCELERATOR PLAN - MUNICIPAL DISTRICT OF ST. STEPHEN

At the beginning of the NB SECA Pilot Program, each community received an Accelerator Plan, tailored to their local needs and context. For the Town of St. Stephen, the Accelerator Plan provided an overview of the services that were provided to the Town from 2021 to 2023, as well as the timeline for implementation and expected level of effort. QUEST engaged the Municipal District of St. Stephen, in 2023-24, to review the energy mapping exercise, action planning exercise, and other reports produced, following municipal reform in New Brunswick.

Figure 1 - Timeline of Services Offered



Find below the list of services rendered:

- Needs identification and Accelerator Plan
- SEC Benchmark Baseline Assessment
- Community Energy Mapping Exercise
- Review of existing CEEP / Climate Action Plan
- Economic Impact Assessment of CEEP / Climate Action Plan
- CEEP Implementation workshop and report
- SEC Benchmark scoring (at the beginning and the end of the program)
- An article published in Powered by Communities
- Monthly meetings of the Municipal Working Group
- Training webinars, for example, on community engagement, land use planning, CEEP best practices
- Navigation of additional resources (e.g. expertise, funding)

SMART ENERGY COMMUNITIES BENCHMARK RESULTS (2021, 2023)

[Smart Energy Communities \(SEC\) Benchmark Assessment](#) - This assessment considers how a community is progressing across 10 indicators relevant to community energy and emissions planning: Governance, Staff, Data,

Financials, Strategy, Land Use, Energy Networks, Waste and Water, Transportation, and Buildings. This process included a pre-survey with initial scoring based on the review of all Municipal Plans, Policies, Bylaws; and interviews with municipal, utility, and government staff. It also included a review webinar and a final scoring report. The tool can help identify gaps and pathways forward, and be used for benchmarking and continuous improvement year over year.

In 2021 the Town of St Stephen scored 45% overall. This result shows that several initiatives were in place and functioning well. However, opportunities still existed to strengthen community-oriented efforts on their journey of becoming a Smart Energy Community. See the full [2021 SEC Benchmark Report](#) for details.

In 2022 the Town of St Stephen scored 60% overall. This score showcases that progress has been made over a 15-month period, including steps taken by the municipality, the energy utility, and others. For more details, see the [2022 SEC Benchmark Report](#) detailing updates to the Town’s scores.

Over time, the Municipal District of St. Stephen’s overall score, and the score for each indicator, will continue to increase. The SEC Benchmark should be understood as a progress bar rather than as a reflection of how well or poorly a community is doing.

ENERGY MAPPING RESULTS

[Energy Mapping Exercise](#) - This interactive exercise engages diverse local participants to identify strengths and opportunities for energy efficiency, clean energy, transportation, land use, etc., using an interactive map. Results can inform the development and improvements of a CEEP.

The former Town of St. Stephen, in partnership with QUEST, hosted a Community Energy Mapping workshop in 2021. For more details consult the [Energy Mapping Exercise Final Report\(2021\)](#). In February 2024, QUEST conducted a review of the energy mapping exercise for the Municipal District of St. Stephen ([Energy Mapping Exercise Final Report 2024](#)).

Find below a summary of the updated opportunities identified after conducting the review session:

Table 1: Description of Strengths and Areas for Improvements/opportunities

Areas	Key Areas for Improvements/Opportunities
Energy Efficiency	Energy efficiency retrofits for <ul style="list-style-type: none"> ● Buildings such as the educational building, buildings in the industrial park, the fire hall and other service buildings belonging to the municipality. ● Commercial buildings in the industrial park ● The fire Hall in Oak Bay, and the Oak Bay community hall ● Various houses that are from the 1950s-80s ● Various old farm houses Buildings that were identified for For net-zero: <ul style="list-style-type: none"> ● The Garcelon Civic center building

Waste and Renewable Heat	<p>Sources:</p> <ul style="list-style-type: none"> ● Auraco (Flakeboard Co.) ● The Garcelon Civic Centre (GCC) ● Ganong Factory ● Water Treatment Plant <p>End Uses:</p> <ul style="list-style-type: none"> ● The industrial park area and its facilities ● Building in the immediate vicinity of GCC ● The Privately owned Cannabis building and the Government building near Progress Drive
Renewable Power	<p>Sources:</p> <ul style="list-style-type: none"> ● Multiple land sites including green space suitable for ground mount solar and/or wind power generation ● Wastewater facility has potential for a micro-hydro generator ● Multiple municipal buildings identified with rooftop solar potential
Land Use	<ul style="list-style-type: none"> ● The industrial park redevelopment has potential for mixed-use planning but requires zoning changes ● The north end of town off King Street, by the commercial district and high school, could undergo mixed-use development and densification ● The areas near Pleasant Street, Progress drive and Boundary Street could be potential sites for mixed use development.
Transportation	<ul style="list-style-type: none"> ● The main shopping district has potential for an active transportation network parallel to King Street, connecting shopping to Riverfront Trail ● Milltown is a transportation development opportunity, as it is very vehicle focused ● Multiple location for EV charging stations ● The St. Stephen Waterfront Trail is a key destination of active transportation
Energy Networks	<ul style="list-style-type: none"> ● The industrial park region (renewable and waste heat) ● The area surrounding the wastewater treatment facility is a renewable energy network opportunity ● The commercial/shopping district has geothermal heat source potential ● Industrial building/GCC region around Riverfront Trail.

Energy Mapping Workshop

How to use this Mural
The goal of this exercise is to provide participants an opportunity to identify, discuss, and map potential options to becoming a Smart Energy Community by using QUEST's Framework.

INSTRUCTIONS

1. Use this MURAL, and reference legend.
2. Actions may be identified for any of the following sectors:
 - Municipal
 - Residential
 - Commercial
 - Industrial
3. Draw or denote actions on the map with stickers and markers (copy and paste from the legend below)
4. Take Notes!
5. Share key highlights during plenary

Municipal District of St. Stephen - New territory

Where is your favourite coffee shop/cafe/restaurant?

Notes

- **Energy Efficiency**
- **Waste & Renewable Heat**
- **Renewable Power**
- **Land Use**
- **Transportation**
- **Smart Energy Networks**
- **Other**

Legend

- **Energy Efficiency**
- **Waste & Renewable Heat**
- **Renewable Power**
- **Land Use**
- **Transportation**
- **Smart Energy Networks**

Original Exercise

QUEST

CEEP DEVELOPMENT WORKSHOP RESULTS

CEEP Development Workshop - This workshop provided an overview of the key considerations for developing a Community Energy and Emissions Plan (CEEP), and the results from the SEC Benchmark baseline assessment. Resources presented help a community develop their CEEP. A CEEP identifies ways to reduce GHG emissions, support the local economy, increase competitiveness, create jobs, improve energy efficiency, and keep energy dollars local. QUEST Canada also facilitated an action planning exercise, engaging local stakeholders to begin comparing and selecting measures to be included in a Community Energy and Emissions Plan. The former Town of St. Stephen, in partnership with QUEST, hosted a Community Energy Plan development workshop on Nov. 10, 2021. In February 2024, QUEST conducted an action plan review exercise for the Municipal District of St. Stephen. For details, please consult the [CEEP Development Workshop Presentations](#), [Action Planning Worksheet 2021](#) and [Action Plan Worksheet 2024](#).

CEEP IMPLEMENTATION WORKSHOP RESULTS

CEEP Implementation Workshop - This workshop is built off of the foundations established during the CEEP Development Workshop and is designed for communities that need to establish a Governance framework (involving multiple stakeholders), a communications strategy, a Key Performance Indicator framework, and strategies to implement the measures contained within a CEEP.

The Town of St. Stephen, in partnership with QUEST Canada, hosted Community Energy Plan Implementation workshops on April 20 and May 3, 2022. In February 2024, QUEST conducted an action plan review exercise for the Municipal District of St. Stephen.

For details, please consult the full [CEEP Implementation Report 2022](#) and [CEEP implementation Report 2024](#).

Governance - Workshop participants expressed **support for designating an existing staff member (or sharing amongst a group of existing staff members)** to provide coordination of the overall community action plan.

Participants also recommended **assigning CEEP implementation to the existing Senior Management Committee** (to meet weekly and add it to the current agenda). The recommendation included the participation of **adjoint staff and stakeholders** as well as others from the community/other regions (meeting monthly).

In brief, the senior management committee would focus on municipally-led actions (which can support both corporate and community-side GHG reduction initiatives). The staff and stakeholder committees would focus on community-side actions and involve a diverse range of stakeholders. The regional coordinator and co-chairs would interface between the committees, stakeholders, and member municipalities.

Communications - The top methods for **public communication** that were selected during the workshop include:

- Town webpage including the annual progress report
- Social media (ad hoc or as needed basis)
- Engage schools / youth groups
- Bill inserts (e.g. tips/fact sheets) and online content

Some of the top methods selected for **stakeholder engagement**, include:

- One-on-one meetings – would need to identify key stakeholders
- Stakeholder Advisory Committee meetings – has been successful in the past
- Ambassador Program – an opportunity for industry and businesses

Data and Key Performance Indicators - Participants selected **preferred tools/methods** to be used, including:

- Meetings of Internal (weekly) and External Committees
- The [QUEST Canada Smart Energy Communities Benchmark](#) tool
- The [PCP Milestone Tool](#), and/or spreadsheet, for updating the GHG inventory
- Surveys and challenges request for information as needed after municipal reform process
- Request data/information from partners annually

Participants also identified some of the most important **Key Performance Indicators (KPIs)** to measure:

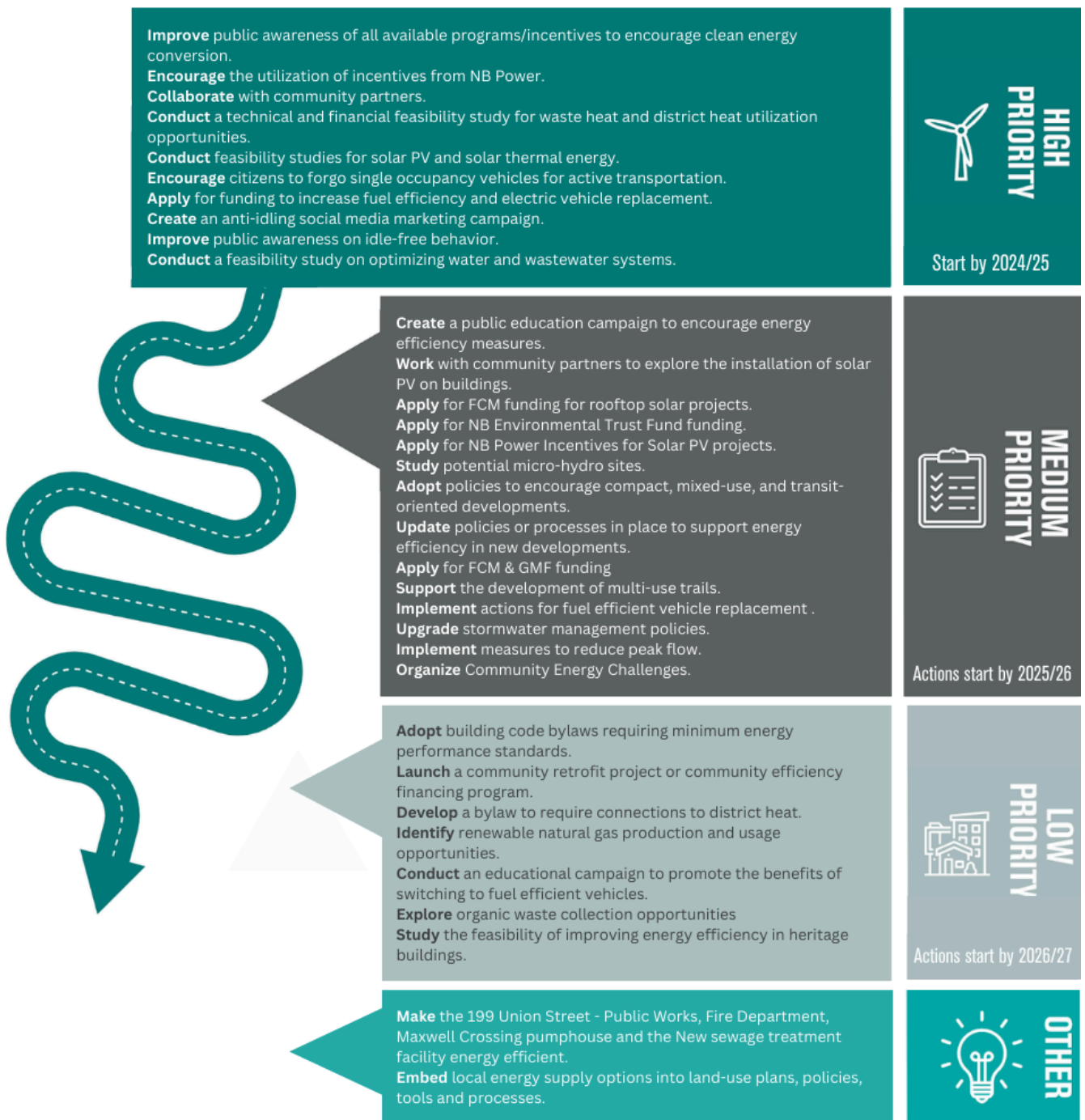
- Total energy usage (GJ) reduction across all sectors (residential, commercial, institutional, transport) for all fuel types
- Amount of GHG emissions reduced – change in total (year over year)
- Peak water demand reduction – number of participants
- Number of EVs purchased and registered in the community
- Number of jobs created in sectors related to energy efficiency, clean energy, clean technologies
- The sharing and promoting of local success stories

CEEP Action Planning / Timeline

Based on this workshop, the Town prioritized the following measures and assigned them to a lead, as well as identified whether studies, funding, or supporting policies were needed.

Based on the selection and prioritization of CEEP actions, the following graph illustrates a possible roadmap for implementation:

Figure 4: Preliminary Roadmap for Implementation



ECONOMIC IMPACT ASSESSMENT RESULTS

[Economic Impact Assessment](#) - For communities with a CEEP, this assessment provides an understanding of the economic development and job creation potential over the lifespan of the Community Energy and Emissions Plan.

Based on the current unit fuel estimate prices available (2021), it can be inferred that total energy costs in the Town of St. Stephen are approximately \$22.1 million per year. And for most communities, approximately 80% of energy spending leaves the local economy, to out-of-town distributors, transmitters, and generators.

The Town of St. Stephen Partners for Climate Protection Report: Milestone 1 has made the recommendation that the Town should set a community reduction target of 30% below 2015 levels by 2030. The actual reduction in energy costs related to this target is a function of the fuel and electricity reductions of each individual measure identified in the Climate Action Plan. However, if we assume that a related 30% reduction in the community's total cost of energy can be achieved through the targets of the Climate Action Plan, then we are able to determine that, at today's energy prices, up to \$6.63 million a year could be retained within the community.

Furthermore, full implementation of the Community Energy and Emissions Plan could achieve a carbon savings of \$690,000 (assuming \$50 per tonne) and could divert up to \$17.2 million (at today's prices) over 25 years back into the local economy. Details of the assessment methodology and assumptions are available on [our website](#).

For details, please consult the full [Economic Impact Assessment Case Study 2022](#) of the Town of St. Stephen's Community Energy and Emissions Plan.

TRAINING FOR PLANNING PROFESSIONALS

CEEP Course for Planners - This online course is designed to build awareness and capacity for energy and climate planning among community planners, as well as the Regional Service Commission (including consultants) with shared best practices (i.e. policy, procedures and tools) to improve the quality, consistency and municipal capacity to implement CEEPs. The course was offered by QUEST Canada and York University, issuing a certificate upon successful completion. For more details, contact eoldfield@questcanada.org.

Promoting Energy Efficiency in Land Use Planning - A series of training webinars were also conducted throughout 2022 and 2023, focusing on the integration of sustainability principles in the design of sub-divisions to maximize opportunities for energy efficiency. The training webinars were offered by QUEST Canada and [DecoDesign](#). Recordings of the webinars are available in [English](#) and [French](#).

MUNICIPAL WORKING GROUP AND WEBINARS

Municipal Working Group - This virtual [working group](#) is hosted by QUEST Canada for one hour every one to two months, and provides opportunities for municipalities to participate in peer-to-peer exchange, improve energy literacy, skills and competencies, learn from expert speakers, and more. Minutes and recordings of each meeting were made available to participating municipalities. For more details, contact eoldfield@questcanada.org.

Previous working groups sessions included the following topics:

- Beneficial Electrification with SGIN (Smart Grid Innovation Network)
- QUEST Canada's Smart Energy Communities Benchmark Tool - a deep dive into three Indicators: Financials, Governance, and Stakeholder Engagement
- Matchmaking sessions with energy service and technology providers
- Co-op financing for renewable energy, with Beauséjour Renewable Energy Coop
- NB Power overview of programs, benefits, and training
- Developing skills and competencies to advance your Community Energy and Emissions Plans, with NBCC
- Liberty Utilities overview of infrastructure and energy projects
- Land Based Renewable Energy Mapping Assessment, with CoMapping
- Low-cost long term efficiency financing, with PACE Atlantic
- Economic Impact Assessment of N.B. CEEPs, with Rob Kerr, Senior Associate, QUEST Canada
- Efficiency Canada - Annual Scorecard and their new toolkit regarding the updated Building Codes
- Community Engagement best practices, with QUEST Canada, CIER, Tamarack Institute, and Student Energy
- Overview of FCM-ICLEI Partners for Climate Protection, and impact of Municipal Reform
- Panel discussion regarding NB Climate Change Action Plan
- Funding resources, with ACOA, FCM, and RDC
- And more!

POWERED BY COMMUNITIES

Powered by Communities - This website includes published articles, blogs, videos, etc., featuring success stories throughout the NB SECA Pilot Program. Articles are also published by external media outlets and in print journals. Visit the website to learn more: <http://poweredbycommunities.ca/>

One of the articles that was published featured the Town of St. Stephen. It was published on the Huddle website:

- "QUEST Canada Helps Saint Andrews, St. Stephen Find Smart-Energy Solutions For Their Environments and Economies"
<https://huddle.today/2022/04/04/quest-canada-helps-saint-andrews-st-stephen-find-smart-energy-solutions-for-their-environments-and-economies/>

NEXT STEPS

Based on the results highlighted above, here are some key next steps for the Town / new municipal entity:

- Post-amalgamation, update your GHG inventory to include your wider territory, more assets, etc. In addition, update your CEEP to include your wider territory, more assets, etc. This can be a simple review to confirm your selected measures, or consider including additional measures. Review your implementation strategy to make adjustments, if needed.

- Submit your CEEP Action Planning and CEEP Implementation Report and a status update (what has been done to date), to FCM-ICLEI Partners for Climate Protection, to achieve Milestone 3 and 4. These can be sent to pcp@fcm.ca.
- Continue with the actions outlined in your CEEP, your Energy Mapping and CEEP Implementation Report.
- Engage the public and local stakeholders through a webpage, social media, bill inserts (e.g. tips/fact sheets), newsletters, annual progress report, stakeholder advisory committee meetings, email listserv, teleconference with stakeholders, or one-on-one meetings, as needed.
- Update your SEC Benchmark scores each year to monitor progress. Collect data for measuring your key performance indicators.
- Update your GHG inventory.
- Continue to apply land-use planning principles to encourage energy efficiency, clean energy, active transportation, densification, etc.
- Continue to participate in the Municipal Working Group, for peer-to-peer exchange.
- Continue to consult QUEST Canada’s [Resource Library](#). This online resource library is full of useful tools, resources, and links that can help your community on its journey to net-zero. Explore best practices and useful tools to support your community’s energy transition.

QUEST Canada looks forward to continued collaboration with the Municipal District of St. Stephen. For any further information about this report or the NB SECA Pilot Program, please contact Eddie Oldfield, Senior Lead, Projects, via telephone (506-440-3854) or by email (eoldfield@questcanada.org).

APPENDIX - WHO PARTICIPATED

Name	Title and Organization	Energy Mapping Workshop Oct 7, 2021	CEEP Dev Workshop Nov 10, 2021	CEEP Impl Workshops Apr 20 and May 3, 2022	Review Workshop: Energy Mapping, CEEP Development and Implementation Feb 1, 2024
Jason Walsh	Territory Manager, Liberty Utilities	✓	✓		
Ghislaine	Deputy Mayor, Town of St.	✓	✓	✓	

Wheaton	Stephen				
Jeremy McShane	Operations/Maintenance Coordinator, Town of St. Stephen	✓		✓	✓
Kev Sumner	Director of Community Services, Town of St. Stephen	✓	✓	✓	
Sara Mudge	Community Energy Specialist, NB Power	✓			
Rory Pickard	Technical Service Lead, Dillon Consulting	✓	✓	✓	
Zen Hiew	Business Development Manager, Liberty Utilities	✓			
Alexander Gopen	Planner, SNBSC	✓			
Sean Morton	Director of Protective Services		✓	✓	
Alex Henderson	Planner, NB Service Commission		✓		
Kendall Kadatz	Future St. Stephen		✓	✓	
Eric Timmins	QUEST Canada	✓	✓	✓	
Kareema Batal	QUEST Canada	✓	✓		
Ericka Wicks	QUEST Canada		✓		
Anna Volc	QUEST Canada		✓		
Eddie Oldfield	Senior Lead, Projects, QUEST Canada		✓		✓
Helda Renyaan	QUEST Canada			✓	
Rob Kerr	Senior Associate, QUEST Canada			✓	
Norma Panetta	Lead, Projects, QUEST Canada				✓
Malsi Angekumbura	Lead, Projects, QUEST Canada				✓