



COMMUNITY ENERGY PLANNING

PRIMER FOR NEW BRUNSWICK MUNICIPALITIES

Report

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EXECUTIVE SUMMARY

This primer is a resource for communities that are interested in developing a Community Energy Plan (CEP). This Primer provides information on the value and benefits of developing a CEP, how to get started, how to engage local partners, steps for developing and implementing a plan, and concrete municipal actions and approaches to realizing a CEP in New Brunswick.

Communities account for 59 percent of energy consumption and over 56 percent greenhouse gas emissions in Atlantic Canada.¹ As a result, communities are central to enabling the Province of New Brunswick to achieve their energy objectives.

While energy has not traditionally played a major role in local government planning, local governments are now realizing the advantages of developing a CEP. Over 180 communities in Canada, representing 50 percent of the Canadian population, have a CEP.

A CEP is a tool that helps define community priorities around energy with a view to improving efficiency, cutting emissions, and driving economic development. The implementation of CEPs provides a comprehensive approach to improving the way energy is used in communities, helping communities to become Smart Energy Communities. Smart Energy Communities improve energy efficiency, enhance resilience, cut costs and reduce emissions.

Using this Primer for guidance, a municipality may develop a CEP, identifying ways to integrate energy into other local government strategies, land use plans, policies, and municipal projects / new development, and to ensure actions identified in the CEP are implemented.

This Primer also identifies energy literacy resources, actions to manage energy and emissions, and opportunities for communities to provide input to and take into consideration province wide electricity and natural gas planning processes.

A CEP should be renewed every 5 to 7 years, in order to consider strategic opportunities, take advantage of new opportunities in technology or buildings/infrastructure, embed CEP objectives in other planning initiatives and timelines, or to identify new needs or opportunities according to local context.

¹ Source: Natural Resources Canada Comprehensive Energy End Use Database (2012 data) :

- Included energy use and greenhouse gas emissions for residential and commercial sectors, as well as some industrial (construction, cement, "other manufacturing") and transportation (cars, passenger light trucks, motorcycles, school buses, urban transit, passenger rail, freight light trucks, medium trucks)
- Excluded agriculture, and some industrial (chemicals, iron and steel, forestry, mining, petroleum refining, pulp and paper, smelting and refining) and transportation (heavy trucks, inter-city buses, passenger air, freight air, freight rail, marine, "off-road").

1.0 COMMUNITY ENERGY PLANS IN NEW BRUNSWICK

This section provides an introduction to CEPs and the benefit that they can provide to New Brunswick Municipalities.

1.1 WHAT IS A COMMUNITY ENERGY PLAN?

A Community Energy Plan (CEP) is a tool that helps define community priorities around energy with a view to improving efficiency, cutting emissions, and driving local economic development. CEPs provide a pathway for communities – the places where we live, work and play – to become Smart Energy Communities.

Smart Energy Communities improve energy efficiency, enhance reliability, cut costs and reduce greenhouse gas emissions (GHGs). Smart Energy Communities integrate conventional energy networks (electricity, natural gas, district energy, and transportation fuel) in communities to better match energy needs with the most efficient energy source; integrate land use; and harnesses local energy opportunities.

Learn more at www.questcanada.org/thesolution.



Le pays de la Sagouine, Bouctouche. 1999.
Government of New Brunswick, New Brunswick Images Website.

While often developed as a stand-alone policy or report, a CEP is best implemented and achieved when it is integrated with corporate strategic plans, such as local plans (municipal or rural), or regional plans. Care should be taken that a CEP does not become an overlooked component of a larger plan or become overly complex and time-consuming.

1.2 BENEFITS OF COMMUNITY ENERGY PLANNING

A CEP is a tool to help communities become Smart Energy Communities and achieve economic, social, and environmental goals. According to the research developed through the *Community Energy Planning: Getting to Implementation in Canada*² initiative (GTI), there are proven advantages for communities who develop and successfully implement a CEP. GTI recently released the new report, *Community Energy Planning: Value Proposition*, which documents the value and benefits of CEPs.³

Table 1 outlines the range of average community-wide energy spending across communities of different sizes. On a per capita basis, this ranges from \$2,000 to \$4,000 per year. These total cost figures include the costs of energy used and produced by buildings, transportation, land use, waste and distributed energy resources. In addition to municipal energy expenditures, energy is also a major operating cost for many businesses. In some manufacturing industries, energy, water and fuel costs are on par with production wage expenditures. Energy is a significant part of household expenses too.

Table 1 – Energy Spending in Small, Mid-sized and Large Communities

Community Size	Average Spending on Energy in the Community
Small Communities (less than 20,000 people)	Up to \$80 million
Mid-sized Communities (20,000 to 100,000 people)	\$60 million to \$400 million
Large Communities (100,000 people to 2.5 million people)	\$200 million to \$10 billion

Source: *Community Energy Planning: The Value Proposition*, GTI, February, 2016

CEPs provide the pathway for communities to realize many opportunities related to land use and urban form, buildings, transportation, waste, and distributed energy resources, which can reduce energy costs and present an opportunity to recirculate dollars back into the local economy. CEPs can aid to lower local energy input costs. Energy conservation and energy efficiency, renewable and alternative energy and fuels, district energy, cogeneration, and new approaches to waste management can change the economics of production for the better, and influence a firms' decision to remain in a community.⁴

While some drivers are unique from community to community, there are several commonly cited reasons for developing a CEP, including:

Economic development

Energy is a significant and growing cost in Canadian communities, with millions of dollars leaving local economies annually. For most communities, 70-80 percent of energy dollars spent leaves a community.⁵ Investment in local energy initiatives allows more dollars to be spent in the community and provides opportunities for local employment opportunities. CEPs can help to keep more money in a local economy, generate opportunities for local savings and jobs, and help to manage risk from volatile energy prices and future climate policy by using energy more efficiently and producing more energy locally. In addition, there is a wide range of broader, and often harder to quantify, economic impacts that CEP can bring about.⁶

Energy independence and security

Reduced reliance on external energy sources can insulate residents and businesses from worldwide energy price volatility and supply shortages.

² *Community Energy Planning: Getting to Implementation in Canada*, is a collaborative initiative spearheaded by the leading community energy experts in Canada. It's about helping communities get to implementation. <http://gettingtoimplementation.ca>

³ *Community Energy Planning: The Value Proposition* (February 2016) <http://gettingtoimplementation.ca/research/>

⁴ *Community Energy Planning: The Value Proposition* (February 2016)

⁵ *Community Energy & Emissions Planning : A Guide For B.C. Local Governments*. (September 2008).

⁶ *Community Energy Planning: The Value Proposition* (February 2016)

Healthier communities

The location and type of energy infrastructure can impact the quality and character of neighbourhoods, the health of the natural environment and local air quality. Improvements to local energy use and production are often conducive to healthier neighbourhood design, transportation systems, natural environments, and housing. CEPs provide an opportunity for communities to identify appropriate land uses such as protected areas, suitable sites for energy production, energy efficiency, and transportation planning such as walking and cycling. The resulting social benefits include a community made suitable for all age-ranges, improved social cohesion and well-being. Integrating local energy resources can provide cost-effective clean power and heat to reduce peak demand and can be used as ancillary services during extended power outages, to mitigate risks to public health.

Efficient communities

Efficient communities developed through integrated land use and energy planning not only use less energy, have lower energy costs and generate less emissions, but can also benefit from higher quality energy services delivered through integrated energy systems, shorter commutes and more vibrant, compact, mixed-use communities.

Environmental benefits

Conservation, energy efficiency and renewable energy result in reduced greenhouse gas emissions (GHGs), improved air quality, healthier ecosystems, protected green spaces, reduced likelihood of oil leakages, and cleaner water and soil. Canadian communities play a particularly important role in national and global efforts to address climate change as they have direct or indirect control of 60 percent of Canada's total GHG emissions. Municipal or regional level policies, including CEPs, can consequently drive significant emissions reductions and are critical to nation-wide efforts to address climate change.⁷ A CEP addresses GHG emissions reduction goals of a community, and can contribute to local resiliency by requiring local energy opportunities to be tied with community centres, public facilities, municipal buildings, to provide ancillary power/heat during extended power outages, and ensuring local energy sources and equipment are developed above flood levels.

Future funding

A CEP demonstrates commitment and credibility to community stakeholders, funders and investors. This can help local governments to build partnerships that are critical for implementing community actions on energy and emissions. Funding methods and opportunities are listed further below.

1.3 COMMUNITY ENERGY PLANNING IN NEW BRUNSWICK

New Brunswick municipalities are increasingly interested in developing CEPs as a way to drive economic development, reduce energy costs and emissions, and increase resiliency. Several NB Municipalities committed to developing CEPs (by resolution), participated in CEP workshops delivered by QUEST, or have existing Local Action Plans with energy and efficiency projects identified or completed over the past five to ten years. Over 30 municipalities in New Brunswick participate in Partners for Climate Protection program⁸, and are at various stages of developing energy and emissions inventories, local action plans, or implementing actions. Even though progress toward GHG emissions reduction is being made by communities involved in the Partners for Climate Protection program, New Brunswick is at the early stages of CEP development and this presents an opportunity to ensure CEPs achieve maximum potential energy, GHG reduction, and economic benefits.

Through CEPs, community energy and GHG emissions reduction opportunities are identified; embedded in Official Plans and land use planning process; inform council decisions, resolutions, bylaws (e.g. zoning); or inform Local Action Plan and projects aiming for GHG emissions reduction.⁹

⁷ Community Energy Planning: The Value Proposition (February 2016)

⁸ The Partners for Climate Protection (PCP) program (<http://www.fcm.ca/home/programs/partners-for-climate-protection.htm>) is a network of Canadian municipal governments that have committed to reducing greenhouse gases (GHG) and to acting on climate change.

⁹ In accordance with the Community Planning Act and Municipal Act, land-use planning is undertaken by incorporated municipalities, including Cities, Towns and Villages, rural communities, as well as by the 12 Regional Service Commissions and by Department of Environment and Local Government for unincorporated areas – around 243 Local Service Districts. The number of Local Service Districts are changing rapidly due to a number of amalgamations underway.

2.0 BEFORE YOU START A CEP

This section identifies key factors to consider before developing a CEP in order to ensure that the CEP will garner the support needed for implementation and to ensure that the proper mechanisms are in place to move from plan to implementation. It also includes information about how to develop a plan, report to council, and a baseline energy and emissions inventory or map.

2.1 FACTORS TO CONSIDER BEFORE DEVELOPING A CEP

According to communities with a CEP, the factors most critical to have in place before getting started include political, staff and stakeholder buy-in and dedicated staff resources.¹⁰ It is also critical to consider strategies for institutionalizing a CEP early in the development process. The following subsections detail strategies and considerations for achieving these.

Political, Staff and Stakeholder Buy-in

Find a political champion

- A political champion is critical for CEP development and implementation. Without one, communities risk developing a plan that will not get adopted by council.

Engage staff from a broad range of departments

- This includes finance, economic development, facilities, the Chief Administrator's office, and others. Role assignment is important for carrying out implementation of a CEP. Where possible, identify champions within other departments to help drive support needed for CEP development and implementation.

Engage community stakeholders early and in a meaningful way.

- Ensure that a process is in place to engage community stakeholders on an ongoing basis. Ensure that they are part of developing the vision for the CEP. Some examples of ways to do this include:
 - One-on-one meetings with stakeholders
 - Stakeholder consultation meetings
 - Surveying and holding sector specific focus groups

Identify values and priorities

- CEPs can help to achieve a number of community and stakeholder objectives including energy efficiency, integrated land use and transportation, economic development and health objectives, among others. It is important to identify the values and priorities of your stakeholders and communicate how the CEP can help achieve these priorities.

Understand local context

This is vital to ensure CEPs and projects are responsive to and supportive of community needs. Community buy-in is integral to the energy planning process, largely established through community outreach and workshops. Community consultation should be comprehensive in order to identify concerns that may not have been identified at the municipal level

¹⁰ Visit www.gettingtoimplementation.ca to see the National Report on Community Energy Plan implementation as well as other resources outlining success factors and barriers for CEP development and implementation. A Community Energy Implementation Readiness Survey will be developed as part of the *Community Energy Planning: Getting to Implementation in Canada* initiative. This survey will enable communities to evaluate their standing as it relates to the factors that influence CEP implementation.

Staff and Financial Capacity

Allocate sufficient staff resources

- This is necessary for successful CEP development and implementation. Having a dedicated staff person before getting started can ensure that the CEP is adequately resourced.

Identify the skills needed

- This will help identify where there may be gaps within the local government and if consultants will be needed.

Identify Financing Opportunities

- While it is not critical to secure financing for CEP implementation *before* developing the CEP, it could be beneficial to identify financing opportunities such as grants and incentive programs available to your community.



Community Energy Planning: Getting to Implementation in Canada Workshop. November 2015. Bathurst NB.

Institutionalize the CEP

Considering how a CEP can be institutionalized *before* getting started can help manage expectations associated with the role that different local government departments and community stakeholders will play during CEP implementation. A CEP can be institutionalized by:¹¹

- **Embedding** – embedding the CEP into other planning and policy documents (e.g. Official Plans and strategic plans), and local government staff job descriptions.
- **Budgeting** – ensuring CEP goals and actions are considered during the annual and five-year budgeting processes.
- **Convening** – holding ongoing and formalized meetings with council, staff and stakeholders to discuss CEP implementation (ex. Mayor’s task forces, committees of council, staff committees, community committees, etc.).
- **Monitoring** – monitoring implementation through key performance indicators for specific departments and follow-up inventories.
- **Reporting** – reporting regularly to council (possibly through integration with reporting on other plans).
- **Renewing** – by establishing timelines for the renewal of the plan (e.g. every 5-7 years).

2.2 PREPARING THE PLAN

A community must carefully prepare to develop a CEP. This includes identifying who can do the work, building capacity internally to carry out plans, engaging external consultants and community stakeholders.¹² Each community will vary in terms of the amount of time it takes to develop a CEP. Consult the next section of steps to develop and implement a CEP.

¹¹ www.gettingtoimplementation.ca

¹² A successful approach involves a combination of council commitment, official plans/policies, a steering committee with participation of council, staff, local business, utilities, community groups and residents.

2.3 PREPARING AN INTRODUCTORY REPORT TO COUNCIL

The first step in developing a CEP is to work with your local elected officials and municipal staff leadership. Below are key considerations to include when developing the staff report to Council describing the CEP.

1. Rationale

Outline the issues the CEP will address and how it will help Council get the information it needs to make effective decisions. Consider including references to existing local initiatives, or other successful CEPs and describe how they benefited the community.¹³ Include information on:

- energy security to promote economic competitiveness
- the cost of energy use to the local economy
- job creation from increasing the demand for energy-saving products & services
- the suitability of and/or opportunities for district energy
- solar or wind generation or geothermal in your city
- small scale or neighbourhood based generation
- the contribution that conservation of gas or electricity use can make to future energy needs

2. Context

Identify that there is a wider context within which the CEP will operate – e.g. provincial electricity plans and natural gas planning. A CEP can also be integrated into:

- the context of a municipal or rural plan
- strategic plan
- business plan
- master plans
- city wide sustainability plans
- other municipal planning and policy documents

3. Opportunities

The report can discuss:

- funding opportunities for CEP development
- the increasing number of municipalities doing community energy planning in Canada (for ideas see: <http://www.questcanada.org/thesolution/atlas>)
- the potential savings by connecting energy and land use planning

4. Scope and Organization

Describe the scope and organization of the proposed CEP including important information such as:

- general outcomes
- timeframe
- scope
- resources
- work team
- project leadership
- framing

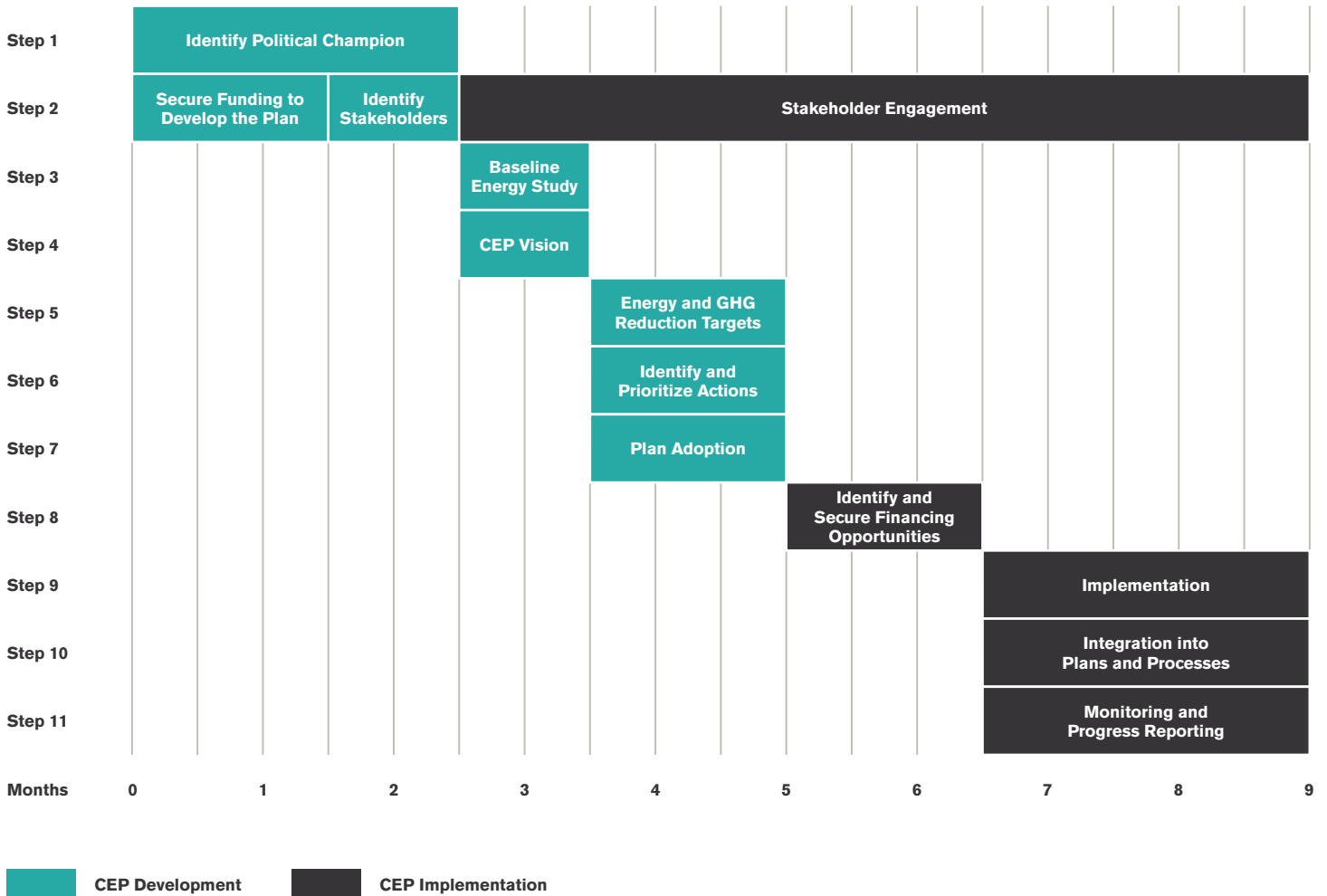
Identify which department or departments within the municipal corporation may be responsible for leading the development of the CEP, reporting to and being accountable to Council. While often this is one department, project leadership is sometimes provided by an Interdepartmental Steering Team and/or Advisory Group, which may include external stakeholders.

¹³ see Appendix D for examples of existing CEPs.

3.0 DEVELOPMENT OF A CEP

CEPs are typically led by local governments and developed in partnership with community stakeholders. While there is no standard approach for developing a CEP, there are several common elements found in CEPs such as: energy and GHG emissions data, models and targets; sector-specific policies and actions, and economic, health, and other co-benefit considerations. Table 2 describes the steps for CEP development and implementation.

Table 2 – CEP Development and Implementation Process



Source: Adapted from the U.S. Department of Energy Guide to Community Energy Strategic Planning: <http://energy.gov/eere/slsc/guide-community-energy-strategic-planning>

3.1 CEP PROCESS

The following section describes all the steps in developing and implementing a CEP.

1. Engage Stakeholders

To ensure a successful plan, the importance of involvement and buy-in of council/board, civic staff, local stakeholders, and the general public cannot be overemphasized. Community engagement is a standard part of most planning processes, and a community energy and emissions planning process is no different. An overview of common approaches for developing community engagement for CEPs is provided in Appendix D.

Get Municipal Staff On Board

It is helpful to involve a wide range of staff, including: Chief Administrative Officer, Finance Officer, Planning Director, Engineering Director, Communications Director, and Environmental Manager. It is also important to recognize that in smaller communities staff may fill multiple roles.

- A well-recognized approach is to begin with a broad workshop for staff, explaining the energy planning process and its importance, and to gather initial ideas. A lack of understanding, awareness or involvement by community staff can mean the best laid plans will languish on the shelf.

Advice from the Experts

It is beneficial to have at least one elected champion to lead the planning process and to ensure that several council and staff members are behind the plan and take ownership of it.

Establish an Energy Planning Committee or Advisory Group

An energy planning or advisory group widens stakeholder involvement and can avoid problems of discontinuity. These groups will not only provide valuable information needed to develop a CEP but will also be important supporters when seeking Council approval and will help provide capacity for CEP implementation.

- The group should include members of council/board, staff, and outside stakeholders such as utilities, industry groups, businesses, property owners and developers, community organizations, academia, health authority, and interested members of the public.

Advice from the Experts

Another benefit of Community Engagement is to ensure effective collaboration (getting the right people around the table) and integration (making sure that the CEP team can use each other's data and information). The benefit of having an established committee is that it can be responsible for ensuring the plan's recommendations/ actions and implementation plan are carried out in a timely and effective manner.



Community Energy Planning: Getting to Implementation in Canada Workshop. November 2015. Saint John NB.

2. Conduct a Baseline Energy Study (BLS), Energy Mapping and Develop Scenarios

A common starting point for a community energy plan is to conduct a community-wide inventory of energy use and associated GHG emissions. An inventory is a summary of all the energy consumed and GHG emissions produced within the community. It provides a snapshot in time of how much energy is consumed and GHG emissions are produced, and by what sources and sectors. If you have already completed an inventory, move to Step 3.

A community inventory includes emissions from energy in buildings, vehicle transportation and solid waste.

- It may also include other energy and emissions sources, such as agriculture, organic waste in landfills, air travel or non-energy process emissions from industry.
- It is important to include both energy consumption and GHG emissions figures in the inventory, to provide a more complete picture.
- Engaging energy data providers, such as gas and electricity utilities and transportation and land use planners early is important to understand their data sharing policies and processes.¹⁴ This will contribute to making the data collection process easier and more time effective, lowering the cost of completing a BLS or energy map. It is likely that you will have some of these data providers represented on your Advisory Group. See CEP Primer for Ontario – (<http://www.questcanada.org/downloads/The%20Primer%20-%20reduced%20size.pdf>)

A community should establish a baseline year against which progress will be measured and data collected.

- This may be chosen to align with provincial and federal targets or based on the historical year for which the best data is available (e.g. as part of the inventory).
- A community can use the inventory for several purposes:
 - To identify where and how much energy is used and emissions created in the community, to quantify energy used and resulting emissions by sector (residential, commercial, industrial, agricultural, transportation), to identify how much energy is supplied to the community including from renewable and distributed generation, identify trends over time, and identify and quantify opportunities for energy and emissions reductions, savings and revenue generation
 - To set targets and milestones, track and report progress in reducing energy consumption and emissions over time, against the baseline year
 - To make comparisons with other jurisdictions (although this should be done with care, as there may be many influencing factors in energy use, and variability in inventory methodologies).

A tool available for Canadian municipal GHG inventories is available here: <http://www.icleicanada.org/pcptool>

Advice from the Experts

Before developing a baseline or map, set up meetings with data managers to discuss what information they collect and how CEP inventory and analyses can also support these groups' priorities and programs. Information resources (such as transportation, utility and structure data) may be available from City departments or utility stakeholders but may come at a cost. Local experts including academics, utility staff and energy managers at local industries and institutions may be able to provide in-kind support (including data) to the project.

Advice from the Experts

Developing a CEP does require a certain level of expertise. Gathering the energy information can be time consuming and difficult. A community will need to decide which sectors will be included in the inventory and the CEP – e.g. consider residential, commercial, institutional, industrial, waste, agricultural and transportation sectors. For example, London, ON did their own inventory and mapped energy intensity (see: <https://www.london.ca/residents/Environment/Energy/Pages/Energy-Maps-for-London.aspx>). A community can also decide whether the CEP will be based on high-level city-wide energy use and GHG emissions totals or a more detailed area based mapping exercise.

¹⁴ In many cases the way in which a CEP reports data depends on how it was received from the local utility. Often electric and gas utilities are limited by privacy and regulatory constraints and available staff and IT resources to provide data that is aggregated citywide and broken down by major sectors (e.g., residential, commercial and industrial customers). Transportation energy use and emissions are often extrapolated from municipal transportation models and local retail fuel sales data.

Developing a baseline energy study is important to know how energy is being used, to identify opportunities and set targets for improving energy use and reducing GHG emissions. Energy mapping is also a useful method to visualize energy use and opportunities across a community.

Energy mapping integrates detailed energy baseline data and connects it to a map which helps communities to¹⁵:

- Identify spatial trends in the data
- Target specific neighbourhoods, sectors and business types for conservation, efficiency, renewables, district energy, distributed generation, and efficient growth patterns
- Communicate visually with the public and decision makers about where and how much energy is used in the community and in individual neighbourhoods

In addition to helping municipalities identify opportunities for targeting their resources, energy mapping can support energy utilities to target and deliver conservation programs, distribution system planners understand infrastructure needs and renewable generation developers, and district energy companies identify investment opportunities.

Developing scenarios allows a community to understand the potential impact of different priority actions and allow for “backcasting” from future energy and emissions targets. By developing scenarios municipalities can understand how much energy the community might use if no action is taken, if moderate or incremental action is taken or if more substantive efforts are made.

¹⁵ Energy density mapping works to provide municipalities and utilities with a way to evaluate the existing location and quantity of energy use in a community. Using the mapping process municipalities are then able to evaluate and work to implement energy and GHG reduction strategies, and renewable energy technologies that are appropriate for their residents, businesses and climates. The mapping process also incorporates the idea that maximizing the energy efficiency of the urban form requires integrating transportation issues, improving the orientation of the built environment, as well as ensuring “unavoidable” energy needs are met in the most effective way possible.

3. Develop the Vision

A community-wide energy consumption and GHG reduction target is an important part of a CEP. A target sets a goal for the community and allows policies and projects to be developed with the objective of meeting the target. Municipalities can set a visionary (top-down) target or a pragmatic (bottom-up) target. Either top-down or bottom-up targets can be used to develop the vision.

Set a Visionary or Top-Down Target

A visionary or top-down target is one which sets goals for the community, based on the perceived need for action.

- It is based on community objectives rather than on a feasibility analysis.
- A visionary target makes a statement about the importance to the community of taking action on energy and climate change.
- The target can be set before or after the inventory is completed.

Set a Pragmatic or Bottom-up Target

A pragmatic or bottom-up target is based on an assessment of reductions that can likely be achieved.

- A bottom-up target is set after completion of the inventory, which forms part of the feasibility analysis.

Advice from the Experts

Most communities set a single target, usually an overall GHG reduction target (although sector based targets are also possible). It is helpful to include an overall energy reduction target as well, to work toward energy efficiency, energy security and reduced energy costs, public transit ridership, residential energy use, renewable energy generation, solid waste recycling, etc. Some of these activities may already be underway or achieved.

Since targets are of considerable importance, a council/board should have a clear understanding of the issues and implications before committing. A target setting workshop is a good way to present the options and enable the council to work toward consensus on a target. Various types of targets and dates can be presented along with benefits, options and implications. If available, the inventory can also be presented and explained to help with the decision.

4. Define the Vision and Time Horizon

A CEP will provide a roadmap to the community on how to address energy consumption and greenhouse gas reduction. It incorporates the inventory information and public feedback, and addresses targets that have been set. The plan should achieve a number of goals:

- Raising awareness of the importance of energy to the community
- Drawing attention to the inventory, how energy is used in the community, and the importance of ongoing monitoring
- Identifying actions that will contribute to reducing energy and GHG emissions
- Identifying local government policies needed to facilitate these actions
- Identifying key community partnerships

Advice from the Experts

One of the goals of a CEP should be to have energy and GHG emission considerations taken into account in all local government decisions. While incorporating language to this effect in the local plan can help move communities in this direction, it may be beneficial to have a more structured sustainable decision-making system in place.¹⁶

Define the Time Horizon

It is important for a plan to include both long-term and short-term targets:¹⁷

- Long-term targets (e.g. to 2020 or 2050) reflect the overall vision
- Short-term target(s) (e.g. to 2017 or 2020) can build momentum toward the longer term vision

Advice from the Experts

A plan with only short-term targets will overlook key actions (e.g. land use planning, education) which are critical for long-term change, but are not effective in creating short-term energy and emissions reductions. A plan with only long-term targets may not provide sufficient impetus for spearheading action, and may be relegated to 'sitting on the shelf'.

5. Identify and Prioritize Actions

Identify Actions

One of the most important aspects of a CEP is to identify objectives and policies that will enable long-term actions and goals to be achieved.

These objectives and policies may be incorporated within the local plan or Regional Growth Strategy (RGS), or they may be stand-alone bylaws or policies. Local plans are a guiding document for a community and can be used to provide staff and council with the mandate to pursue energy and GHG objectives in both civic and private sector development.

A CEP is not intended to investigate actions or projects in great detail, or to prove their viability. That work can be done separately, after the plan is developed. The plan might recommend that potential projects be investigated in future pre-feasibility studies, or might include projects that have already been studied, could be expanded, or have been completed.

Once the overarching objectives and policies are incorporated into the local plan, there are many specific strategies that can be used to influence energy use and emissions within the community. Some of these include:

- Sustainability checklists
- Procurement policies (e.g. vehicles)
- Operation and maintenance policies (e.g. vehicle fleet)
- Building Code / Efficiency minimum requirements for new development
- Rezoning policies
- Development permit area guidelines
- Service area bylaws
- Development cost charges
- Tax exemption bylaws
- Parking management policies
- Anti-idling bylaws
- Recycling programs and landfill restrictions.

Advice from the Experts

A CEP may identify specific policies that are recommended for implementation or identify applicable policy areas so further action can be taken. One of the first things to consider is whether aspects of the plan can be implemented through other planning processes. This is beneficial for both coordination and cost effectiveness. Examples would be neighbourhood plans, transportation plans, and local plans (municipal or rural).

Prioritize Actions

It is important that your CEP is actionable in the short term and over the long term. Where possible, set a schedule for completion of the actions, along with identifying who will be responsible for carrying them out.

- Rather than simply listing a wide range of potential actions without a recommended strategy for moving forward on the most promising ones, communities are encouraged to organize, prioritize, and develop an *implementation strategy* that matches their community's objectives and targets.
- An action plan should be flexible enough that actions can evolve and grow over time, with emphasis on policies and decision-making processes that will enable and encourage this evolution to occur.¹⁸
- Both the action plan and implementation strategy should be looking to the long-term, as implementing a CEP will be a substantial undertaking. However, it is important to build momentum and see some short-term successes. Try to focus on short-term actions that pave the way for long-term results, rather than one-off projects, as resources will be limited.¹⁹
- A community can also develop new governance models to implement projects that have not traditionally been taken on by the local government (e.g. a new holding company, or innovative partnerships).
- Focus on organizational solutions for implementing actions. Some methods to achieve this include integrating energy and emissions into existing local government decision making processes, strengthening ties to the office of the Chief Administrative Officer, and/or developing an inter-departmental steering committee.
- Identify and voice specific recommendations for changes in provincial policy that would help support the implementation of actions on energy and emissions at the local level.

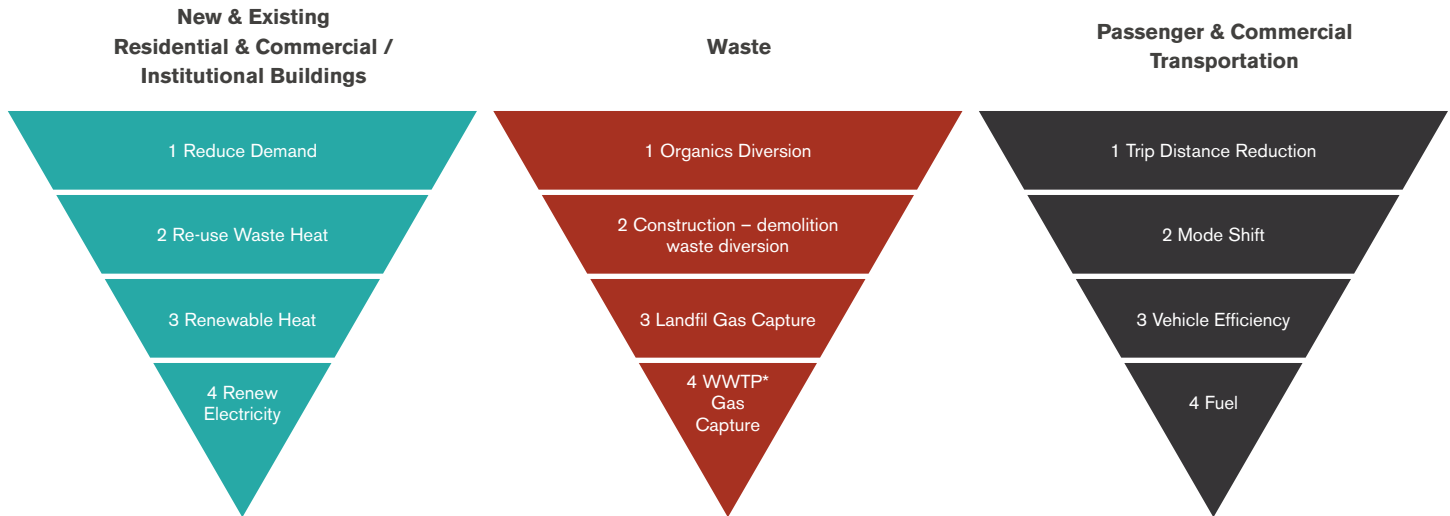
¹⁶ There is a variety of environmental management systems available, with some of the best known being ISO14000 and The Natural Step. These systems can help ensure that every decision made by the local government takes energy/ GHG considerations into account. Environmental management systems can apply to both community development and to local government operations. See: The Natural Step: www.naturalstep.ca or ISO14000: www.iso.org/iso/iso_catalogue/management_standards/iso_9000_iso_14000/iso_14000_essentials.htm

¹⁷ A community should consider: is this a ten or twenty year plan? Will it be reviewed every 5 years like an Official Community Plan (OCP) or does it correspond to the time frame in other key City documents like the strategic plan or the business plan? While shorter-term (incremental) projects can leverage existing projects and programs identified through engagement, longer-term, larger scale (transformative) projects may require the establishment of new programs and partnerships and may need to adapt to changes in municipal or provincial policies.

¹⁸ One of the early actions to undertake in implementing the plan is to address barriers and policy requirements. These may be fairly easy to identify, but may take some time for the institutional change to happen. Removing barriers and implementing appropriate policies up front is important so that future projects do not run into roadblocks down the road.

¹⁹ Identifying catalyst projects can be a useful means of maintaining momentum while keeping an eye on the long-term objectives. Catalyst projects are small-scale projects that can be expanded to large-scale projects or advance long-term goals. Examples would include establishing a district heating plant for one or two buildings with the intent that it be expanded in the future, or establishing a small solar neighbourhood in order to test municipal policies. See page 15 for list of most common actions included in a CEP.

Figure 1 – Illustration of lowest to highest cost energy reduction measures



Source: Community Energy Association
 *waste water treatment plant gas capture

Figure 1 illustrates three action areas commonly found in CEPs and outlines a suggested approach for CEP implementation. While the most effective approach to implementation may vary from community to community, these actions are illustrative of the lowest to highest cost options for potential energy reduction in communities. Further, “low hanging fruit” actions can act as demonstrable success to help build momentum for future, more challenging actions.

Advice from the Experts

While a CEP may get started with one or two projects in mind, there may be unforeseen opportunities in other areas, and/or complementary actions that could be accomplished simultaneously. While some areas may be more important to a community than others, raising awareness of how energy impacts all aspects of a community is important in achieving overall community energy and emissions goals.

6. Present the Plan to Council for Adoption

Consider the following when presenting the CEP to Council for adoption:

- Understand council’s position on CEP implementation and demonstrate how the CEP can help to address other priorities within council (e.g. economic development, health, environment, community resilience, risk mitigation, etc.).
- Use energy maps, charts or other visual representations to communicate the strengths, weakness, opportunities and risks associated with energy in your community.
- Identify how much funding is required to implement the CEP. Identify which budget (Capital or O&M) the funding will come from. Demonstrate the life-cycle costs of the investments proposed compared to a business-as-usual approach
- Propose ongoing monitoring and reporting progress to council on an ongoing basis.

7. Implement the Plan

Getting a plan implemented can be the most difficult part of the energy and emissions management process, however implementation is also the most important step to achieving community energy goals.

- Developing an effective implementation strategy and addressing barriers to implementation are keys to seeing a plan come to fruition.
- One of the most significant factors in seeing a plan move forward is ensuring that adequate staff resources are in place to manage the work. An implementation team should be established, should include representation from both staff and elected officials, and may involve community stakeholders.
- An implementation strategy should include:
 - Team and leader
 - Identification of tasks and responsibility
 - Timeline
 - Budget
 - Reporting periods
- Consider whether aspects of the plan can be implemented through other planning processes.

8. Monitor and Report on Progress

Monitoring is important to assess progress on specified goals. Some resources for staff time or consultants should be allocated to do this.

Completing short-term actions such as policy changes or education programs may be just as important as larger projects, although the energy reductions may occur later. Such actions should be monitored as to whether they have been completed on schedule.

Advice from the Experts

As results are monitored, and progress (or the lack of it) made towards achieving targets, it is not enough to simply report the results. An attempt should be made to assess why the results are what they are. This is critical if results are not being achieved, but it is also important when things seem to be on track. Reductions may be occurring due to unforeseen circumstances (such as an economic slowdown), which will reverse when things return to normal. Or results may be exceeding expectations in some sectors but lagging in others. Understanding the situation will help keep the plan on track over the long term.

Specific metrics used for measuring targets may vary depending on the CEP goals and could include, for example:

- % Reduction in total annual electricity, natural gas or transportation fuel consumption compared to base year by a projected future year
- % Reduction in total annual emissions compared to base year by a projected future year
- % Reduction in peak demand for electricity compared to base year for future year(s)
- % Increase in average building efficiency (energy use per m gross floor area) by sector, building type, building vintage, etc.
- % Reduction in average annual energy use or emissions per capita or per household
- % Reduction in average annual energy use or emissions per employee for businesses
- % Increase in energy supplied from renewable sources or distributed generation
- % Shift in modal split from personal vehicles to transit and active transportation
- % Increase in average personal vehicle occupancy follow-up energy and emissions inventories

Tell others how you did – Communication Activities

A key to long-term success is to maintain good communication with council/board, staff and the public.

- Make sure that people know the work being undertaken, and the results achieved, so that momentum is not lost.
- Regular reporting to Council/Board is important, as is reporting to staff in different departments. This will help build broad understanding of why changes are occurring and how everyone can contribute to energy and emissions objectives.
- Celebrate successes, such as achieving milestones or completing major action items.
- Public updates through newsletters, newspaper reports, or even an open house or public celebration can help to maintain public support for the plan and its goals.

3.2 ACTIONS TO INCLUDE IN THE PLAN

CEPs typically contain between 15–50 actions and an average of 35 actions. Some of the most common actions in a CEP include:

- Public and stakeholder outreach
- Energy efficiency in existing buildings
- Planning and policy measures
- Other transportation measures (e.g. anti-idling)
- Active transportation
- Renewable energy, district energy, or combined heat and power
- Public transit measures
- Solid waste diversion or landfill gas
- Low carbon vehicles

3.3 WHAT WILL IT COST?

There are many different approaches to developing a plan. Community size, location, comprehensiveness of the plan, detail of the inventory, and amount of public participation are all factors that can significantly impact cost. Low-cost approaches can be taken to create a plan, including working with local schools and consulting local business.

Table 3 – CEP Approaches and Relative Cost

CEP Approach	Description	Community Size	Cost
Just Do It	Focusing on a specific project, initiative or opportunity can often be done expediently and economically and can help garner the support needed to develop a plan.	10,000 or less	Project cost
Practical Tactics	Communities with energy and emissions inventories can develop projections and a year- by-year implementation plan. This approach may include frequent involvement of elected officials, staff, and stakeholders. These plans can be renewed frequently (e.g. every 3-5 years).	50,000 or less	\$5,000–\$10,000*
Targeted Dives	Larger communities can develop more comprehensive and long-term plans. This typically includes more stakeholder consultations and detailed projections. These plans can be renewed every 5-7 years.	100,000 or more	\$50,000–\$150,000
Deep and Wide	Communities with greater resources can include more comprehensive analyses when developing their CEP, including a broader range of energy end uses (e.g. food production).	250,000 or more	\$100,000–\$250,000

*Assumes a pre-developed energy inventory exists.

Source: Community Energy Association

Most plans for small-to-medium-sized communities have been in the \$25,000 to \$50,000 range. To keep costs down, focus a plan on high-level policies and actions. Detailed engineering analysis can be done later. Individual projects will vary in cost, depending on scale, technologies used, expertise required, etc.

3.4 FINANCING

Identify the funding sources that are available to support the development of your community's CEP (plan) and individual projects. Some funding sources to consider are:

Table 4 – Examples of Funding Sources

Type of Program	Relevance	Eligibility	Link
NB Environmental Trust Fund	Provides assistance for projects aimed at protecting, preserving and enhancing the Province's natural environment including projects that address climate change and help build Sustainable Communities	Community groups, NB municipalities, non-profit NB organizations, and institutions furthering sustainable development	http://www2.gnb.ca/content/gnb/en/services/services_renderer.13136.html
Federal Gas Tax Funds	Supports investment in sustainable infrastructure, such as public transit, drinking water, wastewater infrastructure, green energy, solid waste management, and local roads and bridges.	Municipalities	http://www2.gnb.ca/content/gnb/en/departments/elg/local_government/content/financial_support/content/gas_tax_fund/what_types_of_projectsareeligible.html
Building Canada Fund – Small Communities Fund for projects in municipalities with fewer than 100,000 residents	Some of the eligible projects include: <ul style="list-style-type: none"> – Public transit – Water and Wastewater – Solid waste management – Green energy – Innovation – Brownfield redevelopment 	Municipalities with fewer than 100,000 residents	http://www.infrastructure.gc.ca/plan/sc-cp-eng.html
Federation of Canadian Municipalities' Green Municipal Fund	GMF-supported initiatives aim to improve air, water, and soil, and mitigate the impacts of climate change.	Municipalities	http://www.fcm.ca/home/programs/green-municipal-fund.htm
Other Government of Canada Funding, Grants and Incentive programs.	<ul style="list-style-type: none"> – Current Funding Programs – ecoENERGY for Renewable Power – Grants and Financial Incentives – Other Federal Sources 	Various	http://www.nrcan.gc.ca/energy/funding/4943

* Programs may change – consult Federal government website

Alternative financing mechanisms²⁰ may include:

- Bonds and bond financing
- Carbon funds and carbon taxing
- Development cost charges
- Fuel tax transfers
- High occupancy toll lanes
- Land value taxation
- Public-private partnerships
- Renewable energy credits
- Revolving funds
- Special district financing and special levies
- Standard offer contracts
- Tax increment financing

²⁰ See: <http://www.fcm.ca/home/programs/partners-for-climate-protection/alternative-financing-mechanisms.htm>

4.0 APPLYING AN ENERGY LENS TO MUNICIPAL PLANNING PROCESSES

This section identifies opportunities to apply an energy lens, strategies to institutionalize a community energy plan, opportunities to integrate municipal priorities into energy planning in NB, and lessons learned.

4.1 THE CURRENT PLANNING FRAMEWORK IN NB

At present, there is limited focus on energy as part of community planning in New Brunswick, relative to other provinces like British Columbia and Ontario. However, there are a number of existing policy tools that can support the implementation of Community Energy Plans.

4.2 OPPORTUNITIES TO APPLY AN ENERGY LENS IN PLANNING PROCESSES

New Brunswick communities are in the early stages of CEP development, which provides an opportunity to ensure CEPs achieve maximum potential energy, GHG reduction, and economic benefits. There are a variety of strategies and policy tools that can be applied to incorporate energy into the existing community planning process in New Brunswick.



Farmland. Government of New Brunswick, New Brunswick Images Website.

Advice from the Experts

A reference document that illustrates how various policy tools available to Canadian municipalities can be applied to address energy objectives is The ICES Municipal Policy Toolkit. The tool kit presents how various municipal tools can be used to advance energy priorities in land-use, transportation, buildings, infrastructure, waste, and water & sanitation, including case study examples.

See: http://questcanada.org/sites/default/files/publications/Integrated-Community-Energy%20Solutions-Municipal-Policy-Toolkit-January-2011_0.pdf

Municipalities use planning as a way to coordinate a community's vision, goals, and strategies. Planning is particularly important for guiding a community's direction and decisions over the long-term, including for energy efficiency and community energy planning. Using an integrated planning process can foster cooperation and collaboration amongst stakeholders, creating an increased sense of community responsibility. Section 4.3 identifies municipal and land use planning tools available to enable CEP implementation. Communities should select tools based on their local context and needs – some tools may be more applicable in an urban context, others in rural context or at a regional level. CEPs can inform new regional plans, municipal and rural plans.

Note: The Government of New Brunswick, as of March 2016, is undertaking a major review of the Community Planning Act of New Brunswick. New tools or the names of present tools in the Province may change as a result.

4.3 MUNICIPAL AND LAND USE PLANNING TOOLS AND EXAMPLES

Background Studies

Background studies can inform local and regional plans, including short term objectives, growth strategy, and a 20–40 year vision. (In other Provinces, Strategic Plans are equivalent). Background studies can be used to embed or apply an energy lens on decision-making. Making the environment or energy security a priority at the community level allows Council to make strategic investments in studies, community energy plans, or targeted projects and policies related to energy. It can also help build a case for funds to be allocated to studies, plans, and projects.

The City of Coquitlam, British Columbia's strategic plan, contains actions related to implementing the Community Greenhouse Gas Reduction Strategy including:

- Creating an energy efficient community
- Implementing district energy where feasible
- Developing policies to encourage higher performance buildings, passive design, and renewable energy

Source: City of Coquitlam (2012). 2012-2015 Strategic Plan. http://www.coquitlam.ca/docs/default-source/city-services-documents/2012_-_2015_Strategic_Plan.pdf?sfvrsn=0

Burlington, Ontario's strategic plan, Burlington, Our Future, includes actions to improve energy management within the community as a way to achieve economic prosperity. Actions within the Strategic Plan include:

- Promoting and encouraging lower community energy consumption
- Expanding renewable energy initiatives
- Developing a Community Energy Plan

The City of Burlington successfully developed and adopted a CEP in 2014.

City of Burlington (2011). Burlington, Our Future – Strategic Plan 2011-2014. <http://cms.burlington.ca/AssetFactory.aspx?did=19272>
City of Burlington (2014). Community Energy Plan. <https://www.burlington.ca/en/live-and-play/community-energy-plan.asp>

Official Plans

Local Plans (Municipal or Rural) are documents that outline growth objectives and guide the future land use planning of a community. Policies for GHG reductions, energy efficiency, distributed energy resources, and requirements for community energy planning can be included in an official plan in order to incorporate energy planning into the community's future growth. Municipalities can also identify future sites for energy infrastructure to meet anticipated growth in official plans by allocating corridors for future distribution lines or zoning land for future electricity generation, district energy, etc.

The Regional Municipality of York, Ontario's Official Plan, encourages all local municipalities within its jurisdiction to develop a CEP and requires local municipalities to develop CEPs for Regional Centres, which are primary focal areas for intensive development. It also requires local municipalities to develop CEPs for each new community area to reduce community energy demands, optimize passive solar gains through design, maximize active transportation and transit, and make use of renewable, on-site generation and district energy options including but not limited to solar, wind, water, biomass, and geothermal energy.

Regional Municipality of York (2013). Official Plan. http://www.york.ca/wps/wcm/connect/yorkpublic/0dc3cfc2-2e0f-49d2-b523-dc7c14b08273/3a%2B-%2BModified%2BYROP%2B2010%2B-%2BAll%2BText_20June13.pdf?MOD=AJPERES

Zoning By-laws and Standards

Zoning by-laws state how land will be used in a community and outlines specific requirements for building use, density, height, size, and location. Zoning bylaws and amendments could be used to promote intensification, mixed-use communities, walkability, distributed energy resources, and support for public transportation.

Minimum/maximum standards can be introduced which specify minimum and maximum building heights and, consequently, the density of a lot area. This tool can be used to encourage intensification, walkability, public transit, and support distributed energy resources.



Cyclists, Campbellton. 2003. Government of New Brunswick, New Brunswick Images Website.

Distributed Energy Resources:

In 2013, the City of Vancouver adopted a bylaw requiring owners of new buildings proposed for construction and existing buildings undergoing significant alterations in the Southeast False Creek neighbourhood to connect to the local district energy system.

City of Vancouver (2013). Energy Utility System Bylaw No. 9552. <http://former.vancouver.ca/blStorage/9552.PDF>

The City of Calgary adopted revisions to the Centre City Bylaw providing incentives for green building features including district energy connections, co-generation facilities and electric vehicle charging stations, among others.

City of Calgary (2015). THE CITY OF CALGARY LAND USE BYLAW 1P2007. http://www.calgary.ca/PDA/pd/Documents/Calgary-Land-Use-bylaw-1P2007/bylaw_1p2007.pdf

Increasing Density:

The Renaissance at North Hill illustrates that redevelopment of large shopping centre parking lots to provide residential units can reap benefits for both the mall owners and developers. The developer considers good communications with surrounding neighbours, as well as building good relationships with the City, to be key factors

The City of Calgary, Alberta adopted a zoning bylaw amendment rezoning a mall parking lot to allow for a high-density residential development in a mixed use area. The development provided residents with greater access to essential services and amenities and reduced their dependency on private vehicles.

Canada Mortgage and Housing Corporation. Residential Housing Intensification Case Studies: The Renaissance at North Hill, Calgary. <http://www.cmhc-schl.gc.ca/en/inpr/su/sucopl/upload/The-Renaissance-at-North-Hill-Calgary-Alberta.pdf>

Parking Incentives for Developers:

The City of Hamilton, Ontario amended its Zoning Bylaw for a transit-oriented multi-residential building, reducing parking space requirements from 1 space per unit in a multi-unit residential dwellings to 0.47 parking spaced per unit due to the building being located in a transit-oriented neighborhood.

City of Hamilton (January, 2015). BY-LAW NO. 15-024 To Amend Zoning By-law No. 05-200, Respecting Lands Located at 98 James Street South (Hamilton). <http://www2.hamilton.ca/NR/rdonlyres/73BB2B31-8D18-455B-970A-176CA3CB978C/0/15024.pdf>

Development Schemes (Official Plan Amendment)

Development Schemes (also known as Secondary Plans in other Provinces) fall under Section 32 of the Community Planning Act of NB. They can be used to amend or add official plan policies for a particular region within a municipality. Similarly to an Official Plan, policies can be amended or introduced to encourage GHG reductions, and energy efficiency and which encourage or require higher densities or transit-oriented development, distributed energy resources, and requirements for community energy planning.

Scarborough Centre Secondary Plan

In 2014, the City of Toronto adopted the Scarborough Centre Secondary Plan which encourages developers to accommodate renewable energy generation and distribution systems, as well as charging infrastructure for electric vehicles. The policies are as follows:

1.4.9 Community Energy

(a) New development and the re-development of existing buildings within the McCowan Precinct will contribute to achieving the City's target for reducing energy use and reducing greenhouse gas emissions. Proponents of new development and redevelopment of existing buildings will be guided by the Community Energy Plan prepared as part of the McCowan Precinct Plan Study (2014) and will work with the City to assess opportunities to contribute to the City's energy targets through sustainable development.

(b) Development is encouraged to promote and accommodate renewable energy generation and distribution systems to assist in reducing greenhouse emissions, off- setting on site energy consumption, and securing a sustainable and stable energy distribution and supply. Energy technologies such as geothermal, combined heat and power co-generation, solar thermal heating, solar cooling, heat recovery, short- and long-term energy storage, and solar photo-voltaic will be encouraged. Building design and site planning to achieve passive solar heating in cold weather months will also be encouraged.

(c) Development will be encouraged to incorporate facilities to re- charge electric-powered vehicles either as a private or common amenity for building occupants or on pay-per-use basis for the general public.

City of Toronto (2014). Scarborough Centre Secondary Plan.
<http://www1.toronto.ca/planning/5-scarborough-centre.pdf>

Plan of Subdivision

A plan of subdivision is used when dividing land into two or more lots intended for separate ownership and outlines all the details and conditions required for development. A community could integrate an energy lens into the approval process by including considerations regarding walkability, the creation of compact neighbourhoods, energy conservation through street and lot layout to optimize passive solar gains and conditions for use of photovoltaics, and the construction of energy efficient homes.²¹

Through the City of Toronto secondary plan process, the City Planning Division can require developers to submit an Energy Plan as part of a Plan of Subdivision. In cases with no Plan of Subdivision, developers can be encouraged to submit the Energy Plan as part of a Site Plan Control application. The energy plan could identify how the development will incorporate opportunities identified in this Community Energy Plan, including but not limited to, efficient buildings, building scale energy solutions, block/precinct scale energy solutions, and smart energy grid integration.

The City of Richmond identified as a priority in its 2014 Community Energy and Emissions Plan to review subdivision bylaws to encourage transit-oriented design to support investments in active transportation infrastructure.

City of Richmond (2014). Community Energy and Emissions Plan.
http://www.richmond.ca/__shared/assets/ceep37697.PDF

²¹ (see Subdivision bylaw and Building Bylaw in Community Planning Act: http://laws.gnb.ca/en/showdoc/cs/C-12/ga:s_59#anchorga:s_59)

Site Plan Control

Site plan control is a tool that municipalities can use to ensure that certain requirements are met before a site is developed. By including design considerations in site plans, communities can promote energy and GHG reduction activities, including energy efficiency requirements such as those used in outdoor lighting.

The Toronto Green Standard (TGS) uses site plan approvals to require new private and public development to meet green building requirements. As of January 31, 2010, the City of Toronto uses this two-tiered set of performance measures for new development, organized by three building types. It requires planning applications, including zoning by-law amendments, site plan approval and draft plan of subdivision to meet Tier 1 requirements. Tier 1 requirements are mandatory and Tier 2, a higher level of performance, is voluntary. These performance measures were instituted to address a number of issues, consistent with the Official Plan's broad policies, including air and water quality, greenhouse gas emissions, energy efficiency, solid waste and the natural environment.

City of Toronto (n.d.) Toronto Green Standard.
<http://www.toronto.ca/greendevlopment>

Development Permit Systems

Development permit systems combine site plan control, zoning, and minor variance together in one application format, providing an expedited and simplified application process. Development permit systems can include requirements for brownfield redevelopment, green roof installation, water conservation measures, street and lot layout that reduces energy consumption, transportation demand management, installation of distributed energy resources, and to encourage energy efficiency and GHG reductions.

While Development Permit Area legislation was recently adopted in Ontario and in BC, it is not currently legislated in NB.

Community Improvement Plans (CIPs)

Community improvement plans are created to target a designated area within a city for development or redevelopment. CIPs could target brownfield redevelopment, densification and intensification, increased support for public transit, or the development of alternative energy systems.

In 2015, The City of Moncton introduced a financial incentive program to revitalize vacant and under-utilized properties within the Downtown Community Improvement Plan area. The CIP aims to enhance mixed-use, sustainable and transit-oriented development in the downtown core.

City of Moncton (2015). Financial Incentive Program for Downtown Community Improvement Plan Area & Designated Heritage Properties. <http://www.moncton.ca/Assets/Business+English/Financial+Incentive+programs.pdf>

Development Charges

A development charge is a levy on developers to finance municipal infrastructure needed to support new developments. Development Charges vary among municipalities and can influence the business case for higher density and mixed use buildings. Development charge incentives and area-specific development charges can be implemented to encourage higher density developments that support the business case for transit, alternative energy solutions and mixed use neighbourhoods.

The City of Penticton, British Columbia reduces Development Cost Charges for low energy impact developments by 50 percent.

The Corporation of the City of Penticton (2010). Development Cost Charges Reduction Bylaw No.2010-11.
[http://www.penticton.ca/assets/City~Hall/Bylaws/Land~Use/Development%20Cost%20Charge%20Reduction%20\(Bylaw%202010-11\).pdf](http://www.penticton.ca/assets/City~Hall/Bylaws/Land~Use/Development%20Cost%20Charge%20Reduction%20(Bylaw%202010-11).pdf)

The Niagara Region Development Charges Reduction Program offers development charge exemptions ranging from 50-75 percent for developments located within central areas, or on brownfield sites within central areas and for LEED projects.

Niagara Region (n.d.). Development Charges Reduction Program.
<https://www.niagararegion.ca/business/property/reductions.aspx>

Height and Density Bonusing

Height and density bonusing is used in order to allow buildings to exceed the height and density of development permitted by existing zoning-bylaws in exchange for community benefits, the cost of which is borne by the developer. Community energy planning can be advanced through this tool by encouraging such community benefits as intensification, mixed-use communities, transit support and improvements.

In 2008, the City of Port Coquitlam adopted a regulation allowing developers to be eligible for density bonusing if proposed developments achieve LEED (Silver) Certification equivalency. This applies to developments Comprehensive Development Zones CD30 and CD31.

Canada Green Building Council (2014). LEED Policy Database.
http://www.cagbc.org/CAGBC/Programs/SmartGrowth/_Canadian_LEED_Policy_Database_/CAGBC/Programs/SmartGrowth/Canadian_LEED_Policy.aspx?hkey=890441eb-cfd3-4d35-af87-8a1a2d3726fa

Secondary Suites

A secondary suite is a separate living unit created within a single-family home. A bylaw allowing secondary suites encourages neighbourhood intensification and can enable the conditions needed to support transit and distributed energy resources.

In 2015, the City of Calgary introduced a Development Permit Exemption program to simplify the implementation of secondary suites in specified land use districts within Calgary. The program waives the application fees for secondary suites and in some cases eliminates the requirement to submit a development permit.

City of Calgary (n.d.). Applying for a Secondary Suite.
<http://www.calgary.ca/PDA/pd/Pages/Permits/Projects/Applying-For-A-Secondary-Suite.aspx?redirect=/suites>

Local Improvement Charges

Local improvement charges (LIC) are used when a municipality provides new services to one or more properties. The municipality pays for the improvements and arranges for the work to be carried out. An LIC is then assessed and assigned to each property that benefits from the improvement. A set portion of the cost is paid back in the form of an additional charge on top of the usual municipal tax over a set number of years by the owner of the property. LICs could be used to finance energy efficiency improvements to a property. They are an attractive option for homeowners because the loan is attached to the property rather than the owner, providing an incentive for investing in more capital-intensive energy efficiency projects. LICs address several barriers to energy efficiency upgrades, including a hesitancy to accept long paybacks, a preference for low-cost improvements, lack of access to capital, and construction industry resistance.

LICs are not currently used to finance home energy retrofits in NB, but are being used in other Provinces. However, a municipality in NB may introduce zoning bylaws with specific criteria/outcomes, and associated Local Improvement Charges. All development in the zone type would be subject to the LIC with outcomes defined.

The Collaboration on Home Energy Retrofits in Ontario (CHEERIO) program has been established to encourage the uptake of Local Improvement Charges in municipalities including Toronto, Guelph, the City of Hamilton, Durham Region and the City of London.

Clean Air Partnership (2015). Collaboration on Home Energy Efficiency Retrofits in Ontario (CHEERIO)
<http://www.cleanairpartnership.org/cheerio>

Parking Charges

Parking charges can provide a variety of benefits, including traffic reduction, increased turnover of spaces, reduced cruising for parking, and new revenue for the municipality. Parking charges are often used in tandem with an overall reduction in parking spaces, which leads to more compact development and promotes alternative forms of transportation. In turn, energy consumption and emissions are reduced.

In 2014 the Town of Banff, Alberta introduced a parking charge pilot program converting free parking in the downtown core to paid parking in an effort to encourage the uptake of alternative modes of transportation among residents and tourists.

Town of Banff (2014). User Pay Parking.
<http://banff.ca/index.aspx?nid=934>

Protection of Settlement Area Boundaries

Settlement area boundaries discourage low density and sprawl development, thus reducing infrastructure costs and greenhouse gas emissions. Energy savings can be achieved through reduced vehicle dependence, brownfield redevelopment, intensification, and growth of compact communities.

The Growth Plan for the Greater Golden Horseshoe identifies density and intensification targets, urban growth centres, strategic employment areas and settlement area restrictions designed to mitigate negative environmental, economic and human health impacts associated with sprawling, uncoordinated growth in the region. The Plan includes population and employment forecasts for all upper- and single-tier municipalities that are to be used for planning and managing growth.

Ontario Ministry of Municipal Affairs and Housing (2006). Growth Plan for the Greater Golden Horseshoe. https://www.placestogrow.ca/index.php?option=com_content&task=view&id=9&Itemid=14

Infill and brownfield redevelopment incentives

Infill and brownfield redevelopment incentives includes introducing financial and regulatory incentives or eliminating financial and regulatory barriers for redeveloping brownfield sites. This approach can help create the conditions for higher density and mixed use development which may be supporting of transit, alternative energy resources resulting in reduced energy consumption and GHG emissions.

In 2002, Koo's Corner, located in the Strathcona neighbourhood in Vancouver, British Columbia was completed. The project represents a best practices as it relates to infill development. The City of Vancouver allowed a higher density for the project than what was permitted in the Vancouver Charter, enabling the project to be viable.

Canada Housing and Mortgage Corporation (n.d.). Residential Intensification Case Studies: Koo's Corner, Vancouver, B.C.
<http://www.cmhc-schl.gc.ca/en/inpr/su/sucopl/upload/Koo-s-Corner-Vancouver-B-C.pdf>

Opportunities to integrate municipal priorities with energy planning in NB

The province of New Brunswick has a history of centralized electricity generation and planning. Municipalities can play a role in bridging the gap between supply and demand, promoting conservation and local generation and identifying energy needs at the source. To be effective in this role, municipalities will need to understand the broader provincial context for energy planning and their plans will need to have regard for these processes.

Natural Gas Planning

Municipal planning and policy documents, including subdivision plans, zoning, and Official Plans, are the main sources of information that natural gas utilities use to understand municipal projections of growth. Municipalities can share these documents in their final versions or as working drafts with gas utilities to keep them informed on new developments and get their input on implications for gas supply.

Municipalities have the opportunity to engage with gas utilities directly to invite them to participate in Community Energy Planning and a CEP Advisory Committee, to get updates on demand side management program development and implementation and discuss municipal planning and growth initiatives.

Electricity Planning

Municipalities can engage with electric utilities directly to invite them to participate in Community Energy Planning and a CEP Advisory Committee, to get updates on distribution planning, efficiency and conservation programs, smart grid programs and technology implementation, and to discuss municipal planning and growth initiatives.

Within the current electricity planning framework, municipal input can be collected as part of the stakeholder engagement process of the electric utility's Integrated Resource Plan. Municipalities can comment on: growth and electricity needs, alternatives and impacts of alternatives, local opportunities and priorities, etc.

Municipalities can also provide input to distribution planning through the EUB Intervener Status: any individual or group, including municipalities, can participate as an intervener in an electricity hearing on rates or any issues at the EUB. Becoming an intervener can be an effective way for interest groups and others to get their opinions heard on regulatory matters. The NBEUB (<http://www.nbeub.ca>) is an independent quasi-judicial body created by the legislature to regulate the charges passed on to consumers by utilities. The NBEUB regulates the charges, rates and tolls for NB Power as well as other specific aspects of the electricity market including the licensing of Market Participants.

5.0 CONCLUSION

Atlantic Canadian communities have many opportunities to reduce energy costs and GHG emissions, and act as an economic engine through development and implementation of CEPs. Accounting for 59 percent of energy consumption and over 56 percent greenhouse gas emissions²², communities in Atlantic Canada are central to enabling the Province of New Brunswick to achieve their energy objectives.

Community Energy Planning: A Primer for New Brunswick Municipalities is designed to be a resource for communities that are interested in developing a Community Energy Plan (CEP). Using this Primer for guidance, a municipality may develop a CEP, identifying ways to integrate energy into other local government strategies, land use plans, policies, and municipal projects / new development, to ensure actions identified in the CEP are implemented.

²² Source: Natural Resources Canada Comprehensive Energy End Use Database (2012 data) :

- Included energy use and greenhouse gas emissions for residential and commercial sectors, as well as some industrial (construction, cement, "other manufacturing") and transportation (cars, passenger light trucks, motorcycles, school buses, urban transit, passenger rail, freight light trucks, medium trucks).
- Excluded agriculture, and some industrial (chemicals, iron and steel, forestry, mining, petroleum refining, pulp and paper, smelting and refining) and transportation (heavy trucks, inter-city buses, passenger air, freight air, freight rail, marine, "off-road").

REFERENCES

Content developed with reference to:

“Community Energy Planning: The Value Proposition”, GTI, 2016.

<http://gettingtoimplementation.ca/research/>

“National Report on Community Energy Planning - Implementation” GTI, 2015.

<http://gettingtoimplementation.ca/research/>

“Advancing Integrated Community Energy Planning in Ontario: A Primer”, QUEST, 2013.

<http://www.questcanada.org/downloads/The%20Primer%20-%20reduced%20size.pdf>

The ICES Municipal Policy Toolkit, 2011.

http://questcanada.org/sites/default/files/publications/Integrated-Community-Energy%20Solutions-Municipal-Policy-Toolkit-January-2011_0.pdf

“Community Energy and Emissions Planning: A guide for B.C. local governments. Vancouver, B.C.” Community Energy Association, 2008.

<http://communityenergy.bc.ca/download/7/>

Community Energy Planning Guide, Natural Resources Canada, 2007.

APPENDIX A – QUEST TECHNICAL AND POLICY PRINCIPLES

Smart Energy Communities are all about improving energy efficiency, cutting costs, enhancing reliability and reducing greenhouse gas emissions in Canada.

So what does a Smart Energy Community look like?

First, conventional energy networks get integrated. That means that the electricity, natural gas, district energy and transportation fuel networks in a community are better coordinated to match energy needs with the most efficient energy source. When conventional energy networks are integrated, it opens the door to innovations like alternative fuel vehicles, energy storage, waste heat capture, and combined heat & power.

Second, a Smart Energy Community considers land use, recognizing that poor land use decisions can equal a whole lot of energy waste.

Third, a Smart Energy Community harnesses local energy opportunities. These can be stock opportunities like solar, wind and geothermal or they can be opportunities that are tailored to a community, like water source cooling, sewage heat capture, biomass for heating, and capturing biogases for electricity and transportation fuel.

Communities have a key role to play in energy. Local decisions related to transportation, buildings, land use, water, and waste among others have a significant impact on energy consumption and emissions. Every community will have its own unique mix of local energy opportunities. Community Energy Plans (CEPs) provide an approach to help communities become Smart Energy Communities, and can build upon the following technical and policy principles:

Technical Principles

- Improve efficiency – first, reduce the energy input required for a given level of service
- Optimize exergy – avoid using high-quality energy in low-quality applications
- Manage heat – capture all feasible thermal energy and use it, rather than exhaust it
- Reduce waste – use all available resources: landfill gas and municipal, agricultural, industrial, forestry wastes
- Use renewable energy resources – tap into local opportunities for geo-exchange systems, small scale hydro, biomass, biogas, solar, wind energy, and opportunities for inter-seasonal storage
- Use energy delivery systems strategically – optimize use of energy delivery systems and use them as a resource to ensure reliability and for energy storage to meet varying demands

Policy Principles

- Match land use needs and mobility options – understand the energy implication of land use, infrastructure for water and wastewater, waste management, personal mobility, goods movement, and building design decisions
- Match energy options to local context – local climate, building on land use choices, industrial structure, availability of local sources of waste and renewables
- Send clear and accurate price signals – consumers should see and pay full real costs, including external costs
- Manage risks and be flexible – maintain technological and fuel diversity; pursue cost-effective opportunities first and incorporate learning; assume the need to adapt quickly to market and technological surprises
- Emphasize performance and outcomes in policy and regulations – avoid prescribing fuels and technologies
- Pursue policy and program stability – maintain a consistent and predictable decision-making environment to sustain investor confidence

APPENDIX B – ENERGY LITERACY RESOURCES

Arctic Energy Alliance - Community Energy Planning Toolkit:
<http://aea.nt.ca/>

BSB (Biomass Solution Biomasse):
www.bsbheating.com

California Energy Aware Planning Guide:
www.energy.ca.gov/energy_aware_guide/index.html

Canadian GeoExchange Coalition:
<http://www.geo-exchange.ca/en/>

Canadian Passive House Institute:
<http://passivehouse.ca/>

Canadian Solar Industries Association:
<http://www.cansia.ca/>

Canadian Wind Energy Association:
<http://www.canwea.ca/>

Case Studies on Municipal Energy Initiatives: Case Studies
on Municipal Energy Initiatives – North America

Community Energy and Greenhouse Gas Mapping:
<http://www.cec.org/>

CEA has a three-volume Community Energy Planning toolkit
and many other resources:
<http://communityenergy.bc.ca/?s=Community+Energy+Planning+Toolkit>

Enbridge Gas NB:
<http://naturalgasnb.com/CMS/en/home/default.aspx>

Falls Brook Centre: Programs and Internships:
<http://www.fallsbrookcentre.ca/>

Federation of Canadian Municipalities:
GHG Inventory and Local Action Plan Resources
www.fcm.ca

Getting to Implementation:
<http://www.gettingtoimplementation.ca>

Green Build Association: Green Up Program:
http://www.cagbc.org/AM/Template.cfm?Section=GREEN_UP
LEED:
<http://www.cagbc.org/Content/NavigationMenu/Programs/LEED/default.htm>

Groupe Savoie:
www.groupesavoie.com

Independent Power Systems:
<http://www.ips-nb.com>

Irving Oil:
<http://www.irvingoil.com/>

Natural Resources Canada - Community Energy Planning Guide:
www.sbc.nrcan.gc.ca/documentation/communities/Community%20Energy%20Planning%202007.pdf

NB Department of Energy and Mines, Government of New Brunswick:
<http://www.gnb.ca/0085/>

NB Environment:
<http://www2.gnb.ca/content/gnb/en/departments/elg.html>

NB Power:
<http://www.nbpower.com/>

NB Power Efficiency Services:
<https://www.nbpower.com/en/smart-habits/energy-efficiency-programs>

NBCC Saint-John Energy Systems Technology Diploma, with a focus on
QUEST and ICES Principles:
http://www.nbcc.ca/en/home/programs_and_courses/programsearch/programdetails.aspx/Details/pf/3789/

Other NBCC / CCNB Engineering Programs:
<http://www.nbcc.ca/en/home/default.aspx>

Provincial Emissions Calculator:
<http://logixml.ghgregistries.ca/New%20Brunswick%20Dashboard%20Solo/>

QUEST - National SEC Atlas:
<http://www.questcanada.org>

Real-Time Building Performance Monitoring:
www.shiftenergy.com

Renewables NB:
<http://renewablesnb.ca/>

Solar Resources Map of Canada:
<http://pv.nrcan.gc.ca/index.php>

The Canadian BioEnergy Centre (CBEC):
<http://www.unb.ca/fredericton/forestry/wstc/cbec/>

The GAIA Project:
<http://www.thegaiaproject.ca/>

There are several other comprehensive guides to community energy and
emissions planning: see Publications on QUEST website:
<http://www.questcanada.org>

UNB Engineering Programs:
<http://www.unb.ca/fredericton/engineering/>

Wood Pellet Association:
www.pellet.org

APPENDIX C – EXAMPLES OF COMMUNITY ENERGY PLANNING DOCUMENTS

Municipality	Title of Plan	Link to Plan	Publication Date
Campbell River, British Columbia	Community Energy & Emissions Plan	https://www.fcm.ca/Documents/reports/PCP/2014/Campbell_River_Community_Energy_and_Emissions_Plan_EN.pdf	September 2011
Edmonton, Alberta	Edmonton's Community Energy Transition Strategy	http://www.edmonton.ca/city_government/environmental_stewardship/energy-transition.aspx	August 2015
Brandon, Manitoba	Brandon's Environmental Strategic Plan	http://brandon.ca/images/pdf/adminReports/environmentalPlan.pdf	May 2013
London, Ontario	London's Community Energy Action Plan	https://www.london.ca/residents/Environment/Energy/Pages/Community-Energy-Action-Plan.aspx	July 2014
Halifax	Community Energy Plan	https://www.halifax.ca/energy-environment/Environment/energyplan/	
Yellowknife, Northwest Territories	2006-2014 Community Energy Plan	https://www.yellowknife.ca/en/living-here/energy.asp	May 2006 (renewal in development approved by Council on May 2014)
Annapolis County	Town of Annapolis Royal: Partners for Climate Protection Milestone 5	http://www.annapolisriver.ca/downloads/toar-milestone-5-report.pdf	
Guelph, Ontario	Community Energy Plan	http://guelph.ca/wp-content/uploads/report_communityEnergyInitiative.pdf	

Other References:

Miller, Glenn, et al. Integrated Energy Mapping for Ontario Communities: Lessons Learned Report. Toronto: Canadian Urban Institute, 2011. Print.
 Online access: <http://www.canurb.org/s/CUIPublicationIntegratedEnergyMappingOntario-wvxc.pdf>

Natural Resources Canada. Communities: Community Energy and Greenhouse Gas Mapping Natural Resources Canada, 9 Feb, 2011. Web. 12, June 2013.

Link: <http://canmetenergy.nrcan.gc.ca/buildings-communities/communities/1477>

APPENDIX D – COMMUNITY ENGAGEMENT METHODS

Community Engagement Methods

At some point in the development of a CEP, the public should be involved. Ideally this would happen earlier rather than later, but such things as cost, timeliness, and participant burnout also have to be considered. There are many forms of public engagement, and different methods should be considered at different points in the process. Creative thinking can result in effective public involvement approaches for your community.

Some possibilities are:

One-on-One meetings – Identify potential interested stakeholders and members of the public, hold one-on-one meetings with them to understand their concerns, needs, ideas, and potential resources. It is advantageous to understand and address concerns or needs up front, engage support for development of a CEP, and harness ideas and resources. This will make for more constructive consultation process with the public and interested stakeholders (e.g. in workshops).

Surveys – Surveys can provide a broad-based indication of the community's interest and concerns. New web-based survey tools have made surveys much easier and cheaper to develop, distribute, and administer. To increase response rates, surveys should be kept fairly short and simple. Offering a draw prize to those who complete the survey can also significantly increase participation.

Display booths – A display booth can be set up to attract participation from audiences that might not otherwise be involved. Locations could include shopping malls, trade shows, or community events. A display booth offers the opportunity to both provide information and receive feedback.

Information campaigns – These would involve the outflow of information to the community, but without an opportunity to provide feedback. This is probably best used early in CEP development, to build community awareness and public support, with the opportunity for public input coming later. Information can be distributed through mail-outs, newspaper or other forms of advertising, community cable programming, web postings, or unstaffed display booths.

Stakeholder participation – It may be beneficial to target the public participation to representatives of larger groups, those with knowledge in the area, or those likely most impacted. Potential stakeholders might include neighbourhood associations, regional growth planning groups, transit officials, major employers and industries, utility representatives and energy or environmental organizations. Once again, it is advisable that participants work through issues in detail under the guidance of a facilitator.

Workshops/open houses – These are a common form of public participation. Open houses should be attended by members of staff and council so feedback can be heard directly. They are generally used to provide information and receive feedback, but tend to draw a limited number of people. Convene round table energy workshops that bring together various municipal departments and external organizations. Round Tables are an effective format for engagement because they enable participants to discuss ideas and solutions for the community in small groups and then share their thoughts with the room. These meetings could bring together conservation and supply planners with municipal economic development department and land use, energy and environmental planners to discuss a wide range of topics. A Roundtable may:

1. Ask local utilities to provide a presentation on the regulatory environment. This helps the City understand what the utilities can and cannot do;
2. Provide information on and discuss system performance, reliability in different areas of the City and opportunities and constraints for incorporating renewable and distributed generation;
3. Share information about how utilities forecast gross load, conservation potential, distributed generation, weather normalization, identify areas of future focus of infrastructure improvement (heat maps);
4. Discuss opportunities for information and data sharing; advancing specific projects; and
5. Apply an energy lens to municipal planning and financing. Roundtable participants can identify opportunities to integrate energy into municipal plans and processes such as Official Plan reviews and economic development strategies. Buy-in from municipal staff is needed to ensure that energy conversation is embedded into every facet of the municipal planning process. Opportunities for bringing an energy lens to various municipal planning processes were identified in the Primer.

Charrettes – Charrettes are a more involved form of public participation, usually by invitation. Participants work through issues in detail under the guidance of a facilitator, often over several days, to generate potential solutions.

Partner with other organizations – Since a CEP impacts the whole community, it is important to involve others beyond local government staff. Involving community groups and non-profit organizations in the development of your CEP is an excellent way to enhance community participation and reduce the costs of implementation. Partnering with these groups early in the process can be valuable in getting public buy-in. Community groups have the advantage of being local and using volunteers to achieve results cost-effectively. Education and awareness campaigns or representation on committees are good avenues for community group involvement. Developing partnerships is also a way to lower implementation costs, coordinate activities, and bring potential funders to the table.

Businesses are also an important part of the community and should be involved. Some may play an important role in energy consumption or supply. Others may simply want to be involved and be willing to participate and contribute.

Neighbouring municipalities and regional districts are also important partners, especially where services are shared between communities. Working together with neighbouring communities can help to increase the scale and cost effectiveness of projects, while avoiding conflict.

Identify key energy-related stakeholders that can provide information, resources, strategy direction and technical support to the project. Utilities have a vested interest in the CEP as it will affect their supply and distribution and likely involve their demand-side management programs. Utilities may have technical experts on staff available to help. Energy Service Companies (ESCOs) are companies that specialize in energy efficiency and energy utility systems. They provide a range of services from performance guarantees to financing, ownership, and operation. ESCOs may be potential partners in developing larger projects. Identify energy-related projects and initiatives already underway or planned that should be considered during CEP development.

It is also important to have buy-in and cooperation from all departments and staff members. A staff workshop will help to explain the plan, how it will impact different departments, and the role of staff for implementation. One of the most significant factors in seeing a plan move forward is ensuring that adequate staff resources are in place to manage the work. Others may do the actual work, but local government staff will be needed to oversee progress and keep the plan on track. Dedicated staff resources are necessary to incorporate these issues into everyday operations.

The implementation team should include representation from both staff and elected officials, and may involve community members. An implementation team can help provide continuity and knowledge transfer in the case of staff turnover. It may be an existing energy planning committee, or a new committee may be established.

Although it will usually be necessary to get some outside expertise for the development of a CEP, there are some components that can be done in-house to reduce costs. These include public, staff, and council/board consultation, and target setting. You may even have the expertise in-house to take on the entire plan, but be careful to consider the best use of staff time.

Local government planning departments and energy utilities are among the most important CEP stakeholders to work with and have been the most supportive when it comes to implementation of CEPs. Other stakeholders that are sometimes seen to be influential when it comes to CEP implementation include the Federation of Canadian Municipalities, professional associations, large industrial energy users and provincial emergency management offices. Successful CEPs had significantly more support from other municipal departments, including engineering and finance departments, and had significantly more support from external CEP stakeholders including real estate developers, higher education institutions, local non-profits, non-governmental organizations, and other local governments.

To efficiently complete a project, the highest risk and longest timeline requirements should be identified and initiated as early as possible. The more prominent processes and requirements that must be navigated include: market access and licensing requirements; environmental assessment and permit requirements; zoning and land use issues; land ownership/acquisition; and infrastructure requirements and related approvals. Early engagement with the regulators, the public and other stakeholders will assist to focus efforts and improve regulatory efficiency.

APPENDIX E – CEP PROCESS – STEPS ABBREVIATED

Here are the abbreviated CEP Steps outlined in detail in the document.

1. Engage Stakeholders
2. Conduct a Baseline Energy Study (BLS), Energy Mapping and Develop Scenarios
3. Define the Vision and Time Horizon
4. Quantify the Vision and Define Time Horizon
5. Identify and Prioritize Actions
6. Present the Plan to Council for Adoption
7. Implement the Plan
8. Monitor and Report on Progress

GTI will release CEP Implementation Framework at the end of 2016.

<http://gettingtoimplementation.ca/>



PROJECT SUPPORTERS

