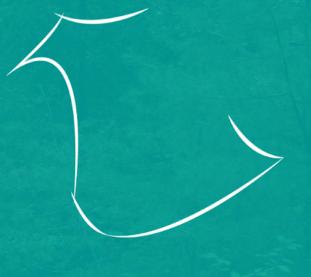


NEW BRUNSWICK SMART ENERGY COMMUNITIES ACCELERATOR PROGRAM

Community Energy and Emissions Plan Development Workshop Summary Report for the Town of Bayside, Chamcook and Saint Andrews Updated in 2023





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, convenes stakeholders and rights holders, and advises 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 <u>questcanada.org</u>.

Table of Contents

1.0 Executive Summary	4
1.1 Background	4
1.2 What this Report Covers	5
1.3 Who Participated in the Workshop?	6
2.0 CEEP Action Planning Exercise	6
2.1 Key Recommendations / Outcomes	6
2.1.1 Energy Efficiency	6
2.1.2 Distributed Energy Resources	11
2.1.3 Transportation	17
2.1.4 Water Conservation	21
2.1.5 Waste	23
2.1.6 Land Use	24
3.0 Energy Map Exercise	25
3.1 Key Recommendations / Outcomes	25
4.0 Summary of Prioritized Actions	26
5.0 Potential Next Steps	29
5.1 Potential Next Steps	29
6.0 Conclusion	30
7.0 Annexes	30
ANNEX 1 — Skills Needed and Job Description Template	30
ANNEX 2 — Embed in Municipal Plans, Policies, and Processes	33
ANNEX 3 — Funding for CEP Actions	34
ANNEX 4 — Methods for Measuring the Economic Impact of CEP	36
ANNEX 5 — List of Participants	37

1.0 Executive Summary

1.1 Background

As part of QUEST's Smart Energy Community Accelerator program (SECA), the Town of Bayside, Chamcook and Saint Andrews is developing a Community Energy and Emissions Plan (CEEP) in order to achieve Milestone 3 of the Federation of Canadian Municipalities and ICLEI's Partners for Climate Protection Program. A Community Energy and Emissions Plan identifies ways to reduce GHG emissions, support the local economy, increase competitiveness, create jobs, improve energy efficiency, and keep energy dollars local. In 2022, the Province of New Brunswick introduced a municipal reform process, which led to Saint Andrews and neighbouring communities amalgamating into the new **Town of Bayside**, **Chamcook**, and **Saint Andrews**.

As of the 2023 update, The Town of Bayside, Chamcook and Saint Andrews has successfully received Milestone 3 of the Federation of Canadian Municipalities and ICLEI's Partners for Climate Protection Program. It is now working to implement a local climate action plan as part of the Milestone 4 requirements.

The Town of Bayside, Chamcook and Saint Andrews and QUEST Canada engaged community stakeholders to help inform the development of a Community Energy and Emissions Plan. This report summarizes workshop results, including measures selected and recommendations for the CEEP, as well as the updated actions after the municipal reform process.

The original proposed Community Energy and Emissions Plan would contain **34 action strategies** or projects whose potential reductions contribute to the overall council approved Greenhouse Gas Emission reduction target of a 30 percent reduction in GHG emissions below 2020 baseline levels by 2034. More specific potential ways of participating and emission reduction targets are included for each action strategy.

Based on the original workshop results, in the short term, the CEEP could include:

- 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
- Collaborating with local businesses and organizations to explore opportunities for integrating waste energy or expanding district heat in the community
- Utilizing the data that emerged from the Energy Mapping exercise with QUEST Canada in collaboration with other municipalities to complete an Energy Technical Mapping Assessment and social acceptability analysis to help identify legally accessible land within the municipal boundary that has good wind regime, existing substation, appropriate setbacks, and social acceptance

Updates from the 2023 Review Session: The Town has completed some of the high-priority and medium-priority actions mentioned in the original workshop (2022), including:

- Changing the water metering system from a flat rate to a water meter system
- Updating the transportation master plan to include active transport networks and the use of e-bikes, in partnership with a private supplier.
- Adding more bike racks and bike repair stations

The actions in the Town of Bayside, Chamcook and Saint Andrews' CEEP are similar to the actions in the CEPs of other nearby communities. This means that many of the Town of Bayside, Chamcook and Saint Andrews CEP's 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 Town of Bayside, Chamcook and Saint Andrews 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**. The regional coordinator would be responsible for ensuring the advancement of CEEP 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. These were further defined during our original CEEP implementation workshop in May 2022 and updated during the Review Session in October 2023, as part of QUEST Canada's SECA program.

In October 2023, QUEST Canada collaborated with the Towns of Bayside, Chamcook, and Saint Andrews to update the action strategies for implementation, checking for any updates or changes made by the Town following the municipal reform process.

1.2 What this Report Covers

The former Town of Saint Andrews, in partnership with QUEST Canada, hosted a Community Energy and Emissions Plan development workshop on Nov. 15, 2021. The workshop engaged local stakeholders and municipal staff to help identify actions/measures for a Community Energy and Emissions Plan.

The workshop included an overview of planning for the CEP and an overview of the results from the SEC Benchmark exercise conducted by QUEST Canada. QUEST Canada then facilitated an action planning exercise, engaging local stakeholders to compare and select measures to be included in a Community Energy Plan. This report contains a summary of the workshop — preferred measures are described in Section 2.

At the request of the community, potential bottom-up community targets have been included with the action strategies worksheet. These possible targets take into account the council approved top-down targets, 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 action specific 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 October 2023, QUEST held a review session with the new Town of Bayside, Chamcook and Saint Andrews, 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 Bayside, Chamcook and Saint Andrews (both municipal staff and elected officials), the NB Regional Service Commission, NB Power, members of the Saint Andrews Environmental Advisory Committee and other key establishments in Saint Andrews, as well as team members from QUEST Canada. The total number of participants was sixteen community representatives. See Annex 5 for a list of workshop participants.

2.0 CEEP Action Planning Exercise

2.1 Key Recommendations / 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. Energy Efficiency. Improving energy efficiency in the commercial, residential, and corporate (heritage and other municipal buildings) sectors 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

Priority	Strategy for Implementation	Lead	Additional Details	Start Date	2023 Updates
High	a. Develop a community retrofit project with funding from FCM, specifically targeting the W.C. O'Neill Arena and surrounding buildings.	Municipal staff	Low-cost strategy. It will require additional funding, a feasibility study, and supporting policy.	2022 / 2023	The town obtained FCM funding to conduct a full energy study with a path to net zero for five of the town's largest emitting facilities
High	b. Develop additional incentives to	Municipal staff,	Low- to medium-cost	2023	Partly being done, however,

Priority	Strategy for Implementation	Lead	Additional Details	Start Date	2023 Updates	
	encourage homeowners, businesses and heritage building owners to improve the energy efficiency of heating systems.	council, NB Power	strategy. It is unknown if it will require dedicated funding or a feasibility study. It will require supporting policy to implement.		it no longer seems to be a priority for the time being.	
High	c. Adopt a public education strategy that includes knowledge sharing on public websites, newsletters and outreach initiatives to facilitates: i. Improving awareness of all available programs/incenti ves and where to go, to encourage clean energy conversion in the community, including NB Power incentives for businesses (e.g. small business lighting program, commercial buildings retrofit program, met Metering). ii. Improving public knowledge of pilot projects and programs	Environm ental Advisory Committe e and municipal staff	Low-cost strategy. It is unknown if it will require dedicated funding or a feasibility study. It will not require supporting policy to implement.	Ongo	The Clerk will lead the initiatives, and they have now been reclassified as Medium Priority instead of High Priority.	

Priority	Strategy for Implementation	Lead	Additional Details	Start Date	2023 Updates
	underway in the community to increase public confidence and engagement.				
High	d. Adopt a building code bylaw requiring minimum energy performance/efficienc y 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 development).	SW New Brunswick Service Commissi on and municipal staff	Low-cost strategy. It is unknown if it will require dedicated funding or a feasibility study. It will require supporting policy which will be brought to Council in June 2022.	2022	No longer seems to be a priority for the time being
High	e. Conduct a study to determine needs, and technical and financial feasibility, and then undertake a pilot to improve energy efficiency in Heritage Buildings.	Municipal staff	Low-cost strategy. It will require a feasibility study (to be included in the 2023 energy audit) and dedicated funding (through 2023 budget and FCM funding). It will not require policy for implementation.	2023	No longer seems to be a priority for the time being
High	f. Establish a policy that all building retrofits and new	Asset manager or	Low-cost strategy. It is unknown if it will require dedicated funding	Ongo ing	No longer seems to be a

Priority	Strategy for Implementation	Lead	Additional Details	Start Date	2023 Updates
	builds/developments use LEDs.	operation s manager (municipa lity)	or a feasibility study. It will require supporting policy.		priority for the time being
High	g. Pilot the installation of residential EV chargers. Pilot installations can be part of an overall community program, which consist of the provision of several public electric vehicle (EV) charging stations as well as the introduction of a residential home charger rental program. The use of electric vehicles will reduce combustion emissions and GHGs.	Municipal staff	High-cost strategy. It will require dedicated funding and a feasibility study. It is unclear if it will require policy to implement.	2025	No update
Medium	h. Obtain funds (from the FCM GMF) to undertake a feasibility study for a community retrofit project or community efficiency financing program in line with the PACE Program, that would include energy efficiency (e.g. improving building envelope) and clean energy conversion measures.	CAO	Low-cost strategy. It will require dedicated funding and a feasibility study. It will not require supporting policy for implementation.	2024	-Study required, led by NB Power and/or AFMNB The CAO will take note of the results of the studies.

Priority		rategy for plementation	Lead	Additional Details	2023 Updates	
Medium	i.	Organize a business 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.	EAC and the chamber of commerc e	Low-cost strategy. It will not require additional funding to implement or a feasibility study. It will not require a supporting policy to implement.	Ongo ing	The Clerk will lead the initiatives, the EAC and the Chamber of Commerce will be partners
Medium	j.	Develop a community efficiency financing program, with funding from the FCM.	Municipal staff, the Province of New Brunswick , and the FCM	Medium-cost strategy. It will require additional funding (FCM, PACE Atlantic) and a feasibility study. It is unknown if it will require supporting policy.	2024	The CAO will take note of the results from the studies conducted for this purpose.

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	2023 Updates
High	a. Conduct a technical and financial feasibility study to explore the creation of a district heat system.	Municip al staff	High-cost strategy. It will require dedicated funding (through FCM) and a feasibility study. It is unknown if it will require policy changes/implemen tation.	2023 -202 4	The town obtained FCM funding to conduct a full energy study with a path to net zero for five of the town's largest emitting facilities
Medium	b. Collaborate with businesses and organizations to explore opportunities for integrating waste energy or expanding district heat.	CAO, SNBSC, and EAC	Low-cost strategy. Does not require dedicated funding. Does not require a feasibility study nor policy changes to implement.	2022	No longer seems to be a priority for the time being
Low	c. Ensure new and existing municipal facilities consider waste heat opportunities by utilizing results from the energy audit/GHG Inventory to determine facility specific information around	Municip al staff - Clerk & public works	Low-cost strategy. It will require dedicated funding and a feasibility study. It is unknown if it will require policy to implement.	2023 - 2024	- The town obtained FCM funding to conduct a full energy study with a path to net zero for five of the town's largest

Priority	Strategy for Implementation	Lead	Additional Details	Start Date	2023 Updates
	energy use and waste heat opportunities.				emitting facilities - Priority change to High

2. Wind Energy. This entails creating opportunities to produce clean power, which would reduce greenhouse gas emissions and long-term costs. The reduction in GHG emissions depends on parameters such as: size of the system, performance of the units, and local wind regime.

Priority High Medium Low

Priority	Strategy for Implementation	Lead	Additional Details	Start Date	2023 Updates
Medium	a. Using the information identified in the energy mapping process, conduct an Energy Technical Mapping Assessment and social acceptability analysis to help identify legally accessible land within the municipal boundary that has good wind regime, existing substation, appropriate setbacks, and social acceptance. Key actions can include: i. Reaching out to QUEST Canada for advisory services related to	Municipal staff (CAO & Clerk) with support from NB Power, EAC, QUEST and Council	Low-to-medium-cost strategy. It will require dedicated funding and a feasibility study. It will not require policy to implement.	2021	Priority changed to Low. The town has developmen t bylaws that restrict the use of wind farms. TBD.

Priority	Strategy f	or Implementation	Lead	Additional Details	Start Date	2023 Updates
	n a ii. L n h t t I l	enewable energy mapping assessments. Liaising with other municipalities that have already done his, such as the Town of Sussex, to earn from their process and outcomes.				

3. 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

Priority	Strategy for Implementation	Lead	Additional Details	Start Date	2023 Updates
Low	a. Undertake a study of one or more options for solar PV and solar thermal in the community. It is recommended that the study outline potential risks, costs, and payback periods. The municipality can then pilot a solar initiative. Considering NB Power regulations, consider liaising with NB	Municipal staff (including CAO), public works, ECW and NB Power	High-cost strategy. Can be lowered with external funding (FCM). Will require a feasibility study and dedicated external funding. It is unknown if it will require supporting policy to implement.	2026	No update on this

Priority	Strategy for Implementation	Lead	Additional Details	Start Date	2023 Updates
	Power to ensure viability of the strategy.				

4. 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	Strategy for Implementation	Lead	Additional Details	Start Date	2023 Updates
High	a. Utilize the information and resources available in the municipal plan surrounding solar to educate residents and/or businesses on the potential and benefits of solar energy, and how the Town's bylaws work for these kinds of initiatives.	Municipal staff, with the EAC and SNBSC	Low-cost strategy. It will not require dedicated funding or a feasibility study. It will not require a supportive policy for implementation.	2022	Ongoing and to be led by the EAC.
High	b. Apply for funding from the FCM, the NB Environmental Trust Fund, and NB Power incentive programs to undertake a solar PV pilot project on the large roof of the arena building, or a mini solar grid with the municipal buildings immediately surrounding it.	Municipal staff (including the CAO), public works, ECW, and NB Power	Low-cost strategy. It will not require dedicated funding nor a feasibility study (if funding can be approved by council and supplemented with FCM grants. It will not require	2025-20 26	-Priority changed to Medium /LowOnce the study is complet ed, impleme ntation

Medium

Low

Priority

High

Priority	Strategy for Implementation	Lead	Additional Details	Start Date	2023 Updates
	i. Use the pilot project as a test project to measure performance and viability, and to use a public education opportunity for more community buy-in.		supporting policy.		will start in 2026.

5. 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

Priority	Strategy for Implementation	Lead	Additional Details	Start Date	2023 Updates
Low	a. Conduct a feasibility study for the creation of a micro-hydro site at one or more of the locations identified in the Energy Mapping exercise: reservoir, dam, and/or the wastewater treatment	Municipal staff, public works and the Department of Environmen t (for	Low-cost strategy. It will not require dedicated funding. It will not require a feasibility study. It will not require	2022	-Start date changed to 2028 -Need to look into feasibility/pos sibility of the identified sites with the necessary

Priority	Strategy for Implementation	Lead	Additional Details	Start Date	2023 Updates
	facility. The study will need to identify local restrictions as each site has some restrictions already identified by the community.	authority issues)	supporting policy.		authorities before proceeding further

6. Renewable Natural Gas project.

			Priority Hig	n Medium	Low
Priority	Strategy for Implementation	Lead	Additional Details	Start Date	2023 Update
Low	a. Conduct a study on the feasibility of integrating the methane collection infrastructure at the local landfill into the natural gas grid, instead of flaring it off. This would serve to reduce emissions attributed to the solid waste sector.	SNBSC, Liberty Utilities, and GNB	Medium- to high-cost strategy. It will require dedicated funding and a feasibility study. It will not require supporting policy.	Unknow n	Will not be pursued

2.1.3 Transportation

Participants expressed support for:

1. Active Transport. The Town of Bayside, Chamcook and Saint Andrews 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

Priority		rategy for plementation	Lead	Additional Details	Start Date	2023 Updates
High	a.	Encourage citizens to forego single occupancy vehicles for active transport using the Coastal Link mapping data to popularize the additional trail networks. The Town will encourage more community-wide challenges promoting active transportation activities.	Municip al staff - Recreati on Manager	Low-cost strategy. It will not require additional funding, a feasibility study, or any policy changes.	2022	Ongoing - continue into 2024
High	c.	The municipality can partner with ECW to promote the ECW's Electric Car Share program to the community.	Municip al staff and the EAC	Medium-cost strategy. It will not require dedicated funding or a feasibility study. It will not require a supportive policy to implement.	2024	Updating the transportation master plan to include active transport networks and the use of e-bikes, in partnership with a private supplier.

Priority	Strategy for Implementation	Lead	Additional Details	Start Date	2023 Updates
High	d. Update the Transportation Plan to include policy that guides rules of the road, distance from bike paths, how to incorporate new technologies such as segways or electric bicycles, and for bylaw enforcement. Create a map of the Active Transportation Network in the Plan.	Municip al staff	Low-cost strategy. It will require dedicated funding to update the plan. It will not require a feasibility study or a supportive policy to implement.	2022	-Ongoing - continue into 2023 -The Town adapted the policy, reviewed the motor vehicle bylaws, and conducted surveys. The results from that are the creation of a non-vehicular bylaw.

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

Priority	Strategy for Implementation	Lead	Additional Details	Start Date	2023 Update
Medium	a. In conjunction with the solar farm pilot project in 2.1.2.4b (above), implement an EV charging station pilot project in the same areas, particularly in the active	CAO in collaborati on with the Federal Capital Program,	Low-cost strategy. It will require additional funding. It will not require a feasibility study or any policy	2022	No update

Priority	Strategy for Implementation	Lead	Additional Details	Start Date	2023 Update
	trail networks for e-bikes and possibly the Huntsman.	EAC, and ECW	changes or implementation.		

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

High

Medium

Priority	Str	rategy for Implementation	Lead	Additional Details	Start Date	2023 Updates
Low	a.	Create an anti-idling (or idle-free) social marketing campaign that aims to encourage behaviour change through prompts, norms, and incentives. The community can build on the campaign created at the W.C. O'Neill Arena.	Municipal staff	Low-cost strategy. It will not require funding, a feasibility study, or supportive policy for implementation.	2023/ 2024	Ongoing
Low	b.	Adopt a policy or bylaw targeting heavy traffic/idling areas (e.g. schools, grocery stores, etc.) that clearly states unnecessary idling is unacceptable to the municipality.	COA and public works	Low-cost strategy. It will not require funding or a feasibility study. But it will require the creation of internal policy	2022	-Start date changed to 2024 -Priority changed to Medium

Priority	Strategy for Implementation	Lead	Additional Details	Start Date	2023 Updates
			for if not already in place for specific target sites.		

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, ride/car sharing, LRT use, and passenger rail stop. For large cities options include most or all of the above including multiple stops for LRT, passenger rail, and rapid transit.

Priority

High

Medium

Priority	Strategy for Implementation	Lead	Additional Details	Start Date	2023 Updates
High	a. Continue with the addition of multi-use trails to the trail network in Saint Andrews.	Municipal staff	Medium-cost strategy. It will not require funding, or a feasibility study. It will require supportive policy changes in the transportation plan when new additions are to be made to the trails.	Ongoing	No update
Medium	b. Adding additional public bike tire pumps, bike parking racks, and	Asset Manager	Medium-cost strategy. It will not require additional	Ongoing	Adding more bike racks

Priority	Strategy for Implementation	Lead	Additional Details	Start Date	2023 Updates
	additional designated bike lanes in the town.		funding for 2022 as the project is underway. Will require additional funding for future additions. It will not require a feasibility study or a supportive policy to implement.		and bike repair stations
	c. The Town has new initiative called "Hop On / Hop Off Bus"				

2.1.4 Water Conservation

Participants expressed support for:

1. Optimizing Water and Wastewater Systems, promoting water conservation, and enhancing stormwater management practices.

			Priority	High Me	edium Low
Priority	Strategy for Implementation	Lead	Additional Details	Start Date	2023 Updates
High	a. Move the town to a water meter system for conservation efforts instead of the current flat-rate metering.	Municipal staff	High-cost strategy. It is unknown if it we require dedicated funding. It will require a feasibility stud- and potentially	l	Changin g the water meterin g system from a flat rate to a water

Priority	Strategy for Implementation	Lead	Additional Details	Start Date	2023 Updates
			supportive policy to implement.		meter system
High	b. Update the Municipal Plan to address stormwater issues and potential mitigation strategies in the short and long term, particularly addressing increased precipitation in the future.	Municipal staff, Council and SNBSC	Low-to-medium cost strategy. Ilt will not require dedicated funding, but it will require a feasibility study and supporting policy for amending the municipal Plan.	2022	
Low	c. Work with the Algonquin Hotel and the Huntsman to implement and promote water conservation efforts.	Municipal staff, EAC and local stakeholder s	Low-cost strategy. It will not require dedicated funding, but may be eligible for retrofit funding opportunities. It will not require a feasibility study or supportive policy to implement.	2022	

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	Strategy for Implementation	Lead	Additional Details	Start Date	2023 Update
Low	a. Pursue a commercial composting project because of its lower tipping fees compared to municipal composting.	SNBSC (waste manageme nt) and municipal staff	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 may require funding.	Unknow n	

Medium

Low

Priority

High

2.1.6 Land Use

Participants expressed support for:

1. Updating the municipal plan, land use plan, and 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 Bayside, Chamcook and Saint Andrews 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	High	iviedium Low
Priority	Strategy for Implementation	Lead	Additional Details	Start Date	2023 Updates
High	a. Adopt policies to encourage compact, mixed-use, and transit-oriented developments with a diversity of building types. The following sites have been identified as high-potential for this strategy: i. Knowledge Park ii. Hunstman: possibility of incorporatin g housing, as the current bylaw allows for mixed use	SNBSC (planning), CAO, and local developers	Cost is unknown. It requires dedicated funding (CMHC or FCM), and a feasibility study. It may also require updates to the municipal plan and land use bylaw.	Ongoi ng	Some actions currently ongoing, Plan development could begin in 2023/2024

Medium	b.	Develop an educational component to new developments to help the community understand why the community is moving in this direction for future development, and what benefits exist. For example, educating about granny suites and net-zero developments of micro-suites in private gardens.	Municipal staff and SNBSC (Planning)	Low-cost strategy. It does not require dedicated funding or a feasibility study. It will not require supporting policy to implement.	2022	To be led by the EAC and anticipated year be 2024
Low	c.	In anticipation of local governance reform opening up more possibilities for the Town of Bayside, Chamcook and Saint Andrews beyond the current town limit, work to identify brownfield sites that could be used for renewable energy or green space.	Municipal staff and SNBSC	Low-cost strategy. It is unknown at this time if additional funding is required, or if there will be a need for a feasibility study or supporting policy.	2024	No update

3.0 Energy Map Exercise

3.1 Key Recommendations / Outcomes

The Town of Bayside, Chamcook and Saint Andrews participated in a community energy mapping workshop facilitated by QUEST Canada, as part of the SECA program. The workshop engaged a total of eight diverse stakeholders and staff through various exercises, including a map exercise using the digital tool Mural. In this, participants could identify local assets/strengths, as well as opportunities around energy efficiency, clean energy, transportation, land use, and more. These opportunities were denoted

on the map and discussed. The mapping exercise was followed by an action planning round. The process ensured diverse viewpoints could be captured and helped to establish a vision for a Smart Energy Community. The key findings can be used to inform a Community Energy Plan, and/or pursue specific community energy initiatives identified in this report.

Full outcomes and findings can be found in the Updated 2023 Community Energy Mapping Final Report.

4.0 Summary of Prioritized Actions

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

In summary, the updated **high priority actions** are (to start by 2022–2023):

- 1. Develop a community retrofit pilot project at the W.C. O'Neill Arena and surrounding buildings.
- 2. Develop and promote additional incentives for homeowners and businesses to convert their heating systems to more efficient sources of heat.
- Invest in creating a public education strategy that includes a website and outreach initiatives to increase awareness of pilot projects, incentive programs, and clean energy conversion opportunities.
- 4. Continue to support the adoption of a new building code bylaw that requires minimum energy performance/efficiency standards or rating/labelling, for different types of buildings.
- 5. Establish a policy that all building retrofits and new builds/developments use LEDs.
- 6. Conduct a technical and financial feasibility study to determine opportunities for waste energy use or district heat.
- 7. Apply for funding and implement a solar farm pilot project on the W.C. O'Neill Arena and surrounding buildings.
- 8. Develop a public education campaign to encourage residents to use active transportation, particularly to promote the car share program and the new trail networks.
- 9. Update the transportation plan to include active transport networks and the use of e-bikes.
- 10. Move the town from a flat rate water metering system to a water meter system to conserve water.
- 11. Adopt policies to support high-density, mixed-use developments, particularly at the Knowledge Park and the Huntsman.

The updated **medium priority actions** are (to start by 2023–2024):

- 1. Develop a community energy efficiency financing program with a public education campaign to educate the public on available incentives for energy efficiency retrofits.
- 2. Conduct an Energy Technical Mapping Assessment and social acceptability analysis to help identify legally accessible land within the municipal boundary that has a good wind regime, existing substation, appropriate setbacks, and strong levels of social acceptance.
- 3. Increase the number of EV charging stations locally and demonstrate feasibility through a pilot project at the arena and surrounding buildings (along with the solar farm pilot project).

- 4. Add more bike parking racks, bike lanes, and public bike tire pumps into the transportation demand management suite of actions.
- 5. Update the secondary municipal plan to address stormwater issues and potential mitigation strategies.
- 6. Develop a public education campaign to draw awareness to densification plans, such as granny suites and net-zero micro-suites in residential gardens.
- 7. Organize a business 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.

The updated **low priority actions** are (to start by 2024 or later):

- 1. In partnership with NB Power, undertake a study of one option or compare several options for solar PV and solar thermal in the community.
- 2. Identify locations in the town that have the potential for micro-hydro power generation.
- 3. Partner with Liberty Utility to identify opportunities to produce/use renewable natural gas.
- 4. Create an anti-idling public awareness campaign targeting high traffic/idling sites such as schools, grocery stores, etc.
- 5. Adopt a site-specific policy/bylaw that clearly states unnecessary idling is unacceptable to the municipality this sends a strong message.
- 6. Work with the Algonquin Hotel and Huntsman to implement water conservation strategies, including water conservation retrofits.
- 7. Engage in consultations to determine the feasibility of a commercial compost program.
- 8. Identify brownfield sites that could be used for renewable energy or green space.

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.

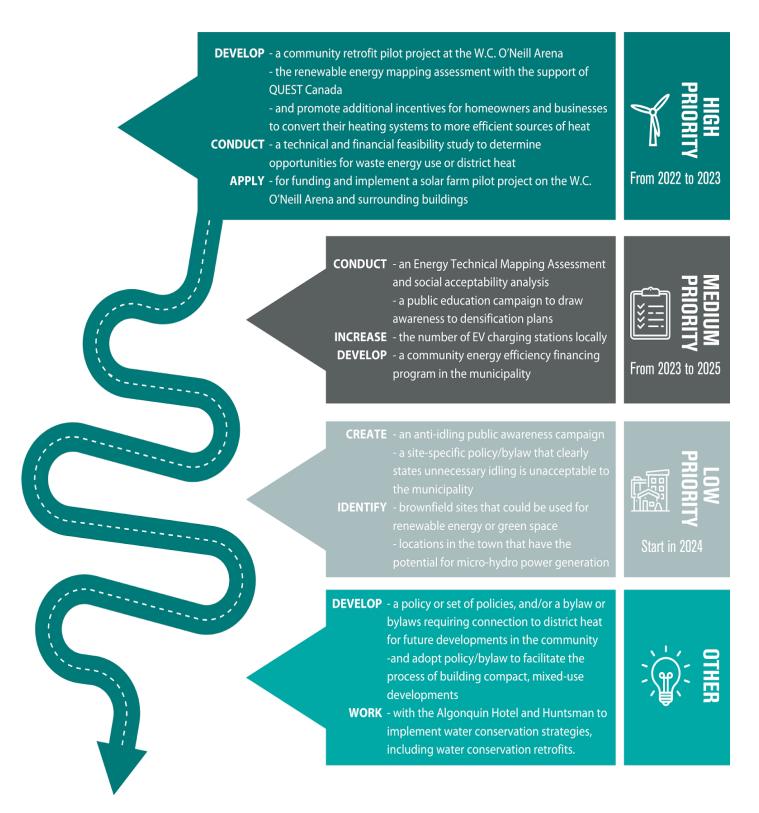
Participants identified the following **policies** that may be needed to support CEEP actions:

- 1. 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.
- 2. Develop a policy or set of policies, and/or a bylaw or bylaws requiring connection to district heat for future developments in the community.
- 3. Develop and adopt a policy/bylaw to facilitate the process of building compact, mixed-use developments, and the adoption of energy efficiency measures in new developments.
- 4. Develop a site-specific policy/bylaw for anti-idling.
- 5. Add or upgrade the 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 Saint Andrews, 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 CEP actions, the following graph illustrates a possible roadmap for implementation:

Figure 2: Preliminary Roadmap for Implementation



5.0 Potential Next Steps

5.1 Potential Next Steps

- 1. 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 the monitoring of key performance indicators. It will also help the process of reviewing and refining strategies for CEP actions.
- 2. Benefit from economic impact analysis of your CEP, as part of the NB SECA program.
- 3. 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.
- 4. Examine the potential of establishing a regional coordinator or coordinators for example within the regional services commission to support Saint Andrews 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 a dedicated municipal staff.
- 5. Obtain funding (e.g. from the NB Environmental Trust Fund, the FCM Green Municipal Fund, etc.) for hiring the coordinator position, convening committees, advancing CEP actions, and performing communications/public education.
- 6. 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, the 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.
- 8. Bring related policy decisions to council as recommended by staff/committees, or as identified within each action strategy. Policy decisions rest with council.
- 9. Align with programs offered by organizations such as NB Power, the FCM, and the 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.
- 10. 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.

Based on the review session held in October 2023, the Town has initiated most of the next steps outlined by QUEST (items 1, 2, 3, 5-10) and is making ongoing efforts to continue work on item 5.

6.0 Conclusion

QUEST Canada appreciates the opportunity to work with the Town of Bayside, Chamcook and Saint Andrews to help inform the development of your Community Energy and Emissions Plan, as part of the NB Smart Energy Community Accelerator Extension Program.

This report summarizes the proposed recommendations and feedback received during the workshop on Nov. 15, 2021, as well as during the review session in 2023 (following municipal reform/amalgamations), to inform or serve as a foundation for developing your Community Energy and Emissions Plan.

As a next step, the Town of Bayside, Chamcook and Saint Andrews, neighbouring municipalities, and the regional services commission, can explore establishing a regional coordinator and committees. This includes establishing an internal (staff) committee and external stakeholder advisory committee, to provide support for implementing the 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

- Communications, 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, sustainability practices literacy
- Quantitative data analyses (spreadsheet software)
- Mapping (geographical information system software)
- Business case development, feasibility/financial analysis

Academic Credentials and Certifications

- Degree in planning, public policy, engineering, sustainability, environmental science, resource management, business, and/or communications
- Registered Professional Engineer or Planner, member of the 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, Ont.

Full Time Temporary (three-year contract)

The Community Energy Program Manager (CEPM) is responsible for implementation of the Community Energy Investment Strategy (CEIS) for the 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, promotions 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 tasks as needed. 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/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, the private sector, not-for-profit groups, 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/recommend the best course of action in response to challenges and issues.

<u>Desired Credentials</u> (related knowledge, skills, and abilities)

- Minimum undergraduate degree in a relevant field (e.g. engineering, environment science/studies, business administration); graduate degree in same or the Certified Energy Manager (CEM) qualification is 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 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/fuel consumption
 - Energy conservation and demand side management principles, programs and incentives
- Successful track record of program management/implementation and partnership development, including experience leading initiatives with multiple stakeholders and competing interests
- Demonstrated ability to facilitate multi-stakeholder committees/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/stakeholder meetings and site visits.

Compensation/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/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 and references to:	ence,
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 upon notification of the interview process.

ANNEX 2 — Embed in Municipal Plans, Policies, and Processes

Although CEP measures are focused on community-side energy and GHG emission reductions, the Town of Bayside, Chamcook and Saint Andrews has a critical role to ensure a supportive environment. The successful implementation of the CEP requires embedding measures within other municipal plans, policies, processes, and decisions. The lead coordinator and internal committee are best positioned to ensure the CEP is embedded into:

- Plan updates
- Council strategic plans
- Official plans and regulations
- Secondary plans/plan amendments
- Community improvement plans
- Zoning and building code bylaws
- 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 the plan review), through ongoing processes (e.g. through permitting), as well as through council decisions (e.g. new policies/bylaws, budget decisions). See QUEST Canada's <u>CEP Primer</u> for more details on each of these options for embedding the CEP.

ANNEX 3 — Funding for CEP Actions

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

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

- 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.
- An implementation budget should be developed for every year of the action plan and should be updated on an annual basis.
- Funding (e.g. from the FCM) can be used to conduct studies, pilots, and projects.

Strategies to secure financial resources

Sources:	Description:
Budget	Create a budget item/fund for CEP measures.
Internal financing sources	 Property taxes, tax levies Tax increment financing, local improvement charges (LIC) User fees (on water, power, natural gas distribution system, waste, etc.) Development cost charges (DCCs) Green bonds
Local incentives and rebates	 DCC reductions LIC financing or Property Assessed Clean Energy (PACE) programs Fee rebates/credits (on water and energy bills); local economic incentives for investing in energy efficiency for households and businesses, and new developments (e.g. tax holidays for businesses, faster permitting for developments meeting certain efficiency criteria, etc.)
New accounting/decision- making tools	 Consider a natural asset management approach — full cost accounting and valuation of natural assets. Estimate benefits from green infrastructure. Combine funding with gas tax revenue.

Sources:	Description:
	 Reinvest efficiency savings into low-cost CEP measures, community engagement, etc.
Institutional grants and external sources of funding	Scan and submit funding applications to Federal agencies and governments: Natural Resources Canada Environment and Climate Change (ECC) Infrastructure Canada programs Low Carbon Economy challenge IC Public Transit Expansion programs FCM programs, including: Green Municipal Fund Municipal Asset Management Program Municipal Asset Management Program Provincial programs and agencies (e.g. NB Environmental Trust Fund)
Loans	FCM low-interest loan (GMF)Municipal green bonds
Leverage private investments	 Engage the private sector to partner with and financially support actions that improve community-side efficiency, clean energy, or transport modes. Ensure the local chamber of commerce or others support efforts of small enterprises to improve energy efficiency.
Economies of scale and synergies at the local level	 Leverage existing initiatives or projects by expanding/adapting their scope and collaborating with other departments (thinking beyond silos). Take a regional approach — collaborate with neighboring municipalities. Share costs when a measure involves several communities, (e.g. procurement).

FCM and ICLEI published a toolkit called <u>On the money: Financing tools for local climate action</u>, that explains how your municipality can leverage private and community investors to help you take action on climate change in your community. This toolkit includes tips on how to harness people power through group purchasing and community owned renewable power, 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 CEP

Significant economic benefits can come from improving energy efficiency across Saint Andrews, and from implementing the full range of measures identified in the CEP. It will be important to quantify the economic impact of CEP measures to gain support from senior decision-makers and elected officials as well as the community at large (the public, businesses, energy stakeholders, service providers, etc.). As part of the NB Smart Energy Communities Accelerator program, you may receive an economic impact assessment of your CEP.

Different methods of economic analysis serve different purposes and provide different information. All are relevant to assessing the economic, environmental, and social benefits of CEPs, and to increasing knowledge of the full economic impacts of these investments.

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

Method:	Purpose:
Community energy cost	Discuss the total community energy use in a metric everyone understands in order to generate different conversations with elected officials and stakeholders (e.g. amount spent on energy vs. the amount leaving the community).
Financial feasibility	Screen and prioritize measures, programs, or portfolios to identify if, and when, the investment will break even.
Levelized unit energy cost	Compare the per kWh or per GJ costs of different energy generating technologies across the expected lifetime of the asset.
Marginal abatement cost curve	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.

Method:	Purpose:
Community socio-economic benefits	Inform the decision-making process and stakeholders on the total value to the local community and economy of a CEP, considering how expenditures recirculate through local businesses, households, and governments.
Cost benefits	Screen and prioritize measures, programs, or portfolios to identify if benefits over time exceed initial costs, and to identify a portfolio of measures that maximize the economic, environmental, and social benefits from CEP implementation.

ANNEX 5 — List of Participants

List of Participants

Town of Bayside, Chamcook and Saint Andrews CEP Implementation Workshop Wednesday Nov. 15, 2021

Name:	Organization:
Sierra Reibling	Kingsbrae Garden, Executive assistant
Kalen Mawer	Saint Andrews Environment Advisory Committee, Eastern Charlotte Waterways (ECW)
Jessie Davies	Saint Andrews Environment Advisory Committee
Aldea Poirier	ECW, Climate Change Intern
Briana Cowie	Executive Director at ECW
Ashley Brown	Senior Administrative Assistant, Hudson Marine Science Center
Marc Blanchard	Counselor with the Town of Bayside, Chamcook and Saint Andrews, Saint Andrews Environment Advisory Committee

Name:	Organization:
Vivian Peng	Junior Planner, SW NB Regional Service Commission
Alexander Gopen	Senior Planner, SW NB RegionalService Commission
Brian Glebe	Saint Andrews Environment Advisory Committee
Chris Bridger	Executive Director, Huntsman Marine Science Center
Alex Henderson	Planning Director, SW NB Regional Service Commission
Chris Spear	CAO, Town of Bayside, Chamcook and Saint Andrews
Paul Nopper	Town Clerk/Senior Administrator, Town of Bayside, Chamcook and Saint Andrews
Brad Henderson	Mayor, Town of Bayside, Chamcook and Saint Andrews
Sara Mudge	NB Power