



Net-Zero Communities
Accelerator Program



SUMMARY OF COMMUNITY ENERGY AND EMISSIONS PLAN DEVELOPMENT WORKSHOP

February 2024



MUNICIPAL DISTRICT OF ST. STEPHEN

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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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1.0 EXECUTIVE SUMMARY

1.1 Background

As part of QUEST's Smart Energy Community Accelerator program (SECA), the Municipal District of St. Stephen is developing a Community Energy Plan (CEP) in order to achieve Milestone 3 of the Federation of Canadian Municipalities and ICLEI's Partners for Climate Protection Program. A Community Energy Plan identifies ways to reduce GHG emissions, support the local economy, increase competitiveness, create jobs, improve energy efficiency, and keep energy dollars local.

The Municipal District of St. Stephen and QUEST engaged community stakeholders to help inform the development of a Community Energy Plan. This report summarizes workshop results, including measures selected and recommendations for the CEP.

The proposed Community Energy Plan would contain 38 action strategies or projects whose potential reductions contribute to the overall community target recommended in the GHG Inventory of a 30 percent reduction in community GHG emissions below 2015 baseline levels. More specific potential ways of participating and emission reduction targets are included for each action strategy.

In the short term, the CEEP includes:

- Working closely with NB Power to promote the use of existing incentives for increasing energy efficiency retrofits and/or upgrades in residential, commercial, and heritage buildings.
- Improve public awareness of all available programs/incentives and where to go, to encourage clean energy conversion in the community through public website/outreach programs.
- Collaborating with community partners including Charlotte County Hospital to explore the creation of a district heat plan and future energy efficiency actions.
- Conducting studies for options for solar PV and solar thermal energy , waste and/or district heat utilization opportunities and measures to optimize water and wastewater systems.
- Improving public awareness on active transportation and idle free behavior.
- Continuing to implement the planning scheme pilot projects within the community while creating a building scheme bylaw and other related bylaws/policies to support the adoption of energy efficiency measures in new developments and encourage compact, mixed-use developments

The actions of the Municipal District of St. Stephen are similar to the actions in the CEPs of other nearby communities. This means that many of the Municipal District of St. Stephen CEP actions (e.g. anti-idling programs, residential and commercial energy efficiency retrofits, clean energy conversions, and the promotion of an EV network, etc.) can be achieved more cost-effectively using a regional approach. Public outreach or communications activities can also be delivered with more consistency across the region. It is recommended that the Municipal District of St. Stephen should reach out and consider working with neighboring communities and partner organizations (e.g. Eastern Charlotte Waterways or the regional service commission) to establish a regional coordinator position, or to advance specific projects. The regional coordinator would be responsible for ensuring the advancement of CEP actions

and stakeholder engagement, among other tasks. A sample job description and a list of skills and credentials needed are included in the Annex.

The community context needs to be incorporated into the development of a governance structure, communications and stakeholder engagement strategy, key performance indicator (KPI) framework, and the prioritization and implementation of actions within the plan

1.2 What this Report Covers

The former Town of St. Stephen, in partnership with QUEST, hosted a Community Energy Plan development workshop on Nov. 10, 2021. The workshop engaged local stakeholders and municipal staff to help identify actions/measures for a Community Energy Plan.

The workshop included an overview of planning for the CEP and an overview of the results from SEC Benchmark exercise conducted by QUEST. QUEST then facilitated an action planning exercise, engaging local stakeholders to compare and select measures to be included in a Community Energy Plan.

At the request of the community, potential bottom-up targets have been included with the action strategies worksheet. These possible targets take into account the recommended top-down targets from the community GHG inventory report, and are based on best practices and practices developed by peer communities. They are not meant to be prescriptive. Rather, they provide guidance for the community as it develops its targets. It is recommended that the targets are aspirational while remaining achievable and realistic. Further guidance can be found in the ICLEI and FCM resources.

In February 2024, QUEST held a review session with the new Municipal District of St. Stephen, to review the strategies selected and make updates as needed. This report contains a summary of the strategies selected. Preferred strategies are highlighted directly below, in 'Key Recommendations /Outcomes.'

1.3 Who Participated in the Workshop

The workshop included representatives from the Town of St. Stephen (both municipal staff and elected officials), the NB Regional Service Commission, NB Power, Liberty Utilities, local consulting firms, and economic development agencies, as well as team members from QUEST. The total number of participants was seven community representatives. A total number of four participants took part in the review session. See Annex 5 for a list of workshop participants.

2.0 CEEP ACTION PLANNING EXERCISE

2.1 Key Recommendations and Outcomes

All CEEP action strategies are included as a separate [spreadsheet](#). Participants reviewed all the action strategies provided by QUEST Canada, discussed additional actions, and assigned each one a lead, priority level, timeframe, and cost — and whether it needs a study, funding, or supporting policy.

2.1.1 Energy Efficiency

Participants expressed support for:

1.Clean Energy Conversion (heating/cooling) - Fuel furnaces are less efficient than electric heaters, and other alternatives exist. Converting heating sources to more efficient methods such as natural gas, electric heaters, mini-splits, or forced heat will allow for a reduction in energy consumption and switch to more environmentally friendly means. This can help lower energy costs, maintenance costs, peak loads, and GHG emissions.

This measure should be taken along with improving the envelope of buildings.

Priority High Medium Low

Priority	Strategy for Implementation	Lead	Additional Details	Start Date
High	a. Through public website/outreach, improve awareness of all available programs/incentives and where to go, to encourage clean energy conversion in the community.	Communications staff (TBD)	Low-cost strategy	2024-2025

2. Energy Efficiency. Improving energy efficiency in the commercial, residential, and corporate (heritage and other municipal buildings) sector can be accomplished using a combination of public education, incentives, policy/bylaws, and partner initiatives. The community and partners could also develop a community retrofit project (combining energy efficiency initiatives).

Priority **High** **Medium** **Low**

Priority	Strategy for Implementation	Lead	Additional Details	Start Date
High	a. Encourage businesses in St. Stephen to apply for existing incentives from NB Power, such as incentives for energy audit and retrofit projects. (e.g. a small business lighting program, a retrofit program for commercial buildings, a net metering program, etc.).	NB Power, municipal staff, and Future St. Stephen	Low-cost strategy. It will not require additional funding, a feasibility study, or any supporting policy.	Ongoing
High	b. Encourage heritage building owners (private and corporate) to apply for funding and incentives for energy audit and retrofit projects (e.g. a residential rebates savings program, a total home energy savings program, a small business lighting program, a commercial buildings retrofit program, a net metering program, etc.).	NB Power	Medium- to high-cost strategy. It will not require additional funding, a feasibility study, or any supporting policy.	Ongoing
High	c. Develop and implement strategies to encourage homeowners to apply for incentives from NB Power for energy audit and retrofit projects (e.g. residential rebates, a total home energy	NB Power	Medium- to high-cost strategy. It will not require additional funding, a feasibility study, or any supporting policy.	Ongoing

Priority	Strategy for Implementation	Lead	Additional Details	Start Date
	savings program, net metering programs, NB Power's community outreach program, etc.).			
High	d. Obtain data annually from NB Power and other groups about the number of incentives provided for commercial, heritage building, and residential efficiency retrofits — or new builds — in order to measure GHG impact.	Municipal staff (to start) - Facility Maintenance Coordinator	Low-cost strategy. It will not require additional funding, a feasibility study, or any supporting policy.	2024-2025
Medium	e. Develop sector-specific public education and communication campaigns using the guidelines for climate mitigation to encourage members of the community to consider energy efficiency strategies and incentives. <ul style="list-style-type: none"> i. For homeowners and multi-unit residential buildings (MURB), promote cost savings on energy bills. ii. For businesses, focus on “building green” and what that means for the business sector and the community. 	Municipal staff (to start) Communications staff(TBD) Facility Maintenance Coordinator	Low-cost strategy. It will not require additional funding, a feasibility study, or any supporting policy. Local business/commercial sector, NB Power and Liberty (Provide Information) can participate.	2024

Priority	Strategy for Implementation	Lead	Additional Details	Start Date
	iii. Heritage building owners			
Low	f. Conduct a study to determine need and technical and financial feasibility; then undertake a pilot to improve energy efficiency in the 199 Union Street Public Works heritage building.	Municipal Staff (CAO/Public Works) for municipally owned buildings	Medium- to high-cost strategy. It will require dedicated funding and a feasibility study. It will not require supporting policy. The community is selling heritage buildings. Other heritage buildings in the town are being bought and refurbished privately.	unknown
Low	g. Develop and adopt a building code bylaw beyond the 2011 provincial energy code — one that mandates minimum energy performance/efficiency standards or rating/labeling, for different types of buildings (e.g. Energy Star, net zero), and collect information through the permitting process (e.g. energy/GHGs saved through high-efficiency or net-zero developments).	Municipal staff (CAO) and potentially the GNB	Low-cost strategy. It is unknown if it will require dedicated funding. It will require a feasibility study and the introduction of supporting policy.	Unknown Follow Province
Low	h. Collaborate with community stakeholders to launch a community retrofit pilot project targeting new/existing MURB developments with	Outside organization	Low-cost strategy. It will require dedicated funding and a feasibility study. It will not	Unknown

Priority	Strategy for Implementation	Lead	Additional Details	Start Date
	funding from the FCM Green Municipal Fund.		require supportive policy.	

3. Other

Priority High Medium Low

Priority	Strategy for Implementation	Lead	Additional Details	Start Date
No priority level identified	<p>a. Make the following Municipal assets energy efficient.</p> <ul style="list-style-type: none"> - 199 Union Street - Public Works and Fire Department - Maxwell Crossing pumphouse for water supply (building is 110 years old, Well driven, treated, pumped) - New sewage treatment facility 	-	<p>Maybe access Green Municipal Fund and New Construction incentives from NB Power</p>	-

2.1.2 Distributed Energy Resources

Participants expressed support for:

1. Waste Energy and District Heat. This entails using a renewable or waste heat source, or sources; piping the heat underground; converting homes and businesses to district heat; and monitoring and managing load, among other processes. A technical study helps the community to understand all the components required and their cost.

Priority High Medium Low

Priority	Strategy for Implementation	Lead	Additional Details	Start Date
High	<p>a. Collaborate with businesses and organizations such as the Charlotte County Hospital and the industrial park to explore opportunities for integrating waste energy or expanding district heat.</p>	<p>CAO (generally). Alex Hendersen to connect with CCH</p>	<p>Low-cost strategy. Does not require dedicated funding. Does not require a feasibility study nor policy changes to implement.</p>	2025
High	<p>b. Conduct a technical and financial feasibility study to explore the creation of a district heat system through Charlotte County Hospital. The study could be focused on utilizing the planning office's property near the hospital that has been identified as a prime site for future development. Consider the viability of connecting to the old apartment buildings across the street.</p>	<p>Dillon Consulting to undertake study, with approval from CAO, Planning Office (holds the RFP); Public Works</p>	<p>High-cost strategy. It will require dedicated funding and a feasibility study. It will not require policy changes/implementation.</p>	2025
High	<p>c. Conduct a technical and financial feasibility study to explore the expansion of the Garcelon Civic Centre district heat including the hotel and municipal buildings around it. Ask if there are neighboring properties close to the GCC that could take advantage of their heat surplus: the new hotel, the library, or the restaurant?</p>	<p>Dillon Consulting to undertake study, with approval from CAO, Planning Office (holds the RFP); Public Works</p>	<p>High-cost strategy. It will require dedicated funding and a feasibility study. It will not require policy changes/implementation.</p>	2025

Priority	Strategy for Implementation	Lead	Additional Details	Start Date
Medium	d. Develop a bylaw to require the appropriate areas/developments to connect to district heat. This step would accompany any successful district heat project development with the industrial park and Charlotte County Hospital.	Municipal District of St. Stephen in partnership with SNBSC	Low-cost strategy. It will not require dedicated funding or a feasibility study. It will require policy changes/implementation.	2025

2. Solar Photovoltaic Arrays or a Community Solar Farm. Solar photovoltaic (PV) arrays provide an opportunity for municipalities to produce power for the grid, which would reduce greenhouse gas emissions and long-term costs. Municipalities can also enable citizens to 'lease' panels (for a GHG/power credit). The reduction in GHG emissions depends on parameters such as the type and size of the project, the amount of kWh generated/offset, and the province's GHG coefficients for electricity, oil, and gas and the cost of the measure.

Priority High Medium Low

Priority	Strategy for Implementation	Lead	Additional Details	Start Date
High	a. Undertake a study of one or more options for solar PV and solar thermal in two target areas: <ul style="list-style-type: none"> i. The area around the sewage treatment facility (to power the facility) ii. The industrial park area, particularly for a potential cannabis growing operation 	CAO (Dillon Consulting could do the study)	Medium- to high-cost strategy. Can be lowered with external funding. Will require a feasibility study and dedicated external funding. It will not require supporting policy.	2025

Priority	Strategy for Implementation	Lead	Additional Details	Start Date
	It is recommended that the study outline potential risks, costs, and payback periods. The municipality can then pilot a solar initiative.			

3. Solar PV (Rooftop or Ground Mount). Solar photovoltaic (PV) systems provide opportunities for municipalities and citizens to produce power for use on site (i.e. net-metered), which would reduce greenhouse gas emissions and long-term costs. The reduction in GHG emissions depends on parameters such as the type and size of the project, the amount of kWh generated/offset, and the province’s GHG coefficients for electricity, oil, and gas and the cost of the measure.

Priority High Medium Low

Priority	Strategy for Implementation	Lead	Additional Details	Start Date
Medium	a. Work with community partners (such as Future St. Stephen and public works groups) to explore the installation of solar PV on school buildings and larger entities such as the Superstore.	Municipal staff and Future St. Stephen	Low-cost strategy. Will not require funding, a feasibility study, or supporting policy. It will require exploring community interest to identify potential strategic partners.	2025
Medium	b. Apply for funding from the FCM, the NB Environmental Trust Fund, and NB Power incentive programs to undertake a solar PV project on a municipal building to act as a pilot project in the community.	Municipal staff (including CAO), community services and public works	Low-cost strategy. It will require dedicated funding and a feasibility study. It will not require supporting policy.	2025

4. Micro-Hydro Site. Local features may present opportunities to generate electricity from hydro power. For example, there may be an existing dam, or pipeline, a stream that could be dammed, or gravity-fed outfalls that could be fitted with a turbine. A municipality that wishes to pursue micro-hydro must identify and assess the feasibility of potential in-stream, outfall, or dam installation and potential to tie into the grid. A limiting factor of a micro-hydro project could be location of the turbine in relation to the existing power grid. The costs of connecting to the grid must be factored in as part of the viability assessment.

Priority High Medium Low

Priority	Strategy for Implementation	Lead	Additional Details	Start Date
Low	<p>a. A. Conduct a study for the creation of a micro-hydro site at the water waste treatment facility. A combined solar and micro-hydro project at this site could be more viable than each individually. It is recommended that the study consider flow, distance to grid, and potential generating capacity to determine feasibility.</p>	<p>The CAO with support from SNBSC, a local solar developer, and an engineer</p>	<p>Medium-cost strategy. It will require dedicated funding and a feasibility study. It will not require supporting policy.</p>	<p>2027 (TBD)</p>

2.1.3 Transportation

Participants expressed support for:

1. Active Transport. The town of St. Stephen may encourage active transport and commuting (where transit exists). In addition to reducing GHGs, active transportation can help to reduce traffic congestion, reduce parking congestion, promote active living, and contribute positively to air quality and human health. Active transport networks also contribute to a more inclusive community and help bring cultures together.

Priority High Medium Low

Priority	Strategy for Implementation	Lead	Additional Details	Start Date
High	a. Encourage citizens to forego single occupancy vehicles for active transport by launching an education campaign — targeting school zones — to promote kids walking to school again. Ideas could include a walking school bus program where kids walk to school together in groups.	Municipal staff, community services and the school system	Low-cost strategy. It will not require additional funding, a feasibility study, or any policy changes.	Ongoing
Medium	b. Apply for FCM GMF funding to provide infrastructure and encourage active transportation to link the area of Milltown (lower SES community) to St. Stephen, and the area of Ganong to St. Stephen to encourage more workers to use active transport.	Municipal staff, community services, and SNBSC (planning)	Low-cost strategy. Will require dedicated funding (FCM) and a feasibility study. No supporting policy is required.	Ongoing

2. Fuel Efficient/Electric Vehicle (EV) Replacements. EV systems use electrical energy to power an electric motor, which ultimately reduces the need for gasoline and the dependence on damaging fossil fuels in a large part of the transportation sector. This transition will not only be more cost-effective for buyers in the long-term — as EVs are cost-effective and deliver great performance — it will also contribute to addressing the community’s overall GHG emissions and air pollution levels. Aside from hybrid vehicles, the two most common types of EV options include fully electric vehicles and plug-in hybrid vehicles.

Priority	High	Medium	Low
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Priority	Strategy for Implementation	Lead	Additional Details	Start Date
High	a. Investigate whether the municipality has a goal to introduce a certain percentage of electric vehicles to the municipal fleet.	Directors	Low-cost strategy. It will not require additional funding, a feasibility study, or any policy changes or implementation.	2022
High	b. Investigate whether the Anglophone School District - South have a GHG reduction policy which could inform further actions toward fuel efficiency and emission reduction actions related to transportation.	Kendall	Low-cost strategy. It will not require additional funding, a feasibility study, or any policy changes or implementation.	2022
High	c. Apply for funding options, including the FCM GMF (for municipally owned vehicles and for car sharing if possible), Eco Action (Environment Canada – if led by a community organization/NGO), and the NB Environmental Trust Fund.	Municipal staff, community services and SNBSC (planning)	Low-cost strategy. It will not require additional funding, a feasibility study, or any policy changes or implementation.	As needed
Medium	d. Take action to:	Municipal Department	Medium to high cost strategy	Ongoing / as needed

Priority	Strategy for Implementation	Lead	Additional Details	Start Date
	<ul style="list-style-type: none"> - improving commercial fleet (taxis/hire cars/delivery service) fuel economy bylaws, - Implement registration fees or road-user charges - Switch municipal fleet of vehicles to electric/hybrid/low-carbon - enable use of municipal electric vehicles by community organizations when not in use by the municipality - Implement car share programs 	Heads and CAO, can decide to replace municipal vehicles with electric/hybrid. There is an EV car share program too in the region.	<p>Will not require conducting a study. Funding will be required through grants and budget. It will also require a vehicle replacement policy.</p> <p>Can be done co-procurement with others</p>	
Low	e. Launch a public education campaign to promote the benefits of switching to fuel efficient vehicles, highlight available rebates/programs, identify locations of EV charging stations, and address barriers to adoption.	Municipal Staff - Community Services and Communications (TBD)	Low-cost strategy. It will require dedicated funding. But it will not require a feasibility study or supporting policy.	Ongoing

3. Idle-Free Policy. The term “idling” refers to running a vehicle’s engine when the vehicle is not in motion. This can occur while a car is being heated, cooled, stopped at a red light, or waiting while stationary with the engine running. The consequences of engine idling include wasting fuel and money, and causing excessive engine wear — and it is a main contributor to air pollution and the release of GHG emissions. For the average vehicle with a three-litre engine, every 10 minutes of idling costs more than one cup of wasted fuel — one half of a litre if your vehicle has a five-litre engine. It is important to keep in mind that every litre of gasoline you use produces 2.4 kilograms of CO₂.

Priority	Strategy for Implementation	Lead	Additional Details	Start Date
High	a. Create an anti-idling (or idle-free) social marketing campaign in conjunction with the active transportation public education campaign (2.1.3.1.a) that aims to encourage behavior change through prompts, norms, and incentives.	Municipal Staff - Community Services and Communications (TBD)	Low-cost strategy. It will not require funding, a feasibility study, or supportive policy for implementation.	2025
High	b. Develop public awareness tools in conjunction with the active transportation public education campaign (2.1.3.1.a) including printed materials, forums, webinars and free presentations, social media campaigns, media engagement, and editorials.	Municipal Staff - Community Services and Communications (TBD)	Low-cost strategy. It will not require funding, a feasibility study, or supportive policy for implementation.	2025
High	c. Obtain information on whether the Town of St. Stephen has a goal to reduce idling by municipal fleet vehicles to help inform an anti-idling Policy in the future.	Directors	Low-cost strategy. It will not require funding, a feasibility study, or supportive policy for implementation.	2022
High	d. Adopt a policy or bylaw targeting municipal vehicles that clearly states unnecessary idling is unacceptable to the municipality.	COA and department heads	Low-cost strategy. It will not require funding or a feasibility study. But it will require the creation of internal policy for municipal staff.	Ongoing

4. Transportation Demand Management - A comprehensive suite of transportation demand management actions could be undertaken in the community. This could include supporting a diversity of active transportation options (to the degree that fits local context; ex. cycling networks, bike share programs, pathways, and pedestrian-friendly sidewalks). This could also include supporting/providing public transit options with considerations for equitable access. For small or rural communities, options might be rideshare/carshare programs or buses. For mid-sized cities options also include city buses, rideshare/car share, LRT, passenger rail stop. For large cities options include most or all of the above including multiple stops for LRT, Passenger rail, rapid transit.

Priority **High** **Medium** Low

Priority	Strategy for Implementation	Lead	Additional Details	Start Date
Medium	a. Take actions for transportation demand management and active transportation including the development of multi-use trails.	Municipal staff, community services	Low-cost strategy. Will require dedicated funding (FCM) and a feasibility study. No supporting policy is required.	Ongoing

2.1.4 Water

Participants expressed support for:

1. Optimizing Water and Wastewater Systems

Priority **High** **Medium** Low

Priority	Strategy for Implementation	Lead	Additional Details	Start Date
High	a. Retrofit older municipal streets that don't have	Public works and SNBSC	Medium-to-high cost strategy. It is unclear if the	Ongoing

Priority	Strategy for Implementation	Lead	Additional Details	Start Date
	split water to reduce energy consumed in the pumping and treatment of water.		<p>continuation of this strategy requires additional funding, a feasibility study, or policy changes.</p> <p>The community is changing all the water meters to smart water meters.</p>	
High	b. Continue to support the pilot project that is optimizing water and wastewater systems in the town.	Public works and SNBSC	Medium-to-high cost strategy. It is unclear if the continuation of this strategy requires additional funding, a feasibility study, or policy changes.	Ongoing

2. Optimizing Stormwater Management Systems.

Priority **High** Medium Low

Priority	Strategy for Implementation	Lead	Additional Details	Start Date
Medium	a. Implement measures to reduce peak flow, such as stormwater retention ponds/tanks, greening roofs, bioswales, permeable pavement, etc. Also consider and prepare for changing	SNBSC (Planning) - Public Works department	Low-cost strategy. Will not require additional funding or a feasibility study. Will require the creation of a stormwater policy or guidelines, and may require	2026

Priority	Strategy for Implementation	Lead	Additional Details	Start Date
	weather patterns related to climate change that may impact infrastructure. Measures could include : <ul style="list-style-type: none"> - Stormwater retention ponds/tanks - Bioswales - Rain gardens - Permeable pavement - green roofs 		potential updates to the land use bylaw.	

2.1.5 Waste

Participants expressed support for:

1. Organic Waste Collection. Participants expressed that waste management activities are a low priority for the town at this time. Participants expressed some interest in municipal compost, however actions on this strategy are not likely. The service commission believes that it's too hard to get a pure input, contamination is very likely, and the soil will be unusable. Commercial composting, however, is more likely.

Priority High Medium Low

Priority	Strategy for Implementation	Lead	Additional Details	Start Date
Low	a. Pursue a commercial composting project because of its lower tipping fees compared to municipal composting.	SNBSC (waste management)	Medium- to high-cost strategy. Will not require a feasibility study. It is unclear if it will require the introduction or change of policy. It will require funding.	Unknown

2.1.6 Land Use

Participants expressed support for:

1. Updating Municipal Plan, Land Use Plan, Policies, and Bylaws. Land use decisions have a long-term impact on greenhouse gas emissions. The location of roads, services, green spaces, utilities, and how people move across the land are all determined by land use planning. The Town of St. Stephen can reduce and avoid GHG emissions by updating the municipal plan, designating areas for densification, promoting mixed-use development, and avoiding sprawl. Participants identified the following implementation strategies as priority strategies.

					Priority	High	Medium	Low
Priority	Strategy for Implementation	Lead	Additional Details	Start Date				
Medium	<p>a. Adopt policies to encourage compact, mixed-use, and transit-oriented developments with a diversity of building types. Start with using properties owned by the municipality as pilot projects and create the development scheme bylaw.</p>	Alex @ SNBSC (Planning), Mayor and Council to approve	Cost is unknown. It requires dedicated funding (CMHC), and a feasibility study. It also requires the creation of the development scheme bylaw for municipal properties.	Ongoing				
Medium	<p>b. Update policies or processes in place to support energy efficiency in new developments across the community. Start with using properties owned by the municipality as pilot projects and imbed energy efficiency targets above code.</p>	Alex @ SNBSC (Planning), Mayor and Council to approve	Cost is unknown. Requires dedicated funding (CMHC). Requires a feasibility study. Requires the creation of the development scheme bylaw for municipal properties.	Ongoing				

<p>Medium</p>	<p>c. Present Plan amendments to Council. Council can set greenspace targets for new developments to promote healthy outdoor living, and modify zoning requirements that determine lot sizes, building performance standards, and building requirements in vulnerable areas such as flood plains.</p>	<p>CAO office, and Planning Board to present to Council</p>	<p>Cost details are TBD</p>	<p>Whenever amendments are presented to council</p>
<p>No Priority identified</p>	<p>d. Embed local energy supply options into land-use plans, policies, tools and processes. This could include through :</p> <ul style="list-style-type: none"> - Updating the Official Community Plan (to include local and/or renewable energy options and to encourage energy efficiency in new developments - Listing renewable energy supply options as permitted land uses in the community's zoning bylaws where applicable This could include provisions for Wind, Solar PV, District Energy, CHP, energy storage, or a green zoning bylaw. - Promoting the use of local energy supply options or energy efficiency through Community Improvement Plans, Site Plan Control or Plans of Subdivision requirements using the development permit 	<p>Can be explored by the Planning board</p>	<p>This is partly encouraged in Municipal Plan</p>	<p>-</p>

	<p>system, for example, development charges, adjustments or deferrals.</p> <ul style="list-style-type: none"> - By-law or policy to permit right-of-ways for district energy infrastructure 	
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2.1.7 Other

Participants expressed support for:

1.Community Energy Challenge - In order to encourage energy efficiency and clean energy conversion in the residential sector, invite households to take part/register in a Community Energy Challenge. The Challenge could center on achieving energy efficiency/GHG reductions over a one month or twelve month period, and be submitted via webpage. The energy/GHG reductions could be quantified through various data, for example: # of households, types of measures, energy bills/usage, comparing average energy consumption per square foot, etc.

Priority
High
Medium
Low

Priority	Strategy for Implementation	Lead	Additional Details	Start Date
Medium	<p>a. Organize a Community Energy Challenge once a year, especially around Fall/Winter. It can be based on measuring energy efficiency efforts over one month or over a full year.</p>	Communications Department	<p>Low-cost strategy It will not require conducting a study. But it may need funding. Can challenge other communities like Saint Andrews.</p>	2025

3.0 ENERGY MAP EXERCISE

3.1 Key Recommendations and Outcomes

Map Exercise Results

Goal

Provide participants with a hands-on energy mapping experience to enable them to share knowledge, discuss local opportunities and apply basic techniques for identifying opportunities in a spatial context, including planning local efficiency, clean energy, transportation, and land use actions.

Overview

The map exercise engaged multiple stakeholders, using a map to identify opportunities for their CEEP and initiatives. The exercise enabled participants to denote these opportunities, and discuss various aspects and viewpoints. Here is a summary of the exercise:

Summary of Results

1. Energy Efficiency

Using green stars and circles, the participants identified potential buildings and neighborhoods for energy efficiency improvements. **These are listed here:**

- Buildings for improving energy efficiency:
 - a) The industrial park area around Church Street and Queensway Way
 - b) The buildings around the GCC, including the community pool, library, and municipal building
 - c) The fire hall in Union Street
 - d) The Public Works building in Union Street
 - e) The Border Arena
 - f) Various building services facilities
 - g) The hospital buildings
 - h) The Maxwell Crossing Pump House (External to the boundaries of the map)
 - i) The RCMP station
 - j) The fire Hall in Oak Bay, and the Oak Bay community hall
 - k) Various houses that are from the 1950s to 80s
 - l) Various old farm houses

- Buildings that were identified for For net-zero
 - m) The Garcelon Civic center building
- No potential net-zero sites have been identified

2. Waste and Renewable Heat

Using red stickers and stars, the participants identified potential waste and renewable heat opportunities. **These are listed here:**

- a) The Auraco site to the east of Church Street could be a waste heat source
- b) The GCC buildings could be a waste heat source from the ice plant
- c) The Ganong Factory near Chocolate Drive could be a potential waste heat source
- d) The town's hospital buildings could be potential waste heat sources
- e) The wastewater treatment facility could be a potential waste heat source
- f) The Privately owned Cannabis building near Progress Drive could undergo clean heat conversion
- g) The Government building near Progress Drive could undergo clean heat conversion
- h) No heat conversion sites have been identified

3. Renewable Power

Using green stickers and stars, the participants identified opportunities to integrate renewable power. **These are listed here:**

- a) The open land to the east of St. Stephen Drive East could be a potential site for wind and/or solar power generation
- b) The open land to the south of St. Stephen Drive West could be a potential site for wind and/or solar power generation
- c) The wastewater treatment facility could be a potential micro-hydro site for clean power conversion. It could be feasible to harness the potential energy from water flow over the lagoon
- d) The GCC building has a flat roof and could be a good location for rooftop solar panels
- e) The Civic Centre could be a site for rooftop solar panels
- f) The old hydro dam /transmission infrastructure could be a potential solar site. Only municipal land is a ballfield
- g) The municipal land next to the airport could be a potential solar site
- h) An area siting for utility scale solar, on municipal land
- i) The municipal land, near transmission(near the reservoir road) could be a potential solar site
- j) The municipal land near Progress Drive could be a potential solar site
- k) The municipal green space or the cleared land area near the Energie NB Power operations center office could be a potential solar site

4. Land Use

Using various colors of shading, participants identified zones for densification, mixed use, and restricted development. **These are listed here:**

- a) The educational building area east of King Street is a mixed-use site for employment and schools. Could continue the mixed-use designation and densification by adding residential developments

- b) The industrial park area is expected to expand and therefore could be a potential site for mixed-use development and densification (such as housing projects) if the zoning is changed
- c) The area surrounding Young Street and William Street has high walkability and proximity to amenities and therefore could be a potential site for densification efforts.
- d) The area near Pleasant Street could be a potential site for mixed use development.
- e) The area near Progress Drive could be a potential site for mixed use development.
- f) The area near Boundary Street could be a potential site for mixed use development.

5. Transportation

Using yellow stickers, purple lines, and blue stars participants identified opportunities for transit amenities, EV charging, trail connectivity and inter-modal hubs. **These are listed here:**

- a) The main shopping district around the area of Young Street has potential for EV charging stations and an active transportation network connecting Riverfront Trail all the way up to Kings court, ideally parallel to King Street
- b) The industrial park area near Churchill Street is a key destination for the town and has potential for a new EV station
- c) The Post Office Park area is a key destination in the town and a potential site for a connected transportation network
- d) Milltown is an opportunity area that could benefit from active transportation infrastructure
- e) A location near newly paved walking trail at waterfront has potential for a new EV station
- f) The existing EV charging station at the Civic Centre is a Key transportation destination and it has three outlets (L2, L3) and an existing one at five Kings.
- g) A location near the superstore has potential for a new EV charging station.
- h) A location near the Public Works Garage closer to Union Street has potential for a new EV charging station.
- i) A newly paved trail extending 1.4 km, known as the St. Stephen Waterfront Trail, has recently been completed near the waterfront
- j) A location near Oak Bay beach has potential for a new EV charging station.

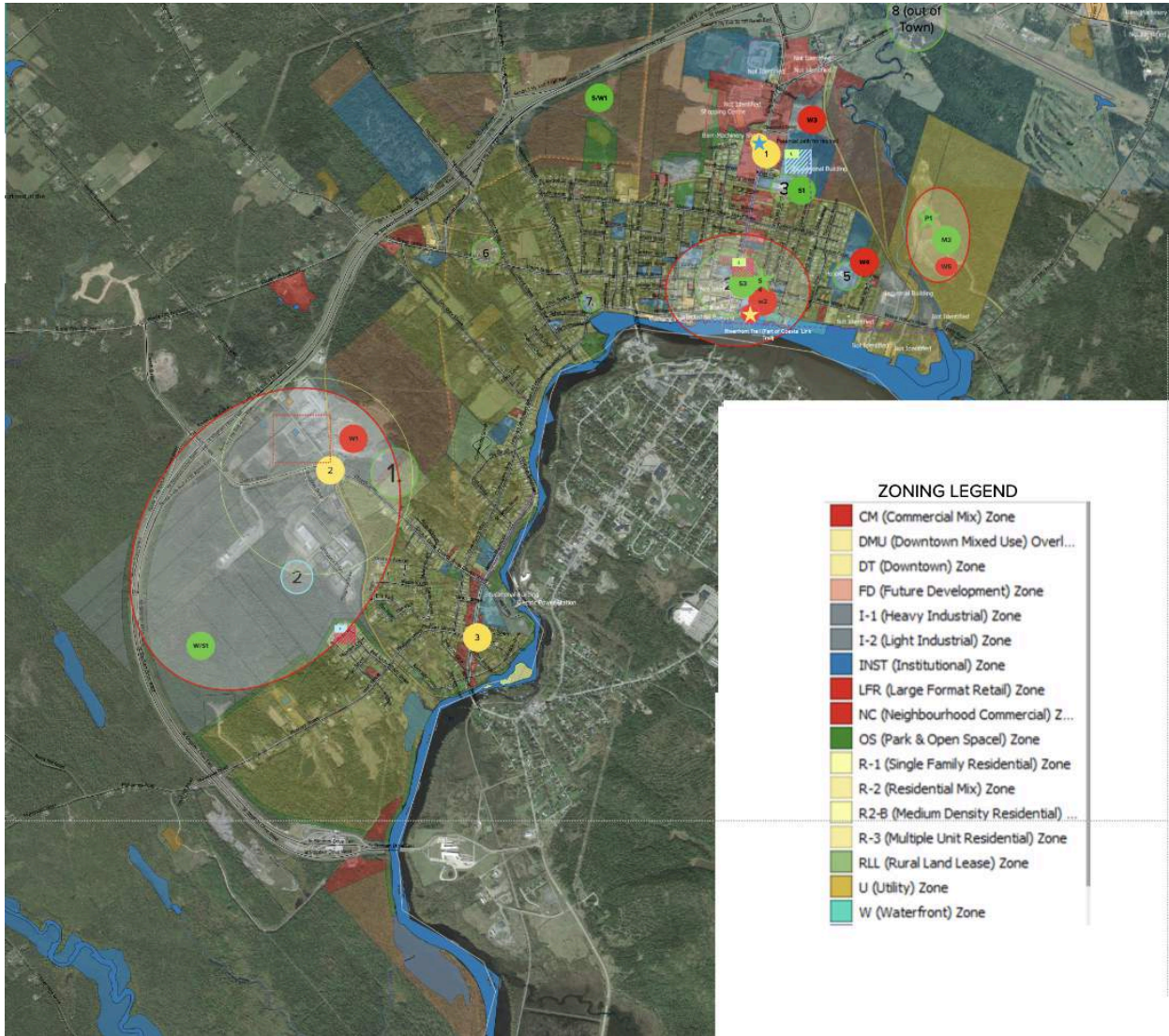
6. Smart Energy Networks

Using a red marker and yellow stars, participants identified potential opportunities for district energy and district heat.

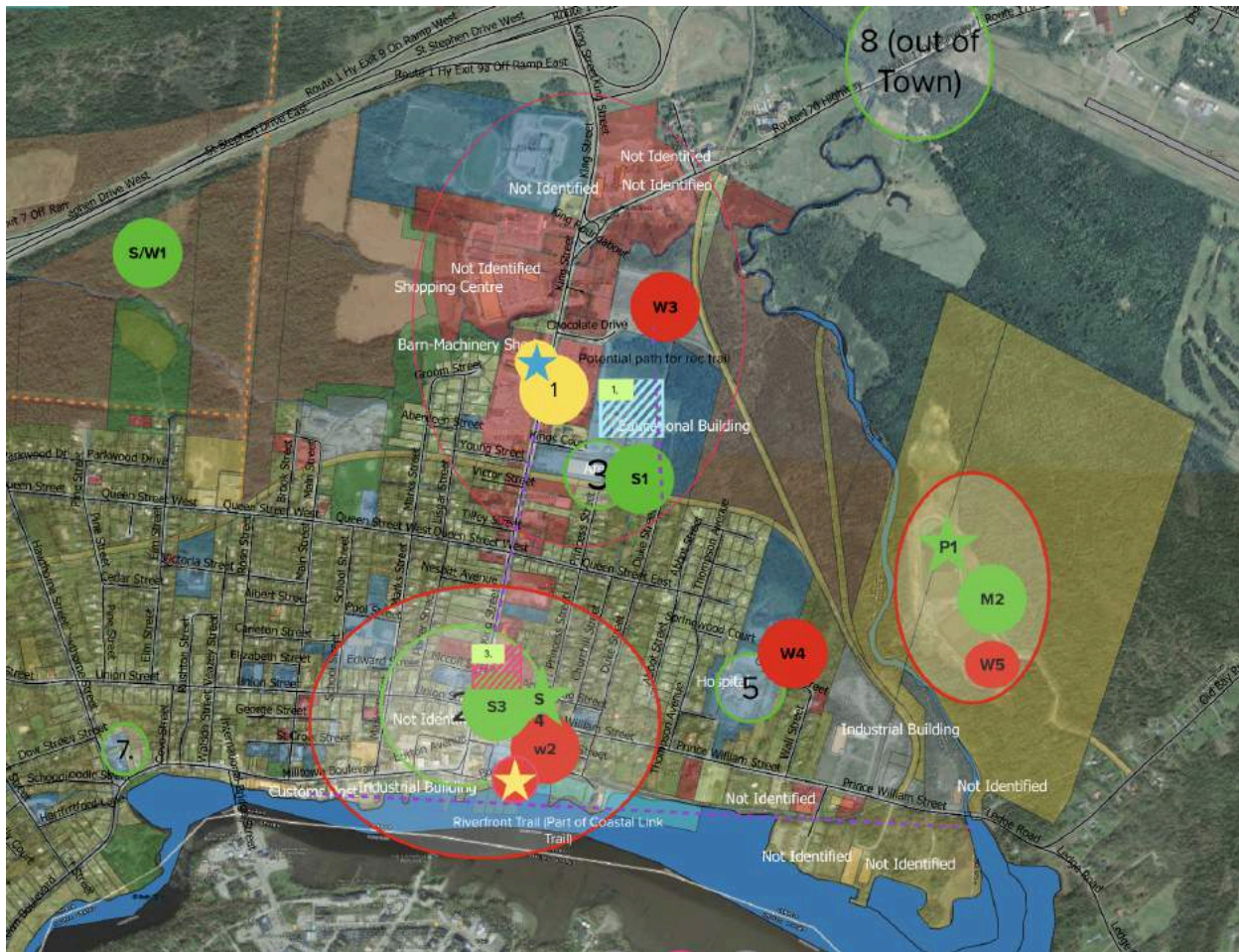
- a) The area around the industrial park could be a potential site where both waste heat is generated, and deploying other renewables is a possibility
- b) The GCC area north of Riverfront Trail
- c) The area around the lagoon/wastewater treatment facility
- d) The shopping center district surrounding Young Street and the Educational Building

7. Map Images (photos of marked-up maps, and of the exercise)

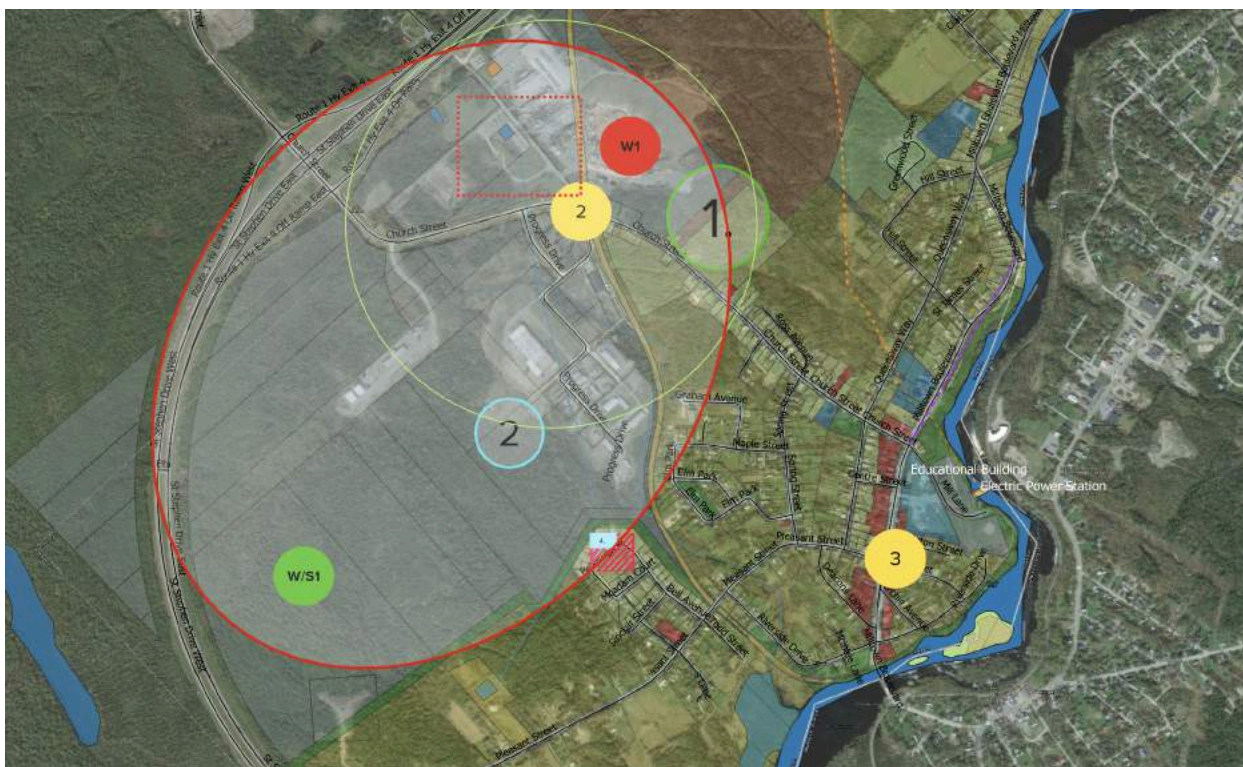
Map Images 1 (2021)



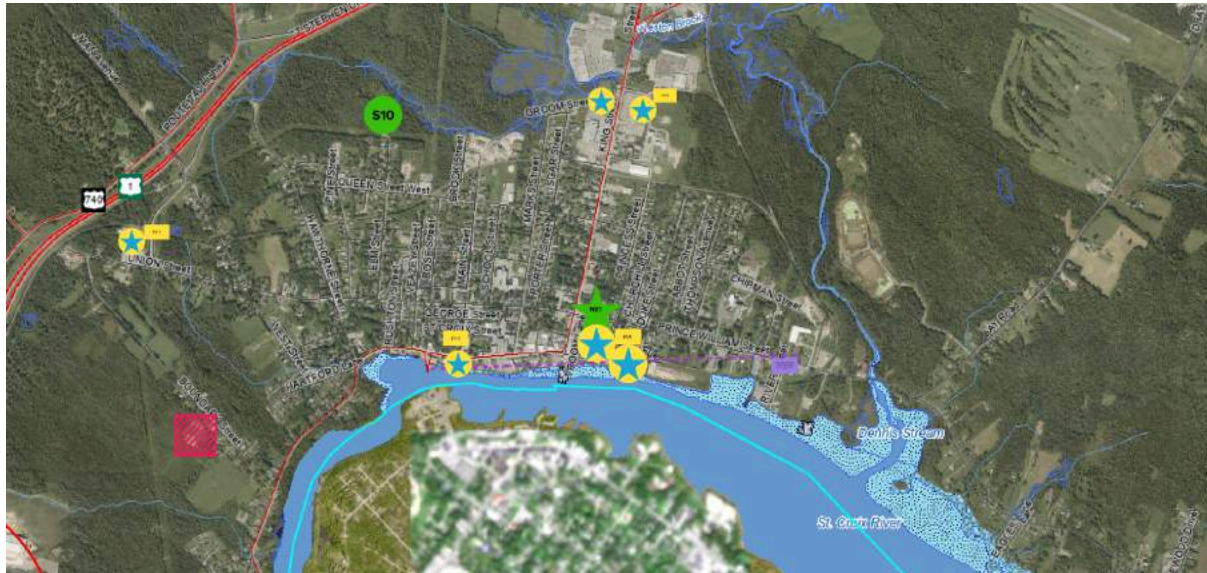
Map Images 2 (2021)



Map Images 3 (2021)



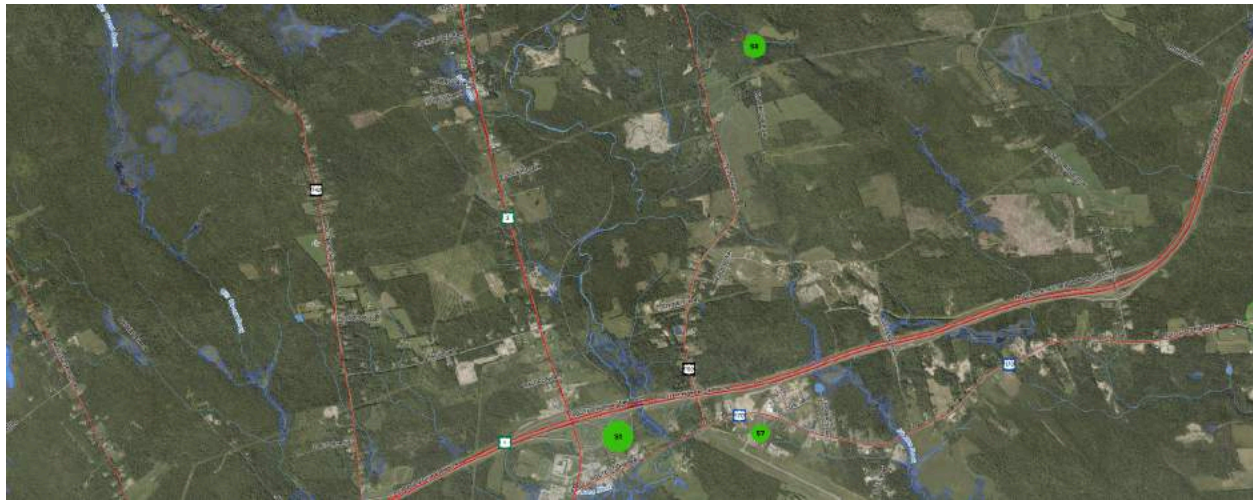
Map Images 6 (2024)



Map Images 7 (2024)



Map Images 8 (2024)



Disclaimer: Maps were produced with best available data at the time. Decisions based on map information should be taken into context — and QUEST will not take responsibility for any damages caused by decisions made based on these maps.

High level Summary of Key Findings

Based on the results of the pre-survey and the workshop, the Municipal District of St. Stephen has the following opportunities to advance community energy and emissions reduction initiatives.

Table 1: Description of improvement and opportunities

Areas	Key Areas for Improvement / Opportunities:
Energy Efficiency	<ul style="list-style-type: none"> ● Energy efficiency retrofits for ● 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: ● 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)

	<ul style="list-style-type: none"> ● 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

4.0 SUMMARY OF PRIORITIZED ACTIONS

For each action selected, participants determined a priority, cost level, lead responsible, partner actions, and preliminary strategy for implementation. They also identified whether it needs a study, funding, or supporting policy. Here is a summary of the priority of actions identified above:

In summary, the **high priority actions** (Ongoing or to start by 2024/2025):

- Improve public awareness of all available programs/incentives and where to go, to encourage clean energy conversion in the community through public website/outreach programs.
- Encourage businesses and homeowners to utilize incentives from NB Power for energy efficiency upgrades.
- Utilize incentives provided by NB Power to upgrade and retrofit heritage buildings with energy efficiency improvements.
- Continue to collect data from NB Power on commercial, residential, and heritage building incentive utilization.
- Collaborate with community partners (e.g. businesses) to explore opportunities for integrating waste energy or expanding district heat.
- Conduct a technical and financial feasibility study for waste and/or district heat utilization opportunities.
- Conduct a study for an option, or various options, for solar PV and solar thermal energy in the community.
- Launch an education campaign to encourage citizens to forgo single occupancy vehicles for active transport.
- Apply for funding to increase fuel efficiency and/or electric vehicle replacement within the municipal fleet.
- Create an anti-idling (or idle-free) social media marketing campaign.
- Develop public awareness tools to promote idle-free behavior in the community.
- Adopt a public and/or internal policy or bylaw that clearly states unnecessary idling is unacceptable.
- Conduct a feasibility study to identify measures to optimize water and wastewater systems.

The **medium priority actions**:

- Create a public education campaign to encourage the adoption of energy efficiency actions/behaviors.
- Work with community partners such as Future St. Stephen, public works organizations, and others to explore the installation of solar PV on buildings.
- Apply for FCM funding to undertake rooftop solar projects in the community.
- Apply for NB Environmental Trust Fund funding for the educational components of a solar pilot project, or to help finance the pilot itself.
- Apply for suitable NB Power Incentive Programs (e.g. a total home energy savings program, a commercial buildings retrofit program, a net metering program, etc.) for suitable solar PV projects.

- Study potential micro-hydro sites for flow, distance to grid, and potential generating capacity to determine feasibility.
- Adopt policies to encourage compact, mixed-use, and transit-oriented developments with a diversity of building types.
- Update policies or processes in place to support energy efficiency in new developments across the community.
- Present municipal plan, land use plan, policy, bylaw amendments to the Council so that they can set greenspace targets for new developments, modify zoning requirements, building performance standards, etc.
- Apply for FCM GMF funding to provide infrastructure and encourage active transportation.
- Support the development and adoption of multi-use trails in the community.
- Implement actions for fuel efficient vehicle replacement such as improving commercial fleet, applying registration fees or road-user charges, enabling and use of municipal electric vehicles.
- Upgrade stormwater management policies and implement measures to reduce peak flow.
- Organize a Community Energy Challenge once a year.

The low priority actions:

- Adopt building code bylaws requiring minimum energy performance/efficiency standards or rating/labeling for different types of buildings (e.g. Energy Star, net zero), and collect information through the permitting process (e.g. energy/GHG saved through high-efficiency or net-zero development).
- Launch a community retrofit project or community efficiency financing program (or study) with funding from the FCM's Green Municipal Fund.
- Develop a bylaw to require connections to district heat.
- Identify opportunities within the community to produce/use renewable natural gas.
- Conduct a campaign to educate citizens, promote benefits of switching to fuel efficient vehicles (e.g. energy cost savings, GHG reduction, etc), highlight available rebates/programs, and address barriers (e.g. range anxiety).
- Explore opportunities in the community for organic waste collection, such as municipal and/or commercial compost
- Conduct a study to determine needs, and technical and financial feasibility and then undertake a pilot to improve energy efficiency in heritage buildings.

Other actions, with no priority assigned:

- Make the 199 Union Street - Public Works, Fire Department, Maxwell Crossing pumphouse and the New sewage treatment facility energy efficient.
- Embed local energy supply options into land-use plans, policies, tools and processes.

Participants recommended to study and/or pilot specific measures first and then access funding (e.g. via the FCM's Green Municipal Fund, NB Environmental Trust Fund, etc.) for implementing the actions — as well as to support stakeholder engagement and communications activities.

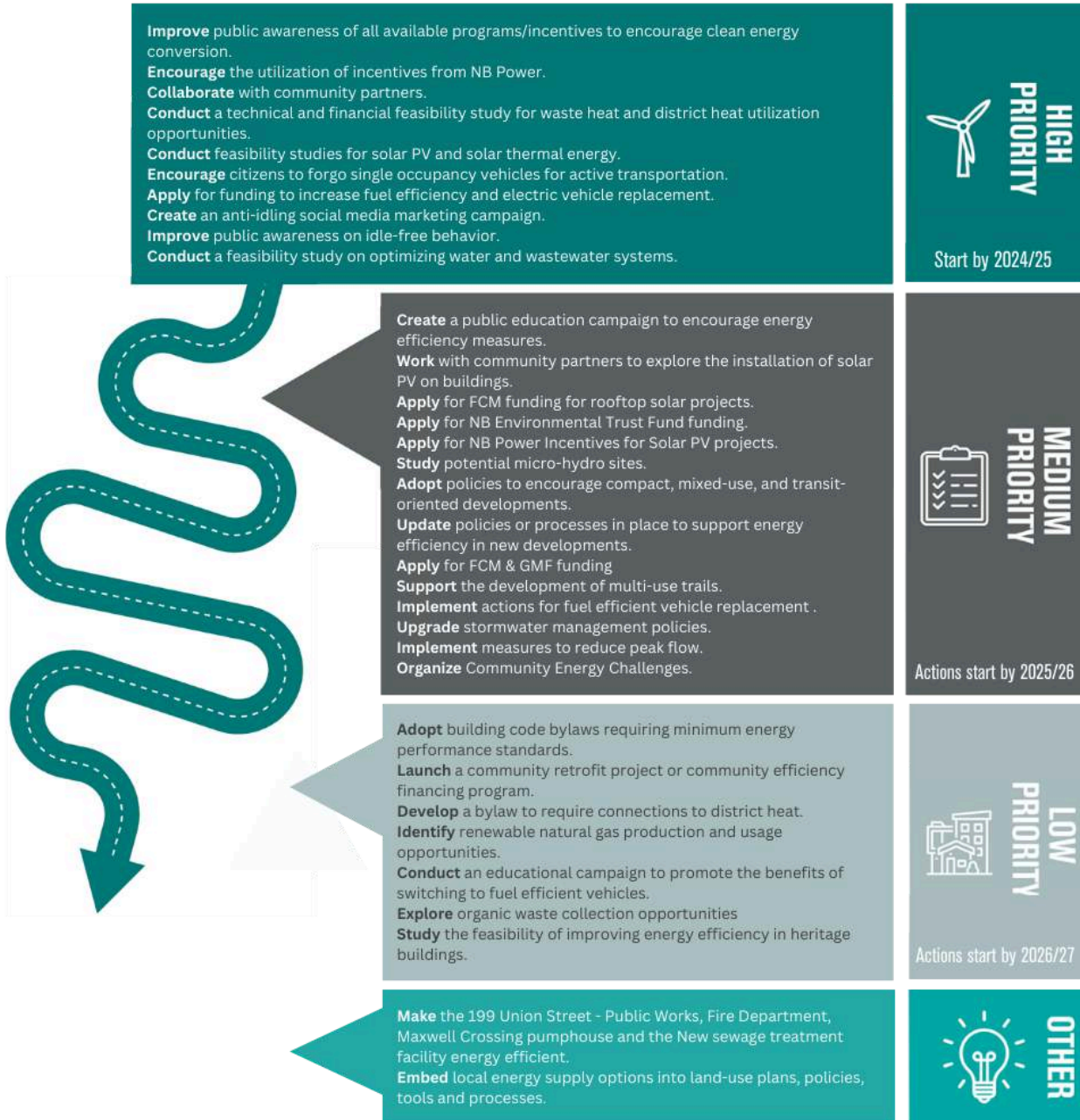
Participants identified the following policies that may be needed to support CEP actions:

- Amend, create and extend the municipal building code bylaw(s) requiring minimum energy performance/efficiency standards or rating/labeling for different types of buildings to better meet the standards set forth in the 2011 Energy Code.
- Develop a policy or policies, and/or a bylaw or bylaws requiring connection to district heat for future developments in the community.
- Develop and adopt a development scheme bylaw which zones properties owned by the municipality for specific development schemes in order to facilitate the process of building compact, mixed-use developments, and the adoption of energy efficiency measures in new developments
- Develop an internal anti-idling policy for municipal staff.
- Add a stormwater management policy and/or guidelines into the development/land use bylaw to help facilitate the adoption of new strategies for stormwater management

Utilities (e.g. NB Power) that already offer programs/incentives will expand those, and pilot smart grid (e.g. storage), renewables, and smart metering programs. It is important to align CEP actions with utility programs or incentives that may become available. It was noted there is a huge opportunity for energy efficiency in St. Stephen, and a need for an energy efficiency strategy for low-income housing (e.g. using FCM GMF funding) and heritage buildings — although challenges exist. Additional funding mechanisms are listed in the Annex 3.

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

Figure 1: Preliminary Roadmap for Implementation



5.0 POTENTIAL NEXT STEPS

- Participate in QUEST Canada’s CEP Implementation Workshop, as part of the NB SECA program. This will help your community establish a governance structure (including internal capacity and committees), a communications and stakeholder engagement strategy, and a strategy for data collection and monitoring key-performance indicators. It will also help the process of reviewing and refining strategies for CEP actions. This has since been completed (in 2022).
- Benefit from economic impact analysis of your CEP, as part of the NB SECA program.
- Have the council review and approve a GHG emissions inventory and Community Energy Plan, and submit to the FCM-ICLEI Partners for Climate Protection program for Milestone 3: pcp@fcm.ca.
- Examine the potential of establishing a regional coordinator or coordinators — for example within the regional services commission — to support St. Stephen to advance CEP actions (e.g. public education, anti-idling, energy efficiency, etc.). See sample job description in the Annex. If the first option proves unfeasible, examine the potential to assign or hire municipal staff.
- Obtain funding (e.g. from the NB Environmental Trust Fund, FCM Green Municipal Fund, etc.) for hiring the coordinator position, convening committees, advancing CEP actions, and performing communications/public education.
- Develop a budget based on annual priorities/studies. Include requests into annual budgets, and prepare funding proposals for specific projects (e.g. NB Environmental Trust Fund, FCM Green Municipal Fund, etc.), where needed. Some actions require no capital investments, only small amounts of labor time (e.g. communications support), or outsourcing (e.g. design, marketing, studies, etc.).
- Launch studies or pilots according to the implementation timeline. Analyze outcomes, and develop full-scale community-side projects or capital projects — based on financial/technical feasibility — where needed. Each of the Actions in the spreadsheet identifies whether a study or pilot is needed.
- Bring related policy decisions to council as recommended by staff/committees, or as identified within each action Strategy. Policy decisions rest with the council.
- Align with programs offered by organizations such as NB Power, the FCM, and federal and provincial governments, whenever possible. These programs provide incentives for the successful implementation of actions related to the CEP, including: energy efficiency, clean energy conversion, renewable energy, transportation, public education, and other related initiatives.
- Report successes, impacts, and benefits to the community through an annual report card. Conduct further outreach throughout the year, as needed in alignment with CEP actions.
- Continue to consult QUEST Canada’s [resource library](#). This digital document is full of resources and links that can help your community on its journey to net-zero.

6.0 CONCLUSION

QUEST Canada appreciates the opportunity to work with the Municipal District of St. Stephen to help inform development of your Community Energy Plan, as part of the NB Smart Energy Community Accelerator Program.

This report summarizes the proposed recommendations and feedback received during the workshop on Nov. 10, 2021 and February 1, 2024 to inform or serve as a foundation for developing your Community Energy Plan.

7.0 ANNEXES

ANNEX 1: Skills needed and job description template

Skills and Credentials a dedicated staff person could have:

Knowledge and Skills of the Designated Staff Person

- Communication, stakeholder and community engagement
- Project management and facilitation
- Leadership, change management, strategic planning
- Familiarity with local government processes and legislation
- Policy and program development
- Energy literacy, sustainability practices
- Quantitative data analyses (spreadsheet software)
- Mapping (geographical information system software)
- Business case development, feasibility and financial analysis

Academic Credentials and Certifications

- Degree in planning, public policy, engineering, sustainability, environmental science, resource management, business or communication
- Registered Professional Engineer or Planner, Member of Canadian Institute of Planners
- Certified Community Energy Manager (CCEM) or Certified Energy Manager (CEM)
- Registered Engineering Technologist
- LEED Professional Accreditation (LEED AP)
- Project Management Professional (PMP)

Sample Job description, *Based on Region of Waterloo, ON*

Full Time Temporary (3 Year Contract)

The Community Energy Program Manager (CEPM) is responsible for implementation of the Community Energy Investment Strategy (CEIS) for Waterloo Region, a collaborative undertaking by the Region, Area Municipalities, and Local Electric and Natural Gas Utilities.

The ideal candidate will provide leadership and coordination for the program, and serve as a champion for community energy investment projects. Specific roles include business plan and budget development, partnership facilitation, stakeholder engagement, promotion and awareness-raising (campaign and event organization), project initiation and support, grant application coordination, program monitoring, and progress reporting.

Key Responsibilities

Program Management: Develop annual work plans, with prioritized actions and budget implications, for approval by the Governance Committee. Work with partners and stakeholders to implement. Monitor, evaluate progress, and provide update reports.

Support Projects: Promote, develop and assess, from a technical and business perspective, project plans and proposals for key community energy initiatives involving multiple stakeholders. Coordinate discussions, and assist with solidifying commitments and securing resources.

Report and Advise: Prepare and deliver briefing materials, data reports, and presentations for Governance Committee approvals. Provide strategic advice and recommendations on issues involving multiple levels of consideration, impacts, and stakeholders.

Build Relationships: Establish and maintain relationships with key stakeholders and project partners, including all levels of government, and private sector, not-for-profit, and industry organizations. Support the development and negotiation of agreements with federal, provincial, municipal, private, and non-government organizations.

Community Engagement and Support: Raise energy awareness through targeted outreach, education, and by providing technical and business expertise. Work proactively with partners and stakeholders to advance community energy goals, and to coordinate communication efforts.

Research: Conduct research and studies (e.g. industry sector trends, development strategies, funding sources and programs). Synthesize information to support and inform CEIS. Determine and recommend the best course of action in response to challenges and issues.

Desired Credentials (Related Knowledge, Skills and Abilities)

- Minimum undergraduate degree in a relevant field (e.g. engineering, environment science and studies, business administration), graduate degree in same or Certified Energy Manager (CEM) considered an asset
- 5-8 years of relevant work experience
- Combined technical (energy or engineering background) and business skill sets
- Understanding of and familiarity with:
 - Systems design thinking

- All aspects of energy (electricity, natural gas, transportation fuels, etc.) and greenhouse gas emissions
 - Community energy and emissions planning and energy management principles
 - The opportunities and challenges associated with distributed generation and renewable energy implementation
 - Facility energy efficiency projects and audits impacting energy and fuel consumption
 - Energy conservation and demand side management principles, programs and incentives
- Successful track record of program management and implementation and partnership development, including experience leading initiatives with multiple stakeholders and competing interests
 - Demonstrated ability to facilitate multi-stakeholder committees and discussions towards progressive action
 - Proven expertise in developing innovative ways of engaging, influencing, and working with the community
 - Effective written and verbal communication skills particularly in terms of presenting and reporting to decision-makers
 - Applied research and data analysis skills using qualitative and quantitative methodologies to create and evaluate briefing materials, performance metrics, and project recommendations
 - Familiarity with municipal processes (e.g. planning and development approvals) along with good business and political acuity
 - Ability to exercise discretion and confidentiality regarding strategic directions, initiatives, and stakeholder interests
 - Strong organizational skills, attention to detail, and the ability to work independently with minimal supervision
 - Time management skills to manage multiple tasks, and to determine and achieve mandated deadlines amid shifting priorities and competing demands

Work Environment

The Community Energy Program Manager reports directly to the CEIS Governance Committee, with day to day oversight by Grand River Energy (GRE), a joint venture company owned by the local electric utilities created to enable the local development of Distributed Energy Resource technologies. Work takes place within an office environment located in Kitchener, Ontario, with occasional travel for partner and stakeholder meetings and site visits.

Compensation and Benefits

Compensation is commensurate with education and experience, and includes a competitive benefits package. The position is initially for a three year term and has the potential to be extended subject to funding availability and upon review and evaluation of the CEPM meeting the identified work plan goals and objectives.

Application Process

Interested and qualified applicants are invited to submit their resume including work experience, education and references to:

Applications must be received by : _____

We sincerely thank all applicants for their interest in this position; however, only those selected for an interview will be contacted. If you are selected to participate in the recruitment process for the position to which you have applied and require a disability-related accommodation, please communicate this at time of notification of interview process.

ANNEX 2: Embed in municipal plans, policies, and processes

Although CEEP measures are focused on community-side energy and GHG emissions reduction, the Municipal District of St. Stephen has a critical role to ensure a supportive environment. Successful implementation of the CEEP requires embedding measures within other municipal plans, policies, processes, and decisions. The lead coordinator and internal committee are best positioned to ensure the CEEP is embedded into:

- Updates of plans
- Council strategic plans
- Official plans and regulations
- Secondary plans and plan amendments
- Community improvement plans
- Zoning and building code by-laws
- Site plan control
- Height and density bonusing
- Plan of subdivision
- Development permits
- Development cost charges
- Parking charges
- Budget

This can be accomplished through regular meetings of an internal committee or by coordinating inter-departmentally (on a case-by-case basis, or as part of Plan review), through ongoing processes (e.g. through permitting), as well as through council decisions (e.g. new policies or bylaws and budget decisions). Refer to [QUEST Canada’s CEEP primer](#) for more details on embedding the CEEP into other municipal plans, policies, processes, and more.

ANNEX 3: Funding for CEEP actions

It will be important for the municipality to identify and pursue funding in order to implement specific measures in the CEEP. Partners may fund their own efforts, and below are some potential strategies to secure additional funding for CEEP measures.

A good practice is to develop an annual budget for prioritized measures, considering the following over the expected life of the CEEP:

- Recognize not all actions need to be implemented immediately
- Distinguish which actions will be implemented year over year
- Determine potential partners, resources, and additional sources of funding, for each measure
- Develop a budget for every year of the action plan and update on an annual basis
- Utilize funding (e.g. from FCM) to conduct studies, pilots and projects

Strategies to secure financial resources

Sources	Description
Budget	Create budget item and fund for CEEP measures
Internal financing sources	<ul style="list-style-type: none"> ● Property taxes, tax levies ● Tax increment financing, local improvement charges ● User fees (on water, power and natural gas distribution system and waste) ● Development cost charges (DCCs) ● Green bonds
Local Incentives and Rebates	<ul style="list-style-type: none"> ● Natural asset management approach, full cost accounting and valuation of natural assets ● Estimate benefits from green infrastructure ● Combine funding with gas tax revenue ● Reinvest efficiency savings into low cost CEEP measures and community engagement
New accounting and decision-making tools	<ul style="list-style-type: none"> ● Consider natural asset management approach, full cost accounting and valuation of natural assets ● Estimate benefits from green infrastructure ● Combine funding with gas tax revenue ● Reinvest efficiency savings into low cost CEEP measures and community engagement.
Institutional grants and external sources of funding	Scan and submit funding applications to: <ul style="list-style-type: none"> ● Federal agencies and governments <ul style="list-style-type: none"> ○ Natural Resources Canada ○ Environment and Climate Change (ECC)

	<ul style="list-style-type: none"> ○ Infrastructure Canada programs ● FCM programs, including: <ul style="list-style-type: none"> ○ Green Municipal Fund ○ Municipalities for Climate Innovation Program ○ Municipal Asset Management Program ● Provincial programs and agencies (e.g. NB Environmental Trust Fund)
Loans	<ul style="list-style-type: none"> ● FCM low-interest loan (GMF) ● Municipal green bonds
Leverage private investments	<ul style="list-style-type: none"> ● Engage private sector to partner and financially support actions that improve community-side efficiency, clean energy or transport modes ● Ensure local chamber of commerce or others support efforts of small enterprises to improve energy efficiency
Economy of scales and synergies at the local level	<ul style="list-style-type: none"> ● Leverage existing initiatives or project by expanding and adapting their scope and collaborating with other departments (thinking beyond silos) ● Take a regional approach by collaborating with neighbouring municipalities ● Cost-share when a measure involves several communities (e.g. procurement)

FCM and ICLEI published a toolkit called [On the money: financing tools for local climate action](#), which explains how your municipality can leverage investors to help you take action on climate change in your community. This toolkit includes tips on how to harness people's power through group purchasing and community-owned renewable power. It also illustrates how to break capital barriers with local improvements and energy performance contracts and create a funding cycle with green revolving funds and green bonds.

The two following handbooks provide helpful, on-the-ground solutions to secure funding for energy resilient infrastructure that may be relevant to your community:

- [Bridgewater Financing Mechanism Scoping Study](#) (2019)
- [Community Energy Investment Strategy for Waterloo Region](#) (2018)

ANNEX 4: Methods for measuring the economic impact of CEEP

There are significant economic benefits from improving energy efficiency across the [community name] and implementing the full range of measures identified in the CEEP. It is important to quantify the economic impact of CEEP measures in order to gain support from senior decision-makers, elected officials, and the community.

Different methods of economic analysis serve various purposes and information. All methods are relevant to assessing the economic, environmental and social benefits of CEEPs, and to increase the knowledge of the economic impacts of these investments.

A thoughtful balance needs to be struck between informed decision-making and analysis paralysis. An economic analysis to support a CEEP should only go as deep as is needed. This can be undertaken by the lead coordinator or committee. The analysis could accompany annual updates on CEEP progress, requests for funding or new policies and bylaws, engagements with partners to advance key measures, and demonstrations of community economic, environmental, and social benefits.

Method	Purpose
Community energy cost	To discuss total community energy use in a metric everyone understands, in order to generate different conversations with elected officials and stakeholders. An example of this could be the dollar amount spent on energy or money leaving the community.
Financial feasibility	To screen and prioritize measures, programs, or portfolios to identify if and when the investment will breakeven.
Levelized unit energy cost	To compare the per kWh or per GJ costs of different energy generating technologies across the expected lifetime of the asset.
Marginal abatement cost curve	To compare GHG emission reduction options according to which will cost the least or deliver the most financial savings, and according to their potential impact on GHG reductions.
Community socio-economic benefits	To inform the decision-making process and stakeholders on the total value to the local community and economy of a CEEP, considering how expenditures recirculate through local businesses, households, and governments.
Cost benefits	To screen and prioritize measures, programs, or portfolios to identify if benefits over time exceed initial costs. It identifies a portfolio of measures that maximize the economic, environmental, and social benefits from CEEP implementation.

ANNEX 5: List of participants

List of Participants

Town of St. Stephen CEP Implementation Workshop
Wednesday Nov. 10, 2021

Name	Organization
Sean Morton	Director of Protective Services
Rory Picard	Dillon Consulting
Kev Sumner	Town of St. Stephen
Alex Henderson	Planner, NB Service Commission
Ghislaine Wheaton	Deputy Mayor, Town of St. Stephen
Jason Walsh	Territory Manager, Liberty Utilities
Ericka, Anna and Eddie	QUEST — shadow guests
Kendall Kadatz	Future St. Stephen

List of Participants

Municipal District of St. Stephen Review Session
February, 2024

Name	Organization
Jeremy McShane	Facility Maintenance Coordinator, Municipal District of St. Stephen
Eddie Oldfield	Senior Lead, Projects, QUEST Canada
Norma Panetta	Lead, Projects, QUEST Canada
Malsi Angekumbura	Lead, Projects, QUEST Canada

All participants agreed to be invited to a meeting of the external stakeholder advisory committee, once established.