



COMMUNITY
ENERGY PLANNING
**GETTING TO
IMPLEMENTATION**
IN CANADA

Community Energy Implementation Framework

DECEMBER 2016

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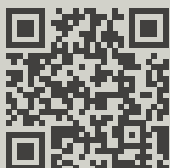
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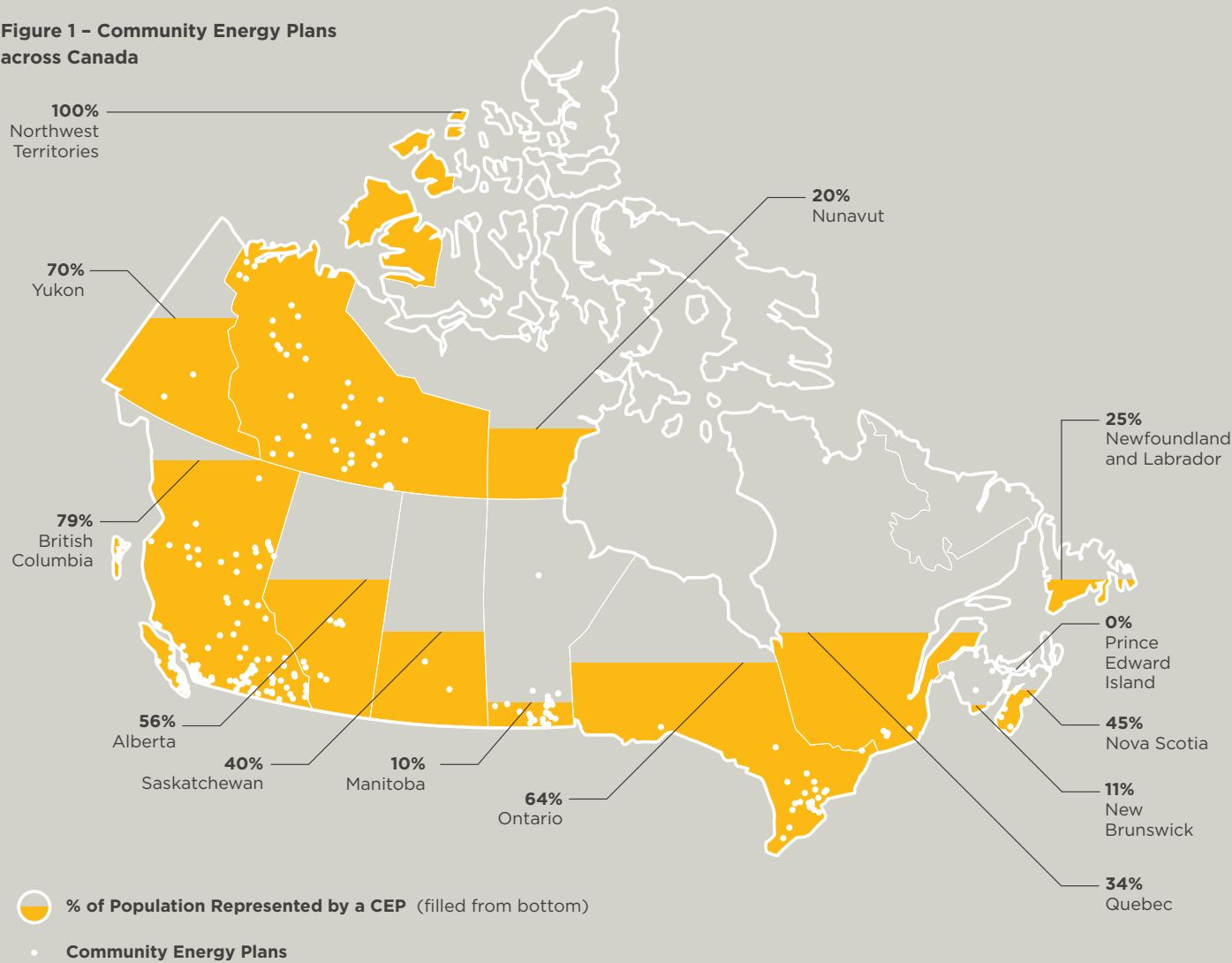


Visit our website to learn more about the *Getting to Implementation* initiative.

About the Community Energy Implementation Framework

Across Canada, more than 200 communities,¹ representing over 50 percent of the population, have a Community Energy Plan (CEP). See Figure 1.²

Figure 1 – Community Energy Plans across Canada



A CEP defines community priorities around energy with a view to improving energy efficiency, cutting GHG emissions, achieving resilience and driving economic development. There is growing acceptance among all levels of government, energy distributors,³ the real estate sector and other stakeholders that CEPs provide a pathway for communities to become Smart Energy Communities. Smart Energy Communities:

- Integrate conventional energy networks (electricity, natural gas, district energy, and transportation fuel) to better match energy needs with the most efficient energy source
- Integrate land use
- Harness local energy opportunities

Smart Energy Communities can be characterized by six technical and six policy principles.

Despite the acceleration of community energy planning across Canada, communities continue to face challenges when it comes to implementation.

¹ The term "local government" refers to a specific level of government. The term "community" or "communities" refers to all infrastructure and residential, commercial, industrial, institutional, transportation, utility, and agriculture activities within a given geographic (or municipal) boundary.

² There are more than 100 CEPs under development across the country. There are 3 known CEPs under development in the Province of British Columbia, 74 CEPs under development in the Province of Ontario, 22 under development in the Province of Manitoba, 5 under development in Alberta and 1 under development in Saskatchewan. The growing number of CEPs as well as policies supporting CEPs are reflected in the GTI reports entitled National Report on Policies Supporting Community Energy Plan Implementation and Policies to Accelerate Community Energy Plans: An Analysis of British Columbia, Ontario and the Northwest Territories (www.gettingtoimplementation.ca/research).

³ Energy distributors are responsible for distributing electricity, natural gas and thermal energy from the point of supply and/or transmission, to the end user.

The *Community Energy Implementation Framework* is a guide intended to help communities move CEPs from a vision to implementation.⁴

The *Community Energy Implementation Framework* should be used with the *Community Energy Implementation Readiness Survey* available here. Together, the *Community Energy Implementation Framework* and the *Community Energy Implementation Readiness Survey* are intended to accelerate the implementation of community energy projects and programs.⁵

The *Community Energy Implementation Readiness Survey* is a self-evaluation tool that enables communities to assess the degree to which critical success factors are in place to support CEP implementation. The *Community Energy Implementation Readiness Survey* contains success factors for implementation, the *Community Energy Implementation Framework* contains strategies that contain insights and advice to achieve success factors for implementation.⁶

The *Community Energy Implementation Framework* includes 10 strategies that provide insights, advice and a proposed path forward to:

- Foster widespread political, staff and stakeholder support
- Build staff and financial capacity for implementation
- Embed energy into the plans, policies and processes of the local government

The *Community Energy Implementation Framework* will answer questions such as:



Engagement

- Who should lead the development and implementation of the CEP?
- What stakeholder groups should you engage with and when?
- How can you effectively communicate with various stakeholder groups to ensure meaningful engagement and input?
- What steps can you take to ensure ongoing support and engagement after the CEP is developed?
- What governance models are most effective for ensuring ongoing support?



Resources

- What is the value proposition for implementing a CEP?
- What is the business case for having a dedicated staff person oversee CEP implementation?
- What internal and external resources are available to support CEP implementation?
- How can the CEP be embedded in to the budget?



Plans & Processes

- How can local government staff incorporate energy into existing plans and policies?
- How can staff effectively monitor and report on implementation progress?

The *Community Energy Implementation Framework* is intended for communities with and without a CEP. You may find it useful if you are:

- A local government staff person (including a land use planner, transportation planner, economic development staff, Global Information Systems (GIS) staff, community energy managers, communications staff, finance staff, etc.)
- An elected official at the local, provincial/territorial or federal level
- An electric, natural gas or thermal energy distributor⁷
- A real estate developer or building manager
- Local or provincial/territorial non-governmental organizations (NGO) with a mandate to support community energy planning and project implementation

⁴ This Framework has been developed with input from hundreds of stakeholders across Canada that were engaged in interviews, workshops and focus groups between May 2014-June 2016 as part of the *Community Energy Planning: Getting to Implementation in Canada* initiative. See Appendix I for further details.

⁵ While corporate energy actions are an important part of community energy planning, this Framework is focused on communitywide actions.

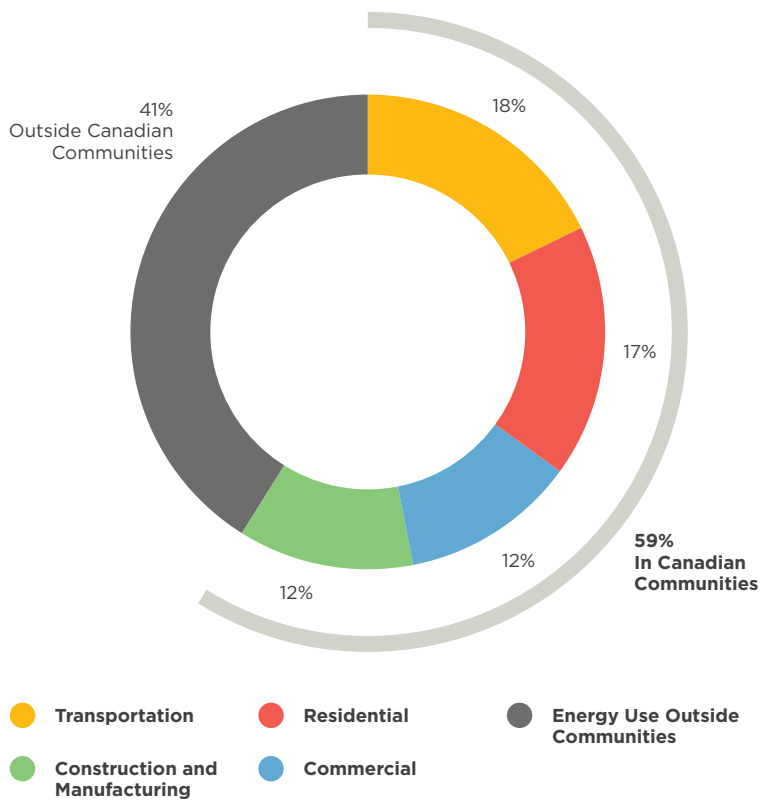
⁶ The Framework does not describe how to develop a CEP. Resources on how to develop a CEP can be found in Appendix I.

⁷ Energy distributors are responsible for distributing electricity, natural gas and thermal energy from the point of supply and/or transmission, to the end user.

The Changing Landscape of Energy in Canadian Communities

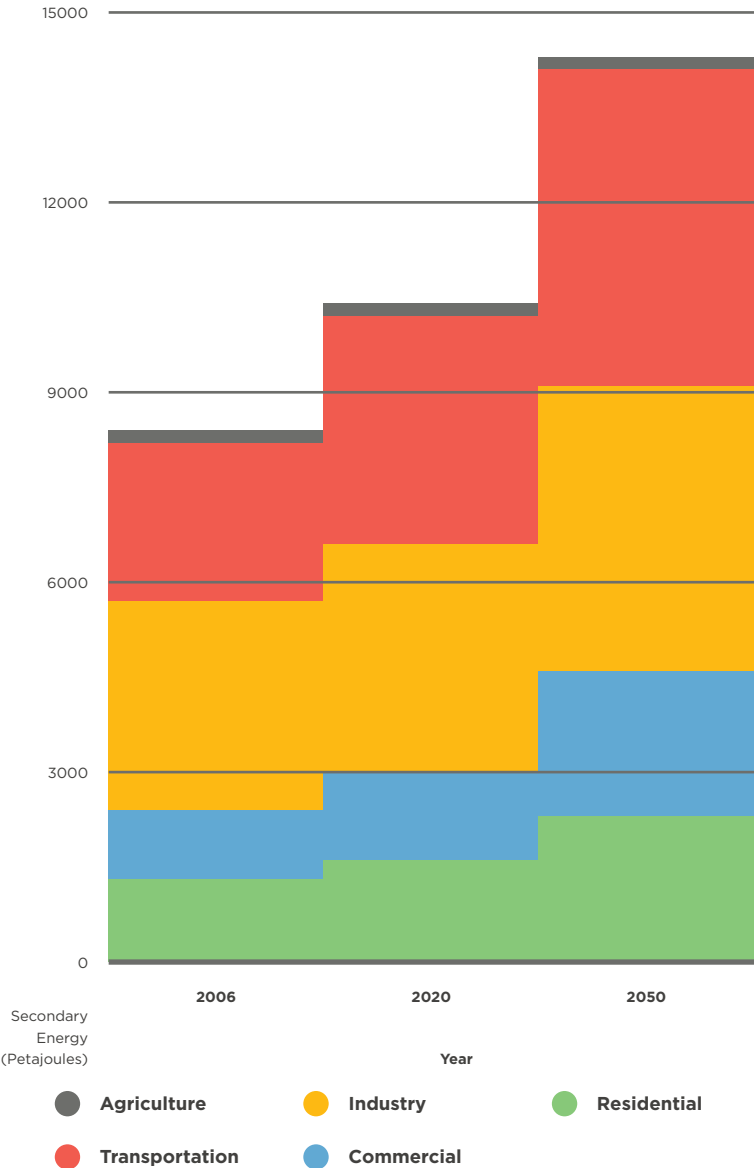
Canadian communities have an important role to play in energy. They influence nearly 60 percent of energy use and 50 percent of greenhouse gas (GHG) emissions nationally. Energy consumption and GHG emissions are attributed to the way energy is used to heat, cool and operate buildings, through the waste management process, in land use and transportation, as well as in agriculture. Figure 2 illustrates the proportion of energy used in communities and the way in which it is used. Figure 3 illustrates that energy use is growing in Canadian communities and could increase by about 75 percent by 2050 over 2006 levels under a business-as-usual scenario. Figure 4 illustrates the potential impact that local governments can have over energy end use in a community.

Figure 2 - Energy End Use in Canadian Communities^a



Source: (Natural Resources Canada, 2012)

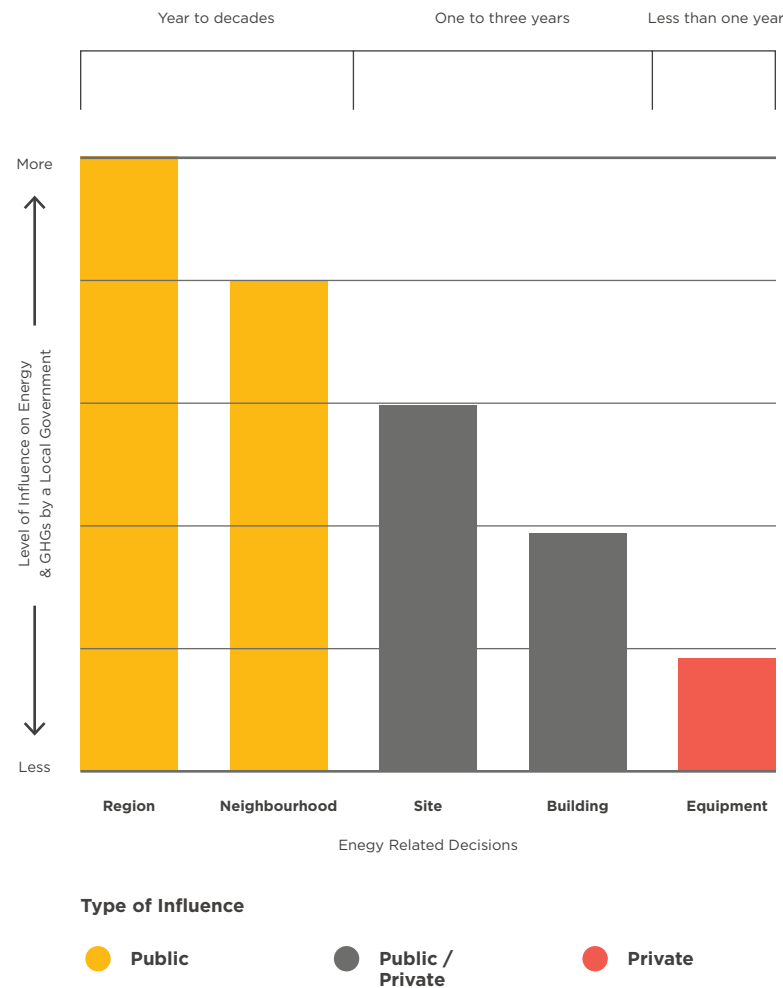
Figure 3 – Potential Increase in Energy Use in Communities across Canada⁹



⁸ Natural Resources Canada (2012). Comprehensive Energy Use Database. Retrieved from http://oee.nrcan.gc.ca/corporate/statistics/neud/dpa/trends_egen_ca.cfm
All energy use data was retrieved from Natural Resources Canada 2012 end use database. Energy used in communities includes: all residential and commercial energy end uses, transportation in communities (including energy used for cars, passenger light trucks, freight light trucks, medium trucks, motorcycles, school buses, urban transit, and passenger rail), industrial energy uses in communities (including construction, cement, and other manufacturing). Energy use outside communities includes transportation energy used for heavy trucks, inter-city buses, passenger air, freight air, freight rail, marine and off-road transportation, industrial energy used for pulp and paper, smelting and refining, petroleum refining, chemicals, iron and steel, forestry and mining industries, and total energy use for the agricultural sector.

⁹ Council of Energy Ministers (September, 2009). Integrated Community Energy Solutions: A Roadmap for Action. Retrieved from https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/oeef/pdf/publications/cem-cme/ices_e.pdf

Figure 4 - Local Government Influence on Energy End Use and GHG Emissions¹⁰



In addition to being one of the highest energy users per capita globally, Canadian communities have among some of the highest global energy costs per capita. Table 1 highlights average annual energy spending by businesses, households and governments in small, mid-sized and large Canadian communities. On average, a community of 100,000 can spend \$400 million across the community on energy per year and much of that spending typically leaves the local economy.

Table 1 - Energy Spending in Small, Mid-sized and Large Communities¹¹

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

Projected growth in energy consumption and the increasing costs associated with energy use are posing significant risks to Canadian communities, threatening to affect the quality of life of all Canadian residents and businesses. Community energy planning can mitigate the risks associated with growing energy consumption and the inefficient use of energy in communities. Table 2 lists the many economic, environmental, health and resilience benefits of implementation.

Table 2 – The Benefits of Community Energy Planning

Economic benefits	Environmental benefits	Health and Social benefits	Resilience benefits
· Reduce energy spending for households and businesses · Recirculate energy spending within the local economy · Create high-quality, local jobs · Attract and retain businesses · Increased retail sales · Increase property values · Capitalize on a growing clean technology market	· Reduce greenhouse gas emissions · Foster healthy ecosystems · Use land and natural resources more efficiently	· Improve social connectivity · Improve mental health · Reduce cardiovascular diseases and respiratory illnesses · Increase physical activity · Improve air quality (indoor and outdoor) · Reduce healthcare costs · Reduce the heat island effect¹²	· Improve access to reliable sources of energy · Reduce exposure to energy price volatility · Solutions for areas facing energy poverty · Recognize local priorities · Reduce the replacement cost of asset renewal

There are a number of emerging opportunities supporting an energy transition in Canadian communities such as:

- Climate policy: Ambitious international, national and provincial/territorial policies are emerging in favour of a more integrated approach to energy planning. The Paris Agreement signals an unprecedented multinational agreement to raise the bar on energy and climate change action.
- Supportive policies: The forthcoming Pan Canadian Framework on Climate Change is also expected to present opportunities for energy and climate action in Canadian communities. At a provincial and territorial level there are over 640 policies, programs and regulations supporting community energy planning.¹³
- Urbanization: The preferences of Canadian homes and businesses are evolving. Today, 81 percent of Canadians live in urban regions, seeking improved connectivity between the places they live, work and play.¹⁴
- Clean tech: There is a significant opportunity to capitalize on the global clean tech market, which is expected to grow from \$1 trillion in 2016 to \$3 trillion by 2020.¹⁵ Currently, Canada's share represents 1.3 percent of the global market.¹⁶

¹⁰ QUEST (September 2010). Paper No. 2: Fuels & Technologies for Integrated Community Energy Solutions. <http://www.questcanada.org/ICES-LiteracySeries2>

¹¹ Community Energy Planning: The Value Proposition (www.gettingtoimplementation.ca/research).

¹² A “heat island effect” is the heating effect that occurs in built up and urban areas. It describes built up areas that are hotter than nearby rural areas. The annual mean air temperature of a city with 1 million people or more can be 1–3°C warmer than its surroundings. In the evening, the difference can be as high as 12°C. Heat islands can affect communities by increasing summertime peak energy demand, air conditioning costs, air pollution and greenhouse gas emissions, heat-related illness and mortality, and water quality. Source: US Environmental Protection Agency <https://www.epa.gov/heat-islands>.

¹³ See the GTI reports entitled National Report on Policies Supporting Community Energy Plan Implementation and Policies to Accelerate Community Energy Plans: An Analysis of British Columbia, Ontario and the Northwest Territories (www.gettingtoimplementation.ca/research).

¹⁴ Statistics Canada (2011). Population, urban and rural, by province and territory (Canada). <http://www.statcan.gc.ca/tables-tableaux/sum-som/101/cst01/demo62a-eng.htm>

¹⁵ Action Canada (2016). Launching Clean Tech: Ensuring Canada's Place in the New Global Market. <http://www.actioncanada.ca/wp-content/uploads/2014/04/AC-TF2-Launching-Cleantech-EN-Summary-web.pdf>

¹⁶ Analytics Advisors (2015). Canadian Clean Technology Industry Report. http://www.analytics-advisors.com/assets/file/2015%20Report%20Synopsis%20Final_wcovers.pdf

An Overview of Energy Planning in Canadian Communities

Traditionally, Canadian communities have planned for buildings, transportation, land use and waste in silos. The way in which communities are planned locks in energy and emissions impacts for decades. There is an untapped opportunity to integrate buildings, transportation, land use, waste and water systems to achieve greater energy efficiency, reduce GHG emissions and drive economic development.¹⁷

Over 200 communities across Canada, representing more than 50 percent of the population, have developed a CEP to transition and integrate the way energy is planned for and used across the community.¹⁸

CEPs are often led and implemented by local governments in partnership with a broad range of community stakeholders, including energy distribution companies, the real estate sector, the private sector, NGOs and provincial/territorial governments.

CEPs often vary from community to community, however they contain many of the following common elements:

- Community-wide energy and/or GHG emissions inventories
- Energy conservation and/or GHG reduction targets, and in some cases sub-sector targets for the building, waste and transportation sectors
- Proposed community-wide actions and strategies to meet the targets, including but not limited to, energy efficiency in buildings, planning and policy measures, transportation (including public transit, active transportation, low carbon vehicles and other transportation actions), waste, distributed energy resources (including renewable energy, district energy and combined heat and power), and water conservation
- Analyses of the economic, environmental, health and social benefits of implementation
- Key Performance Indicators to allow the community to monitor and report on implementation

CEPs also vary with respect to the level of detail contained in energy inventories as well as how deeply the economic, environmental, health and social benefits of CEP implementation are analyzed.

Table 3 describes various approaches to CEP development as well as the resources required to develop and the type of information they provide. Communities should pursue an approach that aligns with the community's priorities, size, demographics, and available resources.

Table 3 – Approaches to Community Energy Planning¹⁹

CEP Approach	Description	Community Size	Cost	Information Provided
Inventory	A community energy inventory is the first step in defining community needs around energy.	Any community size	\$15,000 to \$20,000*	· Total energy consumption and costs · GHG emissions by source type (waste, transportation, buildings, other)
Get Started	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 CEP. Consider the actions listed in Figure 6.	Any community size	Project cost	· Project/program related information e.g. cost-benefit or triple bottom line analysis, implementation schedules, resources required, etc.
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 to \$10,000**	· Total energy consumption and costs · GHG emissions by source type (waste, transportation, buildings, other) · Short-term implementation plans and impact projections for a series of practical actions easily supported.
Targeted Plan	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 to \$150,000	· Total energy consumption and costs · GHG emissions by source type (waste, transportation, buildings, other) · Specific and more detailed targets and actions for priority sectors e.g. targets and actions for existing buildings.
Comprehensive Plan	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	· Total energy consumption and costs · GHG emissions by source type (waste, transportation, buildings, other) · A deeper understanding of required actions, modelled impacts, stakeholders, project partners and resources for all sectors.

*Varies based on the level of detail (granularity), frequency of planned updates and the availability of data.

**Assumes a community-wide energy inventory exists.

¹⁷ The QUEST Smart Energy Community Technical and Policy Principles offer a basis to achieve better integration among these systems. The principles are available at <http://www.questcanada.org/thesolution/principles-smart-energy-communities>

¹⁸ As of September 2015.

¹⁹ Adapted from: Community Energy Association. (2015, January 19). CCEM 101 Energy & Emissions Planning Module 3 - Selecting a CEEP Approach For Your Community.

The Community Energy Implementation Readiness Survey

The process of implementing a CEP will differ from community to community and depends on a number of factors, ranging from the community context, to resources, management and engagement with community stakeholders. Table 4 lays out the steps most often undertaken in the CEP development and implementation process.²⁰

Table 4 – CEP Development and Implementation Process

Identify Political Champion																			
Secure Funding to Develop the Plan				Political, Staff, and Community Stakeholder Engagement															
				Develop a Baseline Energy Study															
				Define the Impacts and Benefits of CEP Implementation															
				CEP Vision															
				Energy and GHG Reduction Targets															
				Identify and Prioritize Actions															
				Plan Adoption															
								Identify and Secure Funding											
								Introduce New Governance Models											
												Implementation Actions							
												Integrate into Plans and Processes							
												Monitor and Report on Progress							



The *Community Energy Implementation Readiness Survey* is a self-evaluation tool that enables communities to measure their level of readiness for CEP implementation. The survey contains 27 success factors that influence successful CEP implementation, organized into five factor categories. The factors were identified through interviews, workshops and focus groups carried out through the Community Energy Planning: Getting to Implementation in Canada initiative.

The results of the survey are intended to provide respondents with insights about the community's strengths and weaknesses and can point communities to the appropriate sections of the *Community Energy Implementation Framework* for support where it may be needed.

Instructions

Read the following implementation factors and indicate the extent to which you agree or disagree with the factors on a scale of 1-5. If you rank the Factor 3 or lower consider reviewing the associated Strategies in the Framework.

You can also take advantage of the interactive web-based Implementation Readiness Survey at www.framework.gettingtoimplementation.ca

Table 6 – Measuring the Economics of Community Energy Plans

	Strongly Disagree	Disagree	Somewhat Disagree	Agree	Strongly Agree	
Success Factors for Implementation	1	2	3	4	5	If you rank the Factor 3 or lower consider reviewing the associated Strategies in the Framework.
Community Energy Plan						
Factor 1: The CEP vision and benefits are clear and able to inspire local leaders, local government staff and community stakeholders to act.						If your community does not yet have a CEP, refer to Appendix I for a list of resources to get started. Refer to: • Strategy 1: Develop a Rationale • Strategy 2: Engage Elected Officials • Strategy 8: Monitor and Report • Strategy 9: Budget
Factor 2: The number, diversity and interdependence of actions in the CEP is manageable.						
Factor 3: The CEP energy and greenhouse gas emission targets, and actions, are specific, measureable, attainable, relevant and time-bound.						
Factor 4: There is clear understanding among those leading the CEP about the risks associated with not implementing the CEP.						
Total						

	Strongly Disagree	Disagree	Somewhat Disagree	Agree	Strongly Agree	
Success Factors for Implementation	1	2	3	4	5	If you rank the Factor 3 or lower consider reviewing the associated Strategies in the Framework.
Community Context						
Factor 5: Council is supportive of a more integrated approach to planning energy within the community and there is a sentiment among Council that implementing the CEP can help achieve other community priorities (e.g. environment, economic, health, social).						Refer to: - Strategy 1: Develop a Rationale - Strategy 2: Engage Elected Officials
Factor 6: The local government is perceived by stakeholders to have the legitimacy and capacity to lead the development and implementation of a CEP.						Refer to: Strategy 2: Engage Elected Officials
Factor 7: Provincial/territorial policies, programs and regulations are supportive of local efforts to develop and implement CEPs.						Refer to: - The National Report on Policies Supporting CEP Implementation. - Policies Supporting the Acceleration of Community Energy Plans - Strategy 4: CEP Oversight - Strategy 6: Define the Proposition - Strategy 7: Engage Community Stakeholders
Factor 8: The local government is leading by example and has implemented community energy projects and programs that are recognized as successful by the community.						Refer to: - Appendix I for a list of resources to get started - Strategy 9: Budget
Factor 9: There has been strong uptake from local residents and businesses of existing programs focused on energy conservation (including transportation, energy efficiency, waste, etc.).						Refer to: - Strategy 1: Develop a Rationale - Strategy 7: Engage Community Stakeholders - Strategy 10: Plans and Policies
Factor 10: The administrative structure of our organization supports, rather than acts as a barrier to, CEP implementation.						Refer to: - Strategy 2: Engage Elected Officials - Strategy 3: Governance
Total						

	Strongly Disagree	Disagree	Somewhat Disagree	Agree	Strongly Agree	
Success Factors for Implementation	1	2	3	4	5	If you rank the Factor 3 or lower consider reviewing the associated Strategies in the Framework.
Management and Governance						
Factor 11: There is a dedicated staff person responsible for leading implementation, delegating responsibilities to other local government staff and monitoring implementation activities among external stakeholders.						Refer to: · Strategy 3: Governance · Strategy 4: CEP Oversight · Strategy 5: Engage Staff · Strategy 8: Monitor and Report · Strategy 9: Budget
Factor 12: Local government department staff know which aspects of the CEP impact or are impacted by their work and there is an assigned staff person responsible for implementing, measuring and reporting on the actions in the plan.						Refer to: · Strategy 3: Governance · Strategy 4: CEP Oversight · Strategy 5: Engage Staff · Strategy 8: Monitor and Report
Factor 13: Those responsible for implementation have a process in place to convene and communicate regularly.						Refer to: · Strategy 3: Governance · Strategy 5: Engage Staff · Strategy 8: Monitor and Report
Factor 14: There is a leadership team in place, with representation from council, local government and key community stakeholders, to provide strategic direction on the CEP.						Refer to: · Strategy 3: Governance
Factor 15: There is an implementation team in place and the team has the authority and mechanisms to implement the plan, and can make changes to the implementation plan based on new learning, shifts in context, and implementation challenges.						Refer to: · Strategy 3: Governance · Strategy 5: Engage Staff · Strategy 8: Monitor and Report
Factor 16: In cases where the implementation team does not have authority to implement actions, new governance models have been developed to support implementation.						Refer to: · Strategy 3: Governance
Factor 17: There is a clear decision making framework in place to support CEP implementation.						Refer to: · Strategy 3: Governance · Strategy 5: Engage Staff · Strategy 9: Budget · Strategy 10: Plans and Policies
Total						

	Strongly Disagree	Disagree	Somewhat Disagree	Agree	Strongly Agree	
Success Factors for Implementation	1	2	3	4	5	If you rank the Factor 3 or lower consider reviewing the associated Strategies in the Framework.
Staff and Financial Sources						
Factor 18: Local government staff tasked with implementation have sufficient skills, commitment and time to manage the implementation of the plan and/or have ability to improve their capacity as required.						Refer to: · Strategy 4: CEP Oversight · Strategy 9: Budget
Factor 19: Risk of staff turnover is low and there is a succession plan in place to pass on the corporate knowledge of the plan.						Refer to: · Strategy 4: CEP Oversight
Factor 20: There is funding to support a dedicated staff person to oversee CEP implementation.						Refer to: · Strategy 2: Engage Elected Officials · Strategy 4: CEP Oversight · Strategy 9: Budget
Factor 21: There is sufficient internal funding in place to support capital expenses, programs and contractors.						Refer to: · Strategy 9: Budget
Factor 22: There is sufficient external funding in place (e.g. funding from energy distributors, provincial/territorial funding, real estate developers, etc.) to support capital expenses, programs and contractors.						Refer to: · Strategy 9: Budget
Factor 23: There is clear understanding among those leading CEP implementation about what can reasonably be implemented and in what time frame, based on local government staff and financial resources.						Refer to: · Strategy 3: Governance · Strategy 4: CEP Oversight · Strategy 5: Engage Staff · Strategy 9: Budget
Total						

	Strongly Disagree	Disagree	Somewhat Disagree	Agree	Strongly Agree	
Success Factors for Implementation	1	2	3	4	5	If you rank the Factor 3 or lower consider reviewing the associated Strategies in the Framework.
Stakeholder Management						
Factor 24: There is a process in place to engage stakeholders on an ongoing basis.						Refer to: · Strategy 3: Governance · Strategy 6: Define the Proposition · Strategy 7: Engage Community Stakeholders · Strategy 10: Plans and Policies
Factor 25: There is clear understanding about how CEP implementation is generating/ will generate value for community stakeholders.						Refer to: · Strategy 1: Develop a Rationale
Factor 26: Community stakeholders contributed to the development of the plan and feel ownership for its key actions, responsibility for its implementation, and commitment toward hoped for results.						Refer to: · Strategy 3: Governance · Strategy 6: Define the Proposition · Strategy 7: Engage Community Stakeholders
Factor 27: There is a clear understanding about what actions community stakeholders have committed to implementing, and stakeholders have indicated that resources are or will be in place to support implementation in an agreed to timeframe.						Refer to: · Strategy 6: Define the Proposition · Strategy 7: Engage Community Stakeholders · Strategy 8: Monitor and Report
Total						

Develop a Compelling Rationale for Undertaking the CEP

CEPs can lead to much more than GHG reductions. Community energy planning can help mitigate risks, and has the potential to lead to widespread economic, health, social, resilience and environmental benefits. While GHG reductions are an important part of community energy planning, it is critical to define what other benefits the CEP can generate. A critical success factor for CEP implementation is defining how the CEP will enable the community to meet its economic, health, social and resilience objectives.

GTI Advice

- **Focus on the widespread benefits of CEP implementation, beyond GHGs:** CEPs have the potential to lead to significant economic, health, social, resilience and environmental benefits. Be sure to describe how CEP implementation will lead to measurable benefits when describing the plan to senior management and council
- **Caution against analysis paralysis:** The analysis to support a CEP should only go as deep as is needed to gain support from senior decision makers and elected officials
- **Be precise, yet efficient:** Aim for detailed, precise and defensible data. Consider that projections beyond 30 years have inherent limits due to technology advances, fluctuating energy prices, changing business models and cultural attitudes
- **Focus on actions under the jurisdiction of local government:** When developing models, include business-as-usual assumptions as well as provincial and federal policies that have already been adopted. Avoid including provincial, territorial or federal policies that have not yet been adopted
- **Use familiar language:** Use language that resonates with the stakeholder group you are engaging

Table 5 describes the benefits of CEP implementation, and identifies a starting point for measuring and describing these benefits in your community.

Table 5 – Analyzing the Widespread Benefit

	Summary of Benefits	What you Will Need	Resources to Get Started
Environmental Benefits	· Reduce GHG emissions · Foster healthy ecosystems · Increase efficient use of natural resources	· Baseline energy and emissions inventory, including community-wide data on electricity, natural gas and fuel consumption · Summary of the largest contributing factors to GHG emissions · Projected local climate change impacts · Summary of the largest contributing factors to GHG emissions · Projected local climate change impacts	· See Appendix I for a list of resources to consider for developing a CEP
Economic Benefits²¹	· Reduce energy spending for households and businesses · Recirculate energy spending within the local economy · Create high-quality, local jobs · Attract and retain businesses · Increase retail sales · Increase property values · Capitalize on a growing clean technology market	· Baseline energy and emissions inventory, including community-wide data on electricity, natural gas and fuel consumption · Community-wide energy spending and spending projections · Analysis of where energy spending goes (e.g. local, businesses, provincial/territorial government, other provinces/territories, federal government, or outside of Canada) · Projected savings associated with energy conservation measures · Spending on local distributed energy resources (e.g. solar photovoltaics, solar heating, Combined Heat and Power - CHP)	· Community Energy Planning: The Value Proposition²² · Clean Energy for a Green Economy, Community Energy Association²³ · The Economic Benefits of Sustainable Streets, New York City Department of Transportation²⁴ · See additional examples in Appendix II
Health and Social Benefits	· Improve social connectivity · Improve mental health · Reduce cardiovascular diseases and respiratory illnesses · Increase physical activity · Improve air quality (indoor and outdoor) · Reduce healthcare costs · Reduce heat islanding effect	· Baseline energy and emissions inventory, including community-wide data on electricity, natural gas and fuel consumption · Baseline studies on air and water quality · Records from medical officer of health	· Healthy Built Environment Linkages, British Columbia Health Services Authority²⁵ · Community Energy Association Primer on the Transition to Electric Vehicles in Metro Vancouver²⁶
Resilience Benefits	· Improve access to reliable sources of energy · Reduce exposure to energy price volatility · Provide solutions for areas facing energy poverty · Recognize local priorities · Reducing the replacement cost of asset renewal	· Baseline energy and emissions inventory, including community-wide data on electricity, natural gas and fuel consumption · Projected local climate change impacts	

²¹ See Community Energy Planning: The Value Proposition for an in-depth review of the economic benefits of CEPs (<http://gettingtoimplementation.ca/research/>).

²² Community Energy Planning: The Value Proposition (www.gettingtoimplementation.ca/research/).

²³ Community Energy Association (May 2010). Clean Energy for a Green Economy. <http://communityenergy.bc.ca/download/313/>

²⁴ New York City Department of Transportation (December 2013). The Economic Benefits of Sustainable Streets. <http://gettingtoimplementation.ca/wp-content/uploads/2016/12/NYdot-economic-benefits-of-sustainable-streets.pdf>

²⁵ British Columbia Health Services Authority (October 2014). Healthy Built Environment Linkages. http://www.phsa.ca/Documents/linkagestoolkitrevisedoct16_2014_full.pdf

²⁶ Community Energy Association (2012). A Primer on the Transition to Electric Vehicles in Metro Vancouver. <http://pluginbc.ca/resource/transitioning-electric-vehicles-metro-vancouver-primer-workshop-notes/>

Methods for Measuring the Economics of Community Energy Plans

Table 6 illustrates a range of methods for measuring the economic impacts of CEPs.²⁷

Table 6 – Measuring the Economics of Community Energy Plans

Method	Purpose	Relevant CEP approach ²⁸
Community Energy Cost	Discuss total community energy use in a metric everyone understands, in order to generate different conversations with elected officials and stakeholders.	Inventory
Financial Feasibility	Screen and prioritize measures, programs, or portfolios to identify if the investment will break even.	Get Started; Practical Tactics
Levelized cost of energy	Compare the unit costs of different energy generating technologies across the expected lifetime of the asset, in real dollars per kWh.	Get Started
Marginal Abatement Cost Curve	Compare GHG emission reduction options according to which will cost the least or deliver the most financial savings, and according to their potential impact on GHG reductions.	Get Started; Practical Tactics; Targeted Plan; Comprehensive Plan
Community economic benefits	Inform the decision-making process, and stakeholders, on the total value to the local economy of a CEP, considering the how direct expenditures recirculate through local businesses, households, and tax revenue.	Targeted Plan; Comprehensive Plan
Cost effectiveness and cost benefits	Screen and prioritize measures, programs, or portfolios to identify if benefits over time exceed initial costs, and to identify a portfolio of measures that maximize the economic, environmental, and social benefits from CEP implementation.	Targeted Plan; Comprehensive Plan

Relevant Case Studies (See Appendix III)

- Case Study 2: Measuring the Widespread Economic Benefits in the City of London, Ontario
- Case Study 3: Measuring Green Jobs in Durham Region, Ontario
- Case Study 4: Measuring the Impacts of Sustainable Communities on Local Retail Sales. New York City, New York
- Case Study 5: Framing the Value Proposition, Edmonton, Alberta

Relevant Resources

- Community Energy Planning: The Value Proposition (www.gettingtoimplementation.ca/research)
- Policies to Accelerate Community Energy Plans: An analysis of British Columbia, Ontario and the Northwest Territories (www.gettingtoimplementation.ca/research)

²⁷ Read more about these economic methods in the GTI report entitled Methods for Measuring the Economics of Community Energy Plans: An Introduction for Community Energy Managers at www.gettingtoimplementation.ca/research

²⁸ See Table 3 Approaches to Community Energy Planning.

Collaborate with a Political Champion and Engage Council

Council support is critical for implementation, as it provides direction, inspiration and impetus for local government staff, and the community, to prioritize community energy planning. Communities that take the time to engage with a political champion and council on an ongoing basis may be better positioned to move forward on implementation. Early engagement can help to surface key questions, considerations and possible challenges and can guide the CEP implementation team to focus on the aspects of the plan that matter most to the community.

GTI Advice

- Consider the following GTI Advice on how to engage with political champions and elected officials, when to engage them, why to engage them and how to engage them.

Collaborating with Political Champions

Who to engage

- While some communities may have an existing political champion for community energy, many must work to engage and foster a champion
- Engage an elected official that actively supports community energy initiatives (consider a councillor that supports alternative modes of transportation, energy efficiency, distributed energy projects, waste management, etc.)
- If none of your councillors actively support community energy initiatives consider engaging a councillor supportive of improved community health, social, resilience or economic development
- Consider engaging multiple political champions as a way to strengthen overall support for the CEP and in an effort to mitigate the risks associated with political turnover

When to engage them

- Engage a political champion as early as possible
- The champion should remain engaged throughout the CEP development and implementation process

Why engage them

- A political champion can establish legitimacy, generate widespread buy-in and secure resources for the community energy planning process.
- They can act as a liaison between the CEP development and implementation teams and council
- They may be available to provide insights to ensure the CEP is developed with the public interest in mind

How to engage them and what to focus on

- If you do not have a personal connection with elected officials in your community consider reaching out to the office of the identified elected official by phone and have an informal discussion
- Present a clear and inspiring message that can easily be championed
- Send the elected official a letter describing the rationale for the CEP and the potential value it will add to the community and summarize how you would like the champion to be engaged in the CEP process
- The mandate of the political champion should include promoting the CEP, meeting with other elected officials to discuss the potential value, risks and benefits of the CEP and participating in key CEP meetings

Building Widespread Support from Elected Officials

Who to engage

- Council
- Committees of Council with a mandate related to community energy
- Agencies, boards and commissions tasked with providing input to council on special topics
- Chief Administrative Officer (CAO). CAOs are responsible for the administrative management and operations of local governments and for ensuring that resolutions and by-laws of council are implemented efficiently and effectively

When to engage them

- Engage council once before beginning the CEP
- At least once per quarter during CEP development
- On a frequent basis during CEP implementation
- Annually
- Consider election and budget cycles and CAO turnover

Why engage them

- Council support is critical for implementation. Their continued interest in the CEP can help garner support from other community stakeholders and can ensure that the CEP remains a priority in local government staff work plans
- Council can allocate funding for implementation for staff time, project capital or maintenance costs and for programs
- CAO support is a significant success factor for CEP implementation. While the CAO may not be directly involved in the implementation of actions, their support is critical for signaling the importance of the CEP to council and other local government departments

How to engage them and what to focus on

- Brief introductory presentations to council and/or committees of council *before* the CEP is started (consider having the champion present to council)
- Focus on the value proposition of the CEP. Describe how the implementation of the plan will enable the local government to meet goals established in council's Strategic Plan
- Meetings (up to a half-day) to present risks assessments, proposed investments, and the value proposition *before* the plan is presented for adoption. If possible, use visual tools such as energy maps²⁹ to illustrate your points. Present the CEP as a good investment. Emphasize the risks associated with *not* implementing the plan. Back your claims up by detailed, precise and defensible data
- Describe the costs of the plan and who bears the costs as well as what the proposed savings are, and to whom the savings accrue
- In the early stages of CEP development invite other groups or agencies to present to council or committees of council as well. Consider inviting health agencies, school boards, homebuilders associations etc. that can speak to the value of community energy planning
- Brief introductory presentations to agencies/boards/commissions that have a mandate related to community energy (including health, social, resilience, etc.)
- Once the CEP is adopted, present regular (e.g. quarterly) staff reports to council or committees of council. Reports can be mostly qualitative however measurable updates can be included if the data is available
- After the CEP is adopted provide an annual report to council describing measurable benefits of implementation (e.g. progress on GHG reductions and Key Performance Indicators)
- Consider additional presentations to council as needed to report on CEP development and implementation milestones

Relevant Case Studies (See Appendix III)

- Case Study 2: Measuring the Widespread Economic Benefits in the City of London, Ontario
- Case Study 3: Measuring Green Jobs in Durham Region, Ontario
- Case Study 4: Measuring the Impacts of Sustainable Communities on Local Retail Sales New York City, New York
- Case Study 5: Framing the Value Proposition, Edmonton, Alberta
- Case Study 21: Integrated Financial Planning in the City of Coquitlam, British Columbia

Relevant Resources

- National Report on Community Energy Plan Implementation (www.gettingtoimplementation.ca/research)
- Community Energy Planning: The Value Proposition (www.gettingtoimplementation.ca/research)

²⁹ An energy map illustrates spatial information about energy in a community. It can visually identify opportunities for reducing energy use (e.g. targeting energy efficiency programs), opportunities for shifting modes of transportation (e.g. transit projects), potential sources of energy (e.g. biomass), and opportunities for distributed energy resources (e.g. district energy systems). The various types of energy maps are described in greater detail in: Canadian Urban Institute (2011). Integrated Energy Mapping for Ontario Communities. <http://static1.squarespace.com/static/546bbd2ae4b077803c592197/t/54b807a6e4b060f2e9745d1e/1421346726645/CUIPublication.IntegratedEnergyMappingOntario.pdf>

Develop a Governance Model that Supports a Community Energy Transition

Communities that undertake to implement a CEP with a business-as-usual approach will have limited success. Communities that have introduced new governance models to oversee and implement their plans have consistently proven that doing so will ensure that the CEP remains top-of-mind for elected officials, local government staff and community stakeholders.³⁰

New governance models provide a platform for political, staff and community stakeholders to convene regularly. In some cases, they provide the legal framework needed to implement projects. This can ensure that a process is in place to monitor and report regularly on the implementation of the CEP.

GTI Advice

- **Design a model that works for your community:** Considering the governance structure for the CEP will ensure that the CEP remains at the forefront for elected officials, staff and community stakeholders. There is however, no “one size fits all” solution for communities. Choose a structure that works for your community.
- **Engage broadly:** Ensure that the governance structure involves all political, staff and community stakeholders in a constructive dialogue, and ensure they feel that their contribution is valued and supported
- **Define the purpose:** Ensure that there is a clear purpose for new committees or governance structures. Determine if the objective can be accomplished within existing committee structures or if a new structure should be introduced. Ensure that committee members, particularly those who are attending on a volunteer basis, are not overworked through the number of meetings or tasks
- **Ensure that there is oversight over the monitoring and reporting of CEP implementation progress:** Ensure that the CEP progress is monitored regularly and reported back to all stakeholders annually. See *Strategy 8: Monitor and Report on CEP Implementation* for more information

Table 7 provides a non-exhaustive list of governance models to support implementation, ranging from council-level to community-level governance options.

Relevant Case Studies (See Appendix III)

- Case Study 6: Establishing a Committee of Council in Yellowknife, Northwest Territories
- Case Study 7: Establishing a Governance Framework for Edmonton's Community Energy Transition Strategy, Edmonton, Alberta
- Case Study 8: Stakeholder Engagement in the City of Kelowna, British Columbia
- Case Study 9: Stakeholder Engagement in Markham, Ontario

Relevant Resources

- National Report on Community Energy Plan Implementation (www.gettingtoimplementation.ca/research)
- Federation of Canadian Municipalities (2012). *Passing Go: Moving Beyond the Plan*. https://www.fcm.ca/Documents/tools/GMF/SS_PassingGo_EN.pdf

³⁰ See the National Report on Community Energy Plan Implementation (www.gettingtoimplementation.ca/research).

³¹ See Case Study 7: Establishing a Governance Framework to Support Edmonton's Community Energy Transition Strategy, Edmonton, Alberta.

Table 7 – Governance Models to Support CEP Implementation

Tier	Options	Rationale and Primary Tasks
Council-level	Committee of Council · Chaired by a Councillor, and may have additional Councillors serving as Vice-Chairs and/or members. Council representatives are reconfirmed annually or at the beginning of Council terms · Meeting minutes are reported to Council · Community stakeholders may be on the committee · Staff would attend meetings as a resource but generally not be members · Meetings would usually be open to the public	Consider creating a Committee of Council or a Mayor's Task Force dedicated to overseeing the implementation of the plan.³¹ Invite participation from leaders across the community in a wide-range of sectors including real estate, energy distributors, academia, municipal and provincial/territorial government, accounting and finance, etc. Primary Tasks: · Act as community leaders for the CEP · Be the voice of the CEP in the community · Meet regularly to oversee the status of CEP implementation
	Mayor's Task Force · Similar to a Committee of Council, but Chaired by the Mayor	
Staff-level	Staff Committee · Includes meetings of department managers/leads and/or inter-departmental staff meetings · Council members typically <i>do not</i> participate on staff committees · Meeting minutes are not usually reported to Council in a formal way · Meetings not usually open to the public	A network of staff members involved in implementing actions should be formed. These staff should also be responsible for monitoring Key Performance Indicators Primary Tasks: · Implementing the cross-sectoral actions in the CEP and/or liaising with the appropriate community stakeholders to manage implementation
	Staff Advisory Committee · A committee of technical experts commissioned to provide analysis support for CEP implementation	· An Advisory Committee of technical experts can provide technical support for the implementation of actions in the CEP including analysis, feasibility studies, etc.
	Dedicate Staff to Manage CEP Implementation · Ensure there is a dedicated staff person to oversee implementation · In small communities the designated person may have other responsibilities · In larger communities there may be a project director overseeing multiple project managers	Primary Task: · Project management
	Corporate Energy Staff Person · A staff person can be assigned to oversee corporate energy actions to ensure that the community is leading by example	Primary tasks: · Find ways to ensure that energy and emissions are considered in all corporate decisions around buildings, transportation, waste, procurement, etc.
Community-wide	Community Committee · Generally, community-based with members from external agencies · Likely to have a Council representative but this may be informal · Staff may attend meetings as a resource but generally not be members · Meeting minutes would not usually be reported to Council in a formal way · Meetings would be open to the public, by nature of the committee	· Create a stakeholder advisory committee to represent a wide range of community voices. · Meet on an ongoing basis. · <i>See Strategy 7: Engage community stakeholders and recognize their implementation progress.</i>
Resilience Benefits	· Work with local energy distributor(s) to establish a holding company to oversee distributed energy projects · Form partnerships with local energy distributors to implement distributed energy resources	· In some cases a local government will not have jurisdiction, or may require partners, to implement some actions in a CEP. Some examples include distributed energy resource such as district energy systems, landfill gas capture projects, etc.

Determine which Department and Staff Person(s) will Oversee CEP Implementation

The department in which a CEP sits can significantly impact implementation. For example, a CEP can be led by the planning, community development or the economic development department. CEPs may also be led by local NGOs or by the provincial/territorial government.

Consider the following questions:

- In which department (or organization) should the CEP be housed?
- What staff person should act as the lead for CEP development and implementation?

In which department (or organization) should the CEP be housed?

- Recognizing that collaboration and coordination among political, staff and community stakeholders is central for community energy planning, the department in which a CEP is housed should be well-positioned to communicate and liaise with political, staff and community stakeholders
- The department should be well-positioned to communicate the widespread economic, environmental, health, social and resilience benefits of CEP implementation.
- CEPs are often housed within the planning department due to the strong links that community energy holds with planning and development.
- Some communities house their CEP in the economic development department, recognizing the strong link between economic growth and community energy transition
- In some cases the following types of organizations may be well-suited to lead CEP development and implementation:
 - A local NGO organization with a mandate related to community energy
 - Regional government, if applicable
 - Territorial/provincial government, particularly for rural and remote communities

What staff person should act as the lead for CEP development and implementation?

- The CEP will have significantly more success if there is a dedicated staff person overseeing CEP development and implementation. Without a dedicated staff person, implementation often falls to the sides of many desks and eventually loses momentum. Assign a dedicated staff person to oversee implementation, such as a Community Energy Manager, Planner or an Economic Development Officer. The staff person should have adequate capacity to manage oversight of the CEP
- A staff person that sits at a management level is often well-suited to oversee CEP development and implementation. A manager remains equally as close to senior management/council as it does to staff and stakeholders working to implement the plan on the ground. If this is not possible, try to appoint a staff person with the ability to communicate and liaise with political, staff and community stakeholders, and who possesses some of the knowledge, skills and academic credentials listed below

Knowledge and Skills of the Designated Staff person

- Communication
- Stakeholder and community engagement
- Project management and facilitation
- Research and writing
- Energy literacy
- Change management
- Leadership
- Strategic planning
- Familiarity with local government processes and legislation
- Policy and program development
- Sustainability practices
- Quantitative data analyses (spreadsheet software)
- Mapping (geographical information system software)
- Business case development
- Feasibility/financial analysis

Academic Credentials and Certifications³²

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

While some communities may have the skills in-house to develop and implement a plan, many will be required to contract aspects of the plan to technical experts. This is often the case for energy mapping and modelling.

Special Advice: Consider Developing the CEP at a Different Scale.

While CEPs are often led by a local government, they do not have to be. CEPs can be developed at different scales, for example at a regional or neighbourhood scale.

Developing a CEP at an alternative scale may be an effective approach for your community if:

- You are a small community with little capacity to develop a CEP
- You are a large community whereby a CEP may not be an effective way to meet the highly varying needs across the community
- You live within the jurisdiction of a regional government and can find efficiencies by coordinating among communities in the region

How to Get Started

- Refer to *Appendix IV - Provincial/Territorial Municipal Organizations that may have Community Energy Planning Resources*. Many organizations across Canada provide community energy planning support and can connect communities with the resources or contacts needed to get started
- Consider reaching out to local government staff, regional government staff or neighbouring communities as well as local energy distributors, to begin discussions about possible models for community energy planning
- Consider that many local energy distributors or provincial/territorial governments provide or match funding to support the development and implementation of a CEP
- Consider risks associated with staff turnover and attrition. Many communities, and most often rural and remote communities, face high staff turnover. High staff turnover can lead to a fragmented implementation process and the loss of relationships and corporate knowledge with respect to implementation. In addition, all communities face the risk of losing corporate knowledge as a result of staff attrition

- Consider the approaches listed in *Strategy 3: Develop a Governance Model that Supports a Community Energy Transition*. The focus of this strategy is to embed the CEP within the processes of the local government and focus on building a network of champions, and redundancy in staff involvement in the CEP
 - If possible, provide incentives to reduce staff turnover, such as:
 - Provide professional development opportunities such as training programs
 - Offer frequent formal and informal recognition and/or awards based on performance to improve employee morale and motivation
- Provide employee engagement opportunities to improve employee contentment and loyalty
- Sometimes, corporate knowledge may lie with a contractor that has been retained for community energy planning consulting services for the community. Consider engaging or re-engaging with former consultants if your community is facing a loss of internal corporate knowledge about previous efforts related to the CEP

Relevant Case Studies (See Appendix III)

- Case Study 6: Establishing a Committee of Council in Yellowknife, Northwest Territories
- Case Study 7: Establishing a Governance Framework for Edmonton's Community Energy Transition Strategy, Edmonton, Alberta
- Case Study 16: Monitoring and Reporting on Implementation Progress in the City of Guelph, Ontario
- Case Study 18: Efficiency One, Nova Scotia
- Case Study 19: Alternatives for Small Communities - Eco-Ouest
- Case Study 20: Yukon Energy Solutions Centre

Relevant Resources

- National Report on Community Energy Plan Implementation (www.gettingtoimplementation.ca/research)

³² Credentials are not required but may be relevant.

Engage Staff across the Local Government, Identify Staff Champions and Embed the CEP into Staff Job Descriptions

CEPs cross more departmental boundaries than most local government initiatives and consequently require early and ongoing inter-departmental coordination and collaboration. The following non-exhaustive list of local government departments should be involved in the development and implementation of the CEP.

- Land use planning
- Transportation
- Economic development
- Finance
- Chief Administrative Officer
- Engineering/public works
- Public health
- Environment/sustainability
- Communications
- Global Information Systems
- Others as needed

Engagement should take place at the senior management and junior/intermediate staff level. Table 8 provides a snapshot of how some of the actions within a CEP relate to various departments. This is intended to act as a starting point for determining which aspects of the CEP are relevant for which departments.

GTI Advice

- Consider the following GTI Advice on how to engage with staff within the local government, including senior staff, staff from the planning, transportation, GIS, public works, parks and recreation, finance, and other departments.

Table 8 – Local Government Department Roles in CEP Implementation

	Economic Development	Land Use	Global Information Systems (GIS)	Transportation	Building	Public Health	Environment / Sustainability	Waste Management	Engineering / Facilities / Public Works	Procurement
Provide Data for Key Performance Indicators										
Energy efficiency in buildings										
Conservation programs										
Policy and land use planning measures										
Public transit										
Active transportation										
Low carbon transportation										
Waste management										
Distributed energy resources										
Corporate actions										

Engaging Senior Management from All Departments

Who to engage

- Senior managers of the above-listed departments

When to engage them

- At all stages of CEP development and implementation

Why engage them

- To foster a network of internal staff champions across local government
- To assess existing work plans and resources available for implementation
- To identify existing or potential actions for implementation and to identify opportunities to integrate plans and actions
- To obtain support to embed the CEP into staff work plans

How to engage them and what to focus on

- Brief introductory presentations to senior management as a group to discuss community energy planning, how it relates to their roles and can help achieve their objective
- Follow up meetings to discuss possible courses of action (e.g. delegating CEP actions to departmental staff, identifying who will monitor Key Performance Indicators and the level of effort required for both)
- Present the CEP action plan as an opportunity for new and exciting experiences for staff
- Set up meetings close to CEP adoption to develop staff work plans
- Semi-annual or annual meetings with the core CEP project manager or team to review implementation progress and to establish course corrections if required

Engaging Other Departments including but not limited to Planning, Transportation, GIS, Public Works and Parks and Recreation

Who to engage

- Staff from the above-listed departments that will be involved in project and program implementation

When to engage them

- At all stages of CEP development and implementation

Why engage them

- Staff from the identified departments will be key partners on implementation as many will be responsible for overseeing the implementation of projects and/or programs as well as providing data to report on Key Performance Indicators. It is critical that these staff members know about the CEP, what value it brings to the community and how it relates to their roles

How to engage them

- Set up informational group meetings (e.g. lunch and learns) to inform staff about the CEP, to describe how it relates to their roles, and to answer questions
- Set up meetings with staff responsible for collecting data that pertains to the Key Performance Indicators to review the availability of the data and to assess the level of effort required to collect and send the information to a central staff person
- Set up meetings closer to CEP adoption, along with senior managers to whom they report, to finalize staff work plans
- Establish an internal staff meeting structure to meet bi-annually or annually to review work plans, implementation progress and to establish course corrections if needed

Engaging the Finance Department

Who to engage

- Senior management and/or staff from the finance department

When to engage them

- Before and during CEP development
- On an ongoing basis as-needed during CEP implementation
- Consider budget cycles

Why engage them

- To discuss internal and external funding opportunities to support the four primary costs associated with CEP development and implementation:³³
 - Staffing costs
 - Consultant costs
 - Infrastructure capital, operations and maintenance costs
 - Program costs
- The finance department may have access to corporate energy data that can provide insights on progress the local government is making on implementation.
- The finance may collaborate on seeking innovative approaches for funding implementation

How to engage them

- Set up one-on-one meetings before the CEP is presented to council to discuss:
- How much funding will be required annually to support CEP implementation costs?
- How much revenue or savings will be generated as a result of energy projects and programs?
- What local government funds are available to support the identified costs?
- What external grants are available to support the identified costs?
- Is there a need or opportunity to change the terms on existing internal funding sources to better support CEP implementation?
- Consider completing the following Preliminary Funding Analysis Matrix before meeting with the finance department to help prepare for the discussion - download here (.xlsx)³⁴
- Determine what, if any, financial information can provide insights into CEP implementation progress (e.g. increases in energy savings)³⁵
- Schedule recurring meetings as needed to ensure that you are prepared to present to council a plan and funding strategy that is feasible

³³ These are costs that the local government will bear. Community stakeholders such as energy distributors, real estate developers, school boards, provincial/territorial government, community groups, etc. will bear their own costs (and reap benefits) for implementation.

³⁴ The Preliminary Funding Analysis for CEP Implementation is available online here <http://gettingtoimplementation.ca/wp-content/uploads/2016/09/Preliminary-Funding-Analysis-for-CEP-Implementation.xlsx>

³⁵ Note this may not be a sound indicator for CEP implementation if the prices of electricity or natural gas increase.

Special Advice: Embed the CEP into Staff Job Descriptions

Once staff across the municipality are engaged, amend existing and new job descriptions to include CEP considerations.

Include tasks for all positions responsible for implementing local government plans, including department heads in the above-listed departments. While the level of responsibility and tasks will vary according to the position, consider the following language as a starting point:

“The incumbent performs a variety of routine and complex technical work ... including supporting the development and implementation of the Community Energy Plan.”

Relevant Case Studies (See Appendix III)

- Case Study 1: CEP Renewal in the City of Yellowknife, Northwest Territories
- Case Study 6: Establishing a Committee of Council in Yellowknife, Northwest Territories
- Case Study 7: Establishing a Governance Framework for Edmonton's Community Energy Transition Strategy, Edmonton, Alberta
- Case Study 12: City of Yellowknife Community Energy Plan Communications Plan, Northwest Territories

Relevant Resources

- National Report on Community Energy Plan Implementation (www.gettingtoimplementation.ca/research)
- National Report on Policies Supporting Community Energy Plan Implementation (www.gettingtoimplementation.ca/research)
- Community Energy Planning: The Value Proposition (www.gettingtoimplementation.ca/research)
- Policies to Accelerate Community Energy Plans: An analysis of British Columbia, Ontario and the Northwest Territories (www.gettingtoimplementation.ca/research)

Define How the CEP will Generate Value for Community Stakeholders

While CEPs are often led by local governments, they are implemented by the community. Early and meaningful collaboration and coordination with community stakeholders is critical for fostering buy-in, ownership and accountability for implementation.

Before engaging with stakeholders, it may be helpful to identify ways in which the CEP can add value to their business models. Some of the stakeholders most central to the success of the CEP include:

- Electric, natural gas and thermal energy distributors
- The real estate sector (including developers, homebuilders, building owners and operators, architects, and real estate agents)
- Provincial/territorial government
- Large energy users in the industrial commercial and institutional sector
- NGOs

The value of community energy planning to each of these stakeholders is described in the following subsections.

Other stakeholders to engage include, but are not limited to:

- Local chambers of commerce
- School boards
- Fuel suppliers
- Engineering and planning consultants
- Other local governments
- The public
- Others

Table 9 – The Value Proposition of Community Energy Planning to Energy Distributors

Considerations	CEP Value
Electric, natural gas and thermal energy distributors are focused on delivering energy to end users as reliably and as cost-effectively as possible	By participating in the community energy planning process, energy distributors can inform the development of programs and projects that complement infrastructure planning
Ambitious demand side management (DSM) or conservation and demand management (CDM) targets	The CEP aims to reduce overall energy consumption and GHG emissions and as a result can act as a direct pathway to allow energy distributors to expand DSM/CDM efforts and meet targets
Uptake of distributed energy resources and alternative fuel vehicles that must be integrated with the distribution system	The community energy planning process can lead to discussions about distributed energy resources, electric vehicle charging, etc.
Missing data needed for load forecasting	Local governments have access to development data that may not be available to energy distributors. Partnering on community energy planning can provide insights with respect to future land use as well as opportunities for integration
Alignment of infrastructure planning	CEPs aim to enhance the reliability and cost-effectiveness of energy supply by integrating energy networks and therefore align with the central focus of distributors Energy distributors can inform CEP actions that reduce communitywide energy use during peak demand Energy distributors can collaborate with public works committees to aligning timing of infrastructure investments, etc.

GTI Advice

- Consider the following GTI Advice on how to engage with the energy distributors.

Engaging Energy Distributors

Electricity, natural gas and thermal energy distributors are critical partners for CEP development and implementation as they have technical expertise in managing infrastructure and experience delivering programs and building projects.

The business models of energy distributors are evolving. Some of the factors influencing this shift include, but are not limited to:

- The introduction of ambitious conservation targets
- The installation of smart meters in several jurisdictions and resulting data and IT management
- Increased adoption of new technologies, including distributed energy resources and alternative fuel vehicles, as well as the introduction of policies encouraging their uptake

Table 9 summarizes how a CEP can add value to the evolving business models of energy distributors.

Who to engage

- Executive leaders
- DSM/CDM staff
- Energy planning staff (if applicable)

When to engage them

- Engage executive leaders and DSM/CDM staff as early as possible in the CEP process

Why engage them

What the CEP can provide:

- CEPs have the potential to enhance the business models of energy distributors. Senior staff should be engaged to participate in strategic level discussions about the CEP
- DSM/CDM staff should be engaged to act as a liaison between large energy users and the CEP team

What is required from distributors for the CEP:

- Energy end use data by postal code to develop energy inventories and if applicable, energy maps³⁶
- If applicable, funding for CEP development and/or staffing resources and/or program and project implementation

How to engage them

- Reach out to executive leaders with an invitation for a one-on-one meeting
- If there are many distributors in your jurisdiction establish a recurring in-person meeting to align on needs, data availability, etc.
- Energy distributors often have strong relationships with facilities departments. This may be a good entry point for communication if your utilities does not yet have a community energy planning contact person.
- Refer to the checklist in Table 11 (in Strategy 7) for a list of approaches on how to maintain engagement with energy distributors

Table 10 – The Value Proposition of Community Energy Planning to the Real Estate Sector

Considerations	CEP Value
· The real estate sector is primarily focused on constructing and selling homes and businesses that are as affordable as possible	· The result of effective community energy planning is often a shift from focusing on the upfront costs of implementing energy efficient buildings and/or distributed energy solutions, to the long-term reduction in costs to operate buildings
· The demand for energy efficient homes and buildings is growing	· There is an untapped opportunity for developers and homebuilders to grow sales by enhancing the level of energy efficiency within new and existing building stocks · Community energy planning provides an opportunity for stakeholders within the real estate sector to engage among one and another to share best practices · Developers that own buildings will experience a reduction in the cost per square foot of operating a building in the long-term by incorporating energy efficiency and distributed energy measures. · Community energy planning can provide a platform upon which stakeholders within the real estate sector can learn about and/or promote the marketability of energy efficient homes³⁷
· The demand for compact, mixed-use communities is growing	· The community energy planning process can provide developers, builders and building owners and operators with new insights on land use and transportation trends and opportunities within the community
· A growing number of policies are being introduced in favour of energy efficiency, integrated land use and transportation and distributed energy resources	· The community energy planning process can provide developers, builders and building owners and operators with a platform upon which to navigate emerging standards, policies and guidelines around energy efficiency · Developers, homebuilders, building owners and operators and others can use the community energy planning process as an opportunity to present policy alternatives that can support CEPs³⁸ · For example, an effective community energy planning process could find ways to increase flexibility with minimum parking requirements, thus increasing affordability of new developments

³⁶ In some cases this may be available from provincial/territorial governments. For example the Province of British Columbia provides energy data to communities via the Community Energy and Emissions Inventory. <http://www2.gov.bc.ca/gov/content/environment/climate-change/reports-data/community-energy-emissions-inventory>

³⁷ For example, a TD Economics study recently found that LEED certification was correlated with increased resale condominium prices, suggesting that consumers are willing to pay a premium for energy and environmental performance. DePratto, B. (2015). The Market Benefits of 'Green' Condos in Toronto. TD Economics. Retrieved from <http://www.td.com/document/PDF/economics/special/GreenCondos.pdf>

³⁸ See Case Study 22 – Parking Incentives in the City of Hamilton, Ontario.

Engaging the Real Estate Sector

Business models within the real estate sector are evolving. Some of the factors influencing this shift include, but are not limited to:

- The evolving preferences of home buyers and businesses. There is a growing mismatch between the high demand for energy efficiency buildings and homes and the supply. Similarly, there is a growing demand for compact, mixed-use neighbourhoods and communities
- Increasing concerns from building owners and operators about the growing cost of energy as a proportion of overall building operating costs
- Federal, provincial and territorial policies evolving in favour of energy efficiency, integrated land use and transportation and distributed energy resources
- Significant, untapped opportunities for integrating distributed energy resources into building design

These changes have impacts on real estate developers, building owners and operators, architects and real estate agents and while some organizations are taking the lead when it comes to community energy projects, many have yet to catch up. Table 10 summarizes some of the realities the real estate sector is facing and describes how participating in the community energy planning process can add value to their business models.

GTI Advice

- Consider the following GTI Advice on how to engage with the real estate sector.

Who to engage

- Developers and homebuilders
 - Distinguish between those perceived to be progressive versus those that are perceived to be traditional
- Building owners and operators
- Architecture firms
- Real estate agents
- Consider reaching out to executives and senior/junior staff
- Consider reaching out to those with an engineering, architecture and/or planning designation

When to engage them

- Early in the process and on an ongoing basis throughout CEP development and implementation

Why engage them

- Commitment to implement projects that align with the CEP, such as energy efficiency projects, distributed energy resource projects, and projects that encourage integrated land use and transportation
- The implementation of demonstration projects

How to engage them

- One-on-one meetings with senior executives.
- Non-prescriptive, performance-based requirements and/or incentives for building efficiency, distributed energy resources and integrated land use and transportation, will enable developers to incorporate cost effective and contextually appropriate technologies into developments
- Refer to the checklist in Table 11 (in Strategy 7) for a list of approaches on how to maintain engagement with the real estate sector

External Resources

- Canada Green Building Council Municipal Green Building Toolkit <https://www.cagbc.org/CAGBC/Store/storeCategories/GBPublications.aspx>
- Vancouver Island Real Estate Energy Efficiency Program <http://www.vireb.com/reep>

Engaging Provincial and Territorial Governments

Provincial and territorial governments are essential in the community energy planning process:

- Increasingly, provincial and territorial governments and their respective agencies are placing a growing emphasis on energy and emissions.³⁹ Community energy planning offers a platform to achieve deep energy and GHG reductions while facilitating economic growth and can directly help achieve provincial and territorial objectives
- Health care costs represent a large, and increasing portion of most provincial/territorial budgets and community energy planning can help to reduce these costs
- They also oversee policies and programs that may impact or be impacted by community energy planning.
- They may also have technical expertise needed for CEP development and implementation
- They may have energy end use data and Key Performance Indicator data needed to monitor implementation progress

GTI Advice

- Consider the following GTI Advice on how to engage with provincial and territorial governments.

Who to engage

- Manager-level staff in ministries including but not limited to energy, land use/municipal affairs, environment and economic development
- Ongoing engagement with the manager and/or appointed staff person

When to engage them

- Early in the CEP process and on an ongoing basis throughout CEP development and implementation

Why engage them

What provincial/territorial governments may need from communities:

- Commitment to deep energy and GHG emissions at the local level
- Commitment to create the conditions for the implementation of energy projects across the community

What communities may need from provincial/territorial governments:

- Technical expertise on energy planning (e.g. energy distribution planning, transportation planning, etc. if applicable)
- Energy end use data
- Key Performance Indicator data for anything tracked at a provincial/territorial level
- Introduce/amend policies to encourage, support or require widespread CEP implementation⁴⁰

How to engage them

- Reach out to any contacts you may have in the provincial/territorial government and their respective agencies with a mandate related to community energy. If you do not have a contact check your provincial/territorial government directory
- Refer to the checklist in Table 11 (in Strategy 7) for a list of approaches on how to maintain engagement with provincial and territorial staff

³⁹ See the National Report on Policies Supporting Community Energy Plan Implementation (visit www.gettingtoimplementation.ca/research).

⁴⁰ See the GTI reports entitled The National Report on Policies Supporting CEP Implementation and Policies to Accelerate Community Energy Plans: An analysis of British Columbia, Ontario and the Northwest Territories (visit www.gettingtoimplementation.ca/research).

Engaging Non-Governmental Organizations

Who to engage

- All NGOs with a mandate related to community energy including but not limited to:
 - Climate action
 - Environmental protection
 - Alternative transportation
 - Active transportation
 - Others
- Consider organizations with capacity to engage with elected officials, community stakeholders and the public
- Consider organizations with capacity to provide research support to support CEP implementation (e.g. measuring and monitoring the impacts of implementing certain energy projects)
- Consider organizations listed in Appendix IV *Appendix IV – Provincial/Territorial Organizations and Communities of Practice that may have Community Energy Planning Resources*

When to engage them

- Early in the CEP process and on an ongoing basis throughout CEP development and implementation

Why engage them

- NGOs may be well-positioned to:
 - Measure and communicate measurable impacts of CEP implementation.
 - Communicate the need for CEP support with provincial/territorial government
 - Develop/implement CEPs
 - Engage with elected officials, community stakeholders and the public to advance the implementation of actions

How to engage them

- Refer to the checklist in Table 11 (in Strategy 7) for a list of approaches on how to maintain engagement with NGOs

Engaging the Public

CEP implementation requires residents and businesses to change the way they consume energy. But when and how should the public be engaged, and what for?

GTI Advice

- While the CEP should be undertaken with the public interest in mind, public engagement may not be needed *before* a CEP is developed
- Public engagement may be most effective once programs have been developed, whereby targeted educational materials and calls to action can be presented to residents and businesses
- Engagement is often most powerful when you go to the community, instead of waiting for the community to come to you. There are many tried and tested alternatives to public engagement meetings
- When communicating with the public, emphasize person benefits such as cost savings
- Use visually compelling materials such as infographics and energy maps⁴¹
- Engage youth to solicit ideas for change. Engage students to act as ambassadors for the CEP

Relevant Case Studies (See Appendix III)

- Case Study 2: Measuring the Widespread Economic Benefits in the City of London, Ontario
- Case Study 3: Measuring Green Jobs in Durham Region, Ontario
- Case Study 4: Measuring the Impacts of Sustainable Communities on Local Retail Sales New York City, New York
- Case Study 5: Framing the Value Proposition, Edmonton, Alberta
- Case Study 6: Establishing a Committee of Council in Yellowknife, Northwest Territories
- Case Study 7: Establishing a Governance Framework for Edmonton's Community Energy Transition Strategy, Edmonton, Alberta
- Case Study 8: Stakeholder Engagement in the City of Kelowna, British Columbia
- Case Study 9: Stakeholder Engagement in Markham, Ontario
- Case Study 11: Public Engagement in London, Ontario
- Case Study 12: City of Yellowknife Community Energy Plan Communications Plan, Northwest Territories
- Case Study 13: Fort Providence, Northwest Territories
- Case Study 19: Alternatives for Small Communities - Eco-Ouest
- Case Study 20: Yukon Energy Solutions Centre
- Case Study 22: Parking Incentives in the City of Hamilton, Ontario.

Relevant Resources

- National Report on Community Energy Plan Implementation (www.gettingtoimplementation.ca/research)
- Community Energy Planning: The Value Proposition (www.gettingtoimplementation.ca/research)
- National Report on Policies Supporting Community Energy Plan Implementation (www.gettingtoimplementation.ca/research)
- Policies to Accelerate Community Energy Plans: An analysis of British Columbia, Ontario and the Northwest Territories (www.gettingtoimplementation.ca/research)

⁴¹ See Special Advice: Energy Mapping as an Engagement Tool in Strategy 7: Engage Community Stakeholders and Recognize their Implementation Progress

Define How the CEP will Generate Value for Community Stakeholders

CEPs are typically led by local government and implemented by the community. Central to the success of a CEP is effective and ongoing community stakeholder engagement. Some of the most critical stakeholders to engage in implementation include, but are not limited to:

- Electric, natural gas and thermal energy distributors
- The real estate sector, including developers, homebuilders, building owners and operators, architects and real estate agenda
- Provincial and territorial government and their respective agencies
- NGOs
- Academic institutions
- School boards
- Fuel suppliers
- Chambers of commerce and local Business Improvement Areas (BIAs)

Approaches for Stakeholder Engagement

- Table 11 provides a preliminary checklist of approaches for engaging with stakeholder groups. Before getting started, consider the following:
- Establish a relationship with community stakeholder as early as possible in the CEP process
- Use plain, clear language when engaging with stakeholders. If possible use terminology that community stakeholders are familiar with
- Not everyone will be supportive of the CEP. Recognize personal dynamics and focus engagement efforts on allies. With that in mind, offer ongoing opportunities to inform and engage all stakeholders
- The CEP may surface debates among stakeholders. Keep in mind that the overall aim of the CEP is to improve the overall quality of life for the community. Find ways to keep the conversation positive
- If your community does not yet have a CEP, find a way for all stakeholders to provide input in the CEP vision and energy and GHG targets
- Collaborate with community stakeholders to identify actions to include in the plan

Table 11 – Approaches for Stakeholder Engagement⁴²

One-on-one meetings	When meeting stakeholders for one-on-one meetings consider the following three questions: · What are you trying to achieve with your CEP? · What is the stakeholder trying to achieve? · Where do your priorities overlap? Click here for a downloadable document of additional questions for consideration.
Establish a Stakeholder Committee	· Create a stakeholder committee · Host ongoing, in-person meetings at all stages of the CEP process · The objective of the meetings should be to provide updates, obtain input and to monitor and report implementation progress. In person meetings may also provide an opportunity to share updates and to identify opportunities to integrate initiatives · Refer to <i>Strategy 3: Develop a Governance Model that Supports a Community Energy Transition</i> for insights on how to set up a formal committee made up of community stakeholders
Workshops and focus groups	· Obtain targeted feedback from stakeholders as you begin to develop concepts, approaches and a vision for your CEP. Workshops should take place in-person · Focus groups can occur in-person, by teleconference or via online platforms. Consider inexpensive and user friendly tools such as Survey Monkey or online community engagement tools
Ongoing telephone and email correspondence	· In some cases, obtaining information, data and buy-in from stakeholders will require frequent and ongoing correspondence
Attend stakeholder meetings (e.g. association meetings)	· Participate in meetings hosted by your stakeholders and find opportunities to present information about the CEP and obtain their support. When possible, sign up the CEP as a routine agenda item for regularly scheduled meetings (e.g. association meetings) · Consider that many stakeholder groups may be unfamiliar with the CEP process and as a result should be engaged early and often · Be sure to always provide a platform for two-way correspondence between stakeholders and the CEP team
Charrettes	· Use the Charrette technique to facilitate a visioning process, and to identify actions to consider in the CEP. All stakeholders should be involved in the CEP vision, determining energy and GHG emissions reduction targets and when prioritizing actions
Additional Resources	· Consider the Natural Resource Canada Stakeholder Engagement Guide with Worksheets for further support⁴³

⁴² Adapted from United States Department of Energy. (2014). Guide to Community Energy Strategic Planning. Retrieved from <http://energy.gov/eere/slsc/guide-community-energy-strategic-planning>

⁴³ Natural Resource Canada (2014). Stakeholder Engagement Guide with Worksheets. https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/energy/pdf/engagementguide_eng_12.pdf

Special Advice:
Segmenting Stakeholders

All stakeholders will have varying levels of interest in the CEP based on their core business. Consider segmenting stakeholders before you begin engaging with them.

Consider segmenting stakeholders within a matrix to determine (1) their willingness to engage and (2) their level of influence with respect to implementation. Often times it is good practice to focus first on the stakeholders with a high influence on energy and GHG emissions. See the Stakeholder Segmentation Matrix Template in Figure 5 as an example.

It is important to keep track of stakeholder contact information as well as a record of stakeholder input. Consider using the *Tools 4 Dev Stakeholder Analysis Matrix* template to keep track of stakeholders and to highlight why the CEP is of value to them.⁴⁴ This matrix can help with future engagement and can also help to avoid a loss of internal corporate knowledge in the event of staff turnover or attrition.

Figure 5 – Stakeholder Segmentation Matrix Template

Willingness to Engage	High	It is good practice to begin engagement with political, staff and community stakeholders that demonstrate a strong willingness to engage, and that have a high level of influence over CEP implementation.
	Low	Also consider engaging with stakeholders that have a high level of influence over CEP implementation but may not yet show a strong willingness to engage.
		High
Level of Influence over CEP Implementation		

Special Advice: Energy Mapping as an Engagement Tool

An energy map illustrates spatial information about energy end use in a community. It can visually identify opportunities for reducing energy use (e.g. targeting energy efficiency programs), opportunities for shifting modes of transportation (e.g. transit projects), potential sources of energy (e.g. biomass), and opportunities for distributed energy resources (e.g. district energy systems).⁴⁵

Energy maps are often represented at the postal code scale. As a result, they are not typically used as technical maps, but rather as a tool to engage community stakeholders, and as a tool to identify preliminary opportunities for energy projects.

Energy maps can be presented in charrettes, stakeholder meetings, workshops and focus groups to illustrate the objectives of the CEP, and to obtain input on actions to include in the CEP.

Special Advice: Tailor Stakeholder Engagement to Community Size and Resources

Consider the size of your community, its resources, and its ability to manage meetings. A larger community with a strong appetite for implementation may wish to have a number of committees, and a structure around these (e.g. a community committee that can feed ideas to a Mayor's task force which in turn takes things to Council). A smaller community with fewer resources available for implementation may prefer to have just one committee, or no committee at all and to just meet on an informal basis. In interviews, a few small communities stated that formal committees can be more of a hindrance than a help, and that for them meetings are best conducted informally.

Special Advice: Recognize Community Stakeholder Progress when Monitoring and Reporting on Implementation

Strategy 8: Monitor and Report on CEP Implementation describes the importance of keeping track of the measurable results of the CEP on an annual basis and sharing those results with all political, staff and community stakeholders. While much of this progress is monitored by the local government, there is an opportunity to engage community stakeholders to provide input on measurable progress.

- Consider providing a formal opportunity for community stakeholders to share measurable progress
- Results can be presented in the form of ongoing Key Performance Indicators (such as the number of energy efficiency retrofits and/or the amount of kilowatt hours and gigajoules reduced)
- Or they can be presented in the form of anecdotes (such as short case studies highlighting successes)

Meaningful engagement such as this can unlock many other opportunities to strengthen the value of the CEP.

Relevant Case Studies (See Appendix III)

- Case Study 8: Stakeholder Engagement in the City of Kelowna, British Columbia
- Case Study 9: Stakeholder Engagement in Markham, Ontario
- Case Study 11: Public Engagement in London, Ontario
- Case Study 12: City of Yellowknife Community Energy Plan Communications Plan, Northwest Territories
- Case Study 16: Monitoring and Reporting on Implementation Progress in the City of Guelph, Ontario
- Case Study 17: Monitoring and Reporting on CEP Implementation in the City of London, Ontario

Relevant Resources

- National Report on Community Energy Plan Implementation (www.gettingtoimplementation.ca/research)
- Community Energy Planning: The Value Proposition (www.gettingtoimplementation.ca/research)

⁴⁴ Tools 4 Dev (n.d.). Stakeholder Analysis Matrix. <http://www.tools4dev.org/resources/stakeholder-analysis-matrix-template/> Additional tools are available at www.tools4dev.org.

⁴⁵ The various types of energy maps are described in greater detail in: Canadian Urban Institute (2011). Integrated Energy Mapping for Ontario Communities. <http://static1.squarespace.com/static/546bbd2ae4b077803c592197/t/54b807a6e4b060f2e9745d1e/1421346726645/CUIPublication.IntegratedEnergyMappingOntario.pdf>

Monitor and Report on CEP Implementation

Based on research from the GTI initiative, 90 percent of CEPs contain an energy and emissions reduction target, yet more than 20 percent of communities lack a structure to monitor progress toward their targets.⁴⁶ Further, less than half of communities with a CEP have conducted a follow-up energy and GHG emissions inventory once their CEP was adopted to track the progress of implementation. Communities that do not monitor and report on progress may fail to secure long-term support and resources needed to implement a CEP.⁴⁷

Monitoring and reporting on implementation can unlock significant opportunities to build ongoing support among elected officials, staff and community stakeholders. Precise, measurable and defensible data, when presented on an ongoing basis, can increase the overall confidence and support of senior decision makers. When the CEP is monitored on an annual basis, successes can be celebrated which can in turn help build further support for implementation. The data can also provide frequent feedback loops to identify strengths and weaknesses as well as possible course corrections, if applicable.

Measuring Primary and Secondary Key Performance Indicators

CEPs typically contain primary and secondary Key Performance Indicators.

Primary Key Performance Indicators: Energy End Use and GHG Emissions

- Communities should undertake to renew energy and GHG inventories on an annual basis
- The Federation of Canadian Municipalities offers a Framework for monitoring energy and GHG emissions. See the Guidelines for Monitoring, Reporting and Verifying Progress http://www.fcm.ca/Documents/reports/PCP/Monitoring_Reporting_and_Verification_Guidelines_EN.pdf

Secondary Key Performance Indicators: Other Key Performance Indicators

- Secondary Key Performance Indicators are typically much broader than energy and GHGs however they are strongly linked
- They often include items such as number of home energy efficiency retrofits conducted, kilometres of bicycle lanes constructed, and tonnes of organic solid waste diverted from landfill
- Secondary Key Performance Indicators should also include financial/economic indicators
- Consider the following matrix for determining KPIs: <http://gettingtoimplementation.ca/wp-content/uploads/2016/08/Matrix-for-Monitoring-CEP-KPIs-1.docx>
- Examples of secondary Key Performance Indicators can be found in the following CEPs:
 - See Part III – Implementation Framework – in the City of Campbell River, British Columbia Community Energy and Emissions Plan: <http://www.campbellriver.ca/your-city-hall/green-city/climate-action/community-energy-emissions-plan>
 - See Part 3 – Implementation & Monitoring in the City of Surrey, British Columbia, Community Energy and Emissions Plan: <https://www.surrey.ca/files/ceep-02-02-2014.pdf>
 - See the indicators embedded throughout the City of Brandon, Manitoba Environmental Strategic Plan <http://www.brandon.ca/images/pdf/adminReports/environmentalPlan.pdf>

Table 12 illustrates the steps to consider for developing, monitoring and reporting on energy and GHG targets and other Key Performance Indicators.

⁴⁶ See the National Report on Community Energy Plan Implementation (www.gettingtoimplementation.ca/research)

⁴⁷ Ibid.

Table 12 – Steps and Considerations for Monitoring and Reporting CEP Implementation

Step	Considerations
Identify Key Performance Indicators to monitor the impacts of the CEP	· In some cases a community may have existing Key Performance Indicators that can be used as a basis for the CEP indicators. For example, if applicable, there may be indicators in an existing CEP, Integrated Community Sustainability Plans or other community plans · Key Performance Indicators should be reviewed and/or selected with the following considerations in mind: – They should be measurable - the data should be available – They should require a reasonable level of effort to track – They should be cost-effective to track · Key Performance Indicators should be chosen by all staff involved in the CEP, and particularly in collaboration those that will be responsible for monitoring the indicators
Determine a rigorous and consistent methodology for measuring progress	· A consistent methodology can be of particular concern for primary indicators, as a range of methodologies can be used to create an energy / emissions inventory. Inventories should be consistent with the methodology used for the baseline inventory (or at least the inventories should be adjusted to be consistent with each other) · If rigorous data is difficult to obtain try developing assumptions. Be explicit about any assumptions made in the monitoring and reporting process
Determine the frequency of monitoring Key Performance Indicators	· Obtain data for energy, GHG emissions and other Key Performance Indicators annually, or as frequently as otherwise possible · The process of monitoring Key Performance Indicators should be embedded into the work plans of staff · All data being monitored by staff across the local government should be submitted to the CEP project manager and reported on annually · Re-evaluate Key Performance Indicators every 1-5 years to ensure that they are still relevant
Determine the frequency of implementation progress reports	· A progress report should be sent to elected officials, local government staff and community stakeholders. It should also be made publicly available. · Communicate successes at council, staff and stakeholder meetings as well as public events · If possible, develop visually compelling materials to communicate implementation highlights
Highlight successes!	
Don't forget to include success stories from community stakeholders	· The reporting of CEP implementation successes, even small ones, can help to build support for CEP implementation and create the conditions for investments in future implementation · Don't forget to invite community stakeholder to provide success stories – either measurable progress or anecdotes – to include in the annual report. See <i>Strategy 7: Engage Community Stakeholders and Recognize their Implementation Progress</i>

Special Advice: Follow-up Energy and GHG Inventories in Small Communities

Annual energy and GHG inventories can be expensive to conduct and may, in some cases, illustrate only incremental changes with respect to energy end use and emissions in a community. As a result, small communities should consider developing inventories at longer intervals (e.g. bi-annually, or every five years). In the interim, communities can focus on monitoring and reporting on secondary indicators, which are often less expensive and easier to monitor, and which can still indicate implementation progress.

Relevant Case Studies (See Appendix III)

- Case Study 16: Monitoring and Reporting on Implementation Progress in the City of Guelph, Ontario
- Case Study 17: Monitoring and Reporting on CEP Implementation in the City of London, Ontario

Relevant Resources

- National Report on Community Energy Plan Implementation (www.gettingtoimplementation.ca/research)

Special Advice: Insights on Measuring Implementation

GTI research has identified that there are many ways to measure CEP implementation. Some approaches include:

- **Measuring reductions in community-wide energy or GHG emissions:** If energy and GHGs are falling in a community, the CEP is effectively being implemented. Note that federal, provincial/territorial policies, economic transitions and other external factors often play a role in overall GHG emissions
- **Measuring secondary Key Performance Indicators:** The effectiveness of a CEP can be measured by the extent to which secondary Key Performance Indicators are achieved. Secondary indicators include indicators that are related to overall energy consumption (e.g. reduction in energy spending, number of jobs created, reduction in vehicle kilometers traveled, shifts in mode splits, energy efficiency retrofits, or increased waste diversion rates)
- **Tracking the number of actions completed in a CEP:** While this is a rudimentary approach to measuring the impacts of implementation, it can signal the extent to which local government processes are supportive of implementation
- **Assessing Implementation Readiness:** The *Community Energy Implementation Readiness Survey* enables a community to assess the extent to which conditions are in place to support ongoing implementation

Develop an Implementation Budget and Work within your Means

Effective CEP implementation will require funding to support:

- A dedicated staff person(s)
- Project capital and operations and maintenance costs
- Programs
- Consultants

GTI Advice

When developing a budget over the expected life of the CEP consider:

- **Implementation pacing:** Not all actions need to be implemented immediately. Distinguish which actions will be implemented year over year. Develop an annual implementation budget and update the budget annually
- **Be proactive and reactive:** Consider all internal and external funding opportunities and be adaptable to new sources of funding
- **Embed the CEP into other plans and policies:** Identify opportunities to integrate land use actions into any relevant policy/program review cycles

Fund a Dedicated Staff Person to Oversee Implementation

Many communities are concerned about the cost associated with hiring a full time employee to oversee community energy planning efforts. Based on research from the GTI initiative, communities are much more likely to implement their CEP, and generate community-wide financial savings and economic growth, if a dedicated staff person is assigned to manage implementation.⁴⁸

Consider the following approach for obtaining funding for a dedicated staff person.

Conduct a preliminary funding analysis

- Often times, provincial/territorial governments and/or utilities, and/or local NGOs provide funding or resources to offset the cost of hiring a staff person
- Consider preparing a preliminary analysis to determine how much funding is available from external sources as well as within the local government to fund:
 - Staff
 - Consultants
 - Project capital and operations and maintenance costs
- See *Strategy 5: Engage Staff Across The Local Government. Identify Staff Champions and Embed the CEP Into Staff Job Descriptions*, and particularly the section on engaging the finance department.
- Presenting an analysis such as this may provide insights into available funding and can help to generate a more detailed discussion about how to fund a dedicated staff person.

Begin conversations with senior management, the finance department, the CAO and council

- Set up one-on-one or group meetings to discuss the level of interest in funding a dedicated staff person
- Communicate that there is strong evidence to show that community energy managers can more than offset their salaries through the reduction in energy spending at the community level as a result of their work
- Community energy planning can lead to energy savings that in turn free up public dollars to spend on other community services
- Describe the value of community energy planning. See *Strategy 1: Develop A Compelling Rationale for Undertaking the CEP*
- Communicate that the community energy planning process will result in significantly more energy and GHG reductions, as well as financial savings and economic growth, if a dedicated staff person is managing implementation

Invite external advisors to speak with senior staff, the finance department, the CAO and council

- External advisors and NGOs may have data and insights available to help communicate the value of investing in a dedicated staff person for implementation
- Consider some of the organizations listed in *Appendix IV – Provincial/Territorial Organizations and Communities of Practice that may have Community Energy Planning Resources*

Integrate CEP Actions into the Budget Process

Embedding the CEP into the budget process can draw positive attention among senior managers to the level of priority of the CEP. As a result, local government departments may be able to find ways to advance their own priorities by aligning their work plans with CEP actions (e.g. economic development and district energy, planning and higher density, transportation and bike paths, or solid waste and composting). Table 13 describes the steps to embed the CEP into the budgeting process.

GTI Advice

- When making the case to include the CEP into the budgeting process on an ongoing basis, focus on how the CEP can help the community to achieve a wide range of community benefits. Focus on the cost-saving and economic benefits. See *Strategy 1: Develop A Compelling Rationale for Undertaking the CEP*
- Carefully cultivate relationships with the finance department, and involve them in the CEP and its implementation as early as possible. See *Strategy 5: Engage Staff Across the Local Government. Identify staff Champions and Embed the CEP into their Job Descriptions*

Table 13 – Considerations for Integrating CEP Actions into the Budgeting Process

Consideration	Rationale
Create an action plan that is SMART (Specific, Measurable, Attainable, Relevant, and Time-bound) and allocate responsibilities to the implementation of actions	· Actions that are Specific, Measurable, Attainable, Relevant, and Time-bound may be easier to incorporate into the budgeting process
Embed the CEP into corporate and community planning, development related documents and job descriptions	· Can be an important precursor to including CEP implementation into the budgeting process
Invite representatives from the finance department to attend CEP implementation meetings	· Helps the finance department become more familiar with CEP implementation. · Based on research from the GTI initiative, the finance department is the local government department that is least likely to be supportive of CEP implementation. Therefore, the finance department should be engaged to try to overcome any of their concerns, and if possible, a champion should be cultivated within it
Request ongoing funds for staffing, programs, project capital, operations and maintenance, and consultants	· Know how much you need on an ongoing basis to implement the actions in the plan
Adopt a policy to consider lifecycle costing with purchasing decisions	· Although this is more likely to affect corporate energy consumption and GHG emissions, it helps to build long-term thinking and helps people to understand the benefits of reducing energy consumption · Can also help to link the discussions on capital and operations and maintenance budgets, which can sometimes be siloed

⁴⁸ See the National Report on Community Energy Plan Implementation (www.gettingtoimplementation.ca/research)

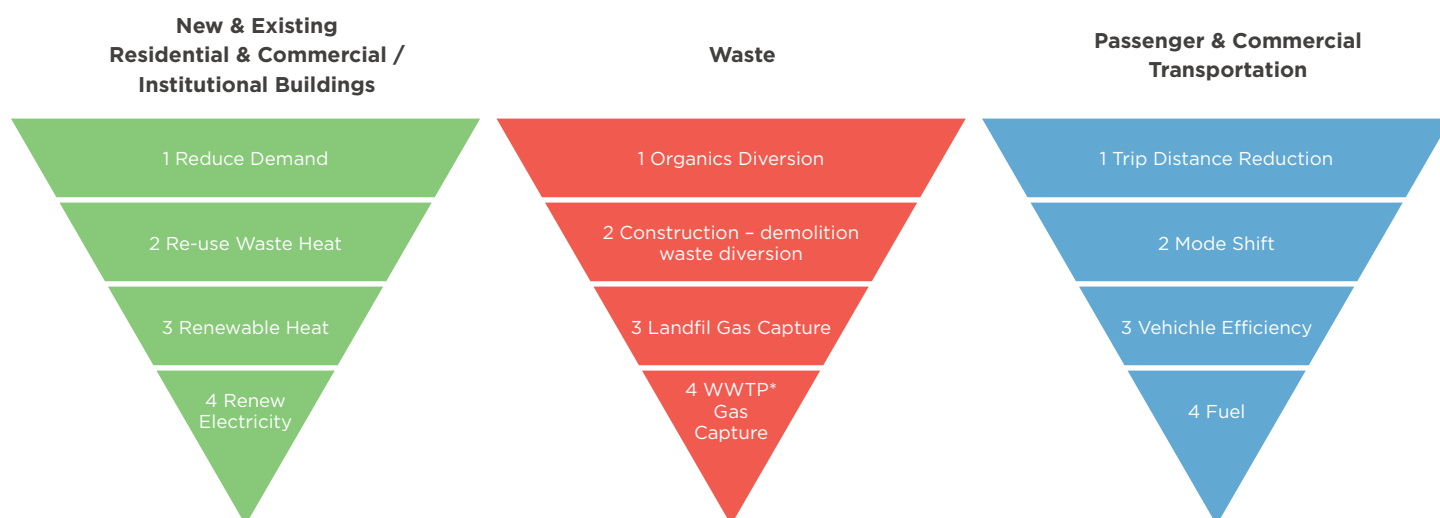
Special Advice: Implement a Single Energy Project to Demonstrate the Success of the Investment

Communities struggling to gain the support of council to develop a CEP should consider implementing single projects to demonstrate the value and widespread benefits of implementing community energy initiatives. Often times, demonstrating small successes can help garner support to develop a complete CEP.

GTI Advice

- There are endless opportunities to change the way energy is delivered and used in our communities. Remember that it is almost always most cost-effective to focus first on actions that focus on *reducing* energy consumption. This can take place in the form of energy conservation and efficiency in new and existing buildings, waste and organics diversion, and reducing trip distances for the movement of people and goods
- Figure 6 includes three action categories that summarize some of the greatest opportunities for community energy planning. Communities are often advised to start first with the actions at the top end of the pyramid as they typically require a low level of investment and can have significant impacts on reducing energy and GHG emissions
- While payback periods should be reasonable, consider that sometimes a longer payback period may result in a stronger return on investment. Select a project that will deliver both

Figure 6 – A Summary of the Opportunities for CEP Implementation⁴⁹



* Wastewater Treatment Plant Gas Capture

Special Advice: Consider CEP Renewal Early On

- It typically takes 5-7 years for a CEP to complete a development/implementation cycle
- Renewal should typically take place every 5-7 years to ensure that actions as well as the supporting rationale, data, analysis and impacts are up-to-date. Consider renewing the CEP when the majority of the actions in the CEP have been implemented or assessed for feasibility
- A community aiming to achieve an 80 percent reduction in energy and GHG emissions by 2050 will complete five to seven cycles between now and 2050
- Consider electoral, budgeting and other planning cycles when deciding on a frequency for CEP renewal
- Be explicit about when the CEP will be renewed
- Be adaptable. If circumstances change, consider renewing the CEP more or less frequently than was decided on initially
- If possible, avoid renewing the plan within 5 years of adoption. Renewal within a 5 year time frame can lead to “planning paralysis”, where it falls into the trap of expending its efforts on creating plans to the detriment of implementing them

Special Advice: Consider Developing a CEP at a Different Scale

- Consider developing a CEP at a regional scale. Participating local governments can then contribute a fair proportion of the cost to fund a dedicated staff person
- Consider housing the CEP within a local NGO, which may have access to more or different sources of funding to support a dedicated staff person
- Note that it is important to dedicate a staff person to oversee CEP development *and* implementation

Relevant Case Studies (See Appendix III)

- Case Study 2: Measuring the Widespread Economic Benefits in the City of London, Ontario
- Case Study 3: Measuring Green Jobs in Durham Region, Ontario
- Case Study 4: Measuring the Impacts of Sustainable Communities on Local Retail Sales New York City, New York
- Case Study 5: Framing the Value Proposition, Edmonton, Alberta
- Case Study 13: Fort Providence, Northwest Territories
- Case Study 14: Halifax Vending Machine Energy Efficiency By-laws, Nova Scotia
- Case Study 15: Net Zero Community in London, Ontario
- Case Study 16: Monitoring and Reporting on Implementation Progress in the City of Guelph, Ontario
- Case Study 17: Monitoring and Reporting on CEP Implementation in the City of London, Ontario
- Case Study 18: Efficiency One, Nova Scotia
- Case Study 19: Alternatives for Small Communities - Eco-Ouest
- Case Study 22: Parking Incentives in Hamilton, Ontario

Relevant Resources

- National Report on Community Energy Plan Implementation (www.gettingtoimplementation.ca/research)
- National Report on Policies Supporting Community Energy Plan Implementation (www.gettingtoimplementation.ca/research)
- Community Energy Planning: The Value Proposition (www.gettingtoimplementation.ca/research)
- Policies to Accelerate Community Energy Plans: An analysis of British Columbia, Ontario and the Northwest Territories (www.gettingtoimplementation.ca/research)
- Federation of Canadian Municipalities (2015). Alternative Financing Mechanisms compendium <http://www.fcm.ca/home/programs/partners-for-climate-protection/alternative-financing-mechanisms.htm>
- Natural Resources Canada RETScreen tool: <http://www.nrcan.gc.ca/energy/software-tools/7465>. RETScreen is free software and online training modules. The software includes support for project feasibility and performance analyses. This tool allows communities to conduct a preliminary financial assessment of community energy projects and can help to identify what changes, if any, would be needed to fund supporting staff, capital, operations and maintenance, programs and consultants, to mobilize implementation.

⁴⁹ This graphic has been developed by the Community Energy Association and adapted from BC Hydro. For a downloadable version of the figure click [here](#).

Embed the CEP into Plans and Policies

Community energy planning is a unique process that unlike most local government initiatives, crosses over many departmental and organizational boundaries. CEPs, however, often fall short on being integrated into the existing plans and policies in local government because there typically lacks a process to integrate the CEP once it has been adopted by council (see *Table 3: CEP Development and Implementation Process*). Local governments frequently operate in silos. Buildings and development, land use, transportation, and waste, are planned for through separate processes.

Once a CEP is adopted, consider taking the important step of integrating the CEP into plans and policies immediately after CEP adoption.

GTI Advice

- **Cast a wide net, and be strategic:** Identify all opportunities to integrate the CEP into plans, policies and bylaws immediately after CEP adoption. Consider the timing for when some or all of the plans will be renewed and embed the CEP strategically
- **Engage:** Engage with all stakeholders, including staff and community stakeholders, that all be impacted by when and how the actions identified in a CEP are embedded into plans and policies. Obtain stakeholder input on how the plans and policies can be designed and/or amended to result in positive impacts
- **Embed:** Proceed with embedding the CEP actions into the plans and policies selected. Ensure that the clauses and policies are designed to maximize impacts and benefits of CEP implementation. Amend the identified plans, policies, by-laws and regulations as soon as possible after the opportunities have been identified to ensure that goals and actions included in the CEP remain top of mind for Council, staff and community stakeholders
- **Be adaptable:** The CEP is a living document and should be renewed and amended over time. Include clauses within policies and plans that allows changes to be made to the CEP without requiring additional amendments, for example, “the goals and actions of the Community Energy Plan, as amended from time to time”⁵⁰
- **Be explicit:** Refer to the CEP goals and objectives within each plan, policy, by-law and regulation in a specific way, so that the direction set by the CEP and its impact on the plan is clear. Figure 7 describes light and deep approaches for embedding the CEP into plans and policies
- **Follow up:** Ensure that staff and community stakeholders are aware of new and amended policies. For example, if new development permit requirements are introduced, ensure that staff working in the development permit department are trained on the changes

⁵⁰ This can be done in sections where CEP policies interact with other plans and programs, e.g. those related to growth management, mixed land use, increased density, active transportation, transit, solid waste management, facilities management, and parks and recreation.

Figure 7 – Approaches to Embedding the CEP into Plans and Policies

Low Impact Policies  High Impact Policies

Talk and Hope	Encourage	Support / Enable	Require	Provide
Increase awareness (e.g. media releases) without enabling policies and mechanisms	Adjust policies that prevent / discourage CEP development and introduce policies that encourage CEP development	Support CEP development through incentives or enabling policies	Mandate energy conservation and GHG emission targets and actions in local plans and policies	Provide communities with components of the plan (e.g. energy and GHG data/inventories etc.)

Often, the integration of energy into local plans and policies will have implications for community stakeholders. Ensure that community stakeholders are consulted during the design of new policies and programs to ensure that supports, requirements and incentives are designed to maximize their uptake.

The following examples describe how a CEP can be embedded into plans, policies, by-laws and regulations. The CEP can be incorporated into these plans as they are being developed, or they can be amended afterwards. All of the plans, policies, by-laws and regulations listed below should be considered in your community. Consider how lightly or deeply the CEP should be embedded into each plan and policy.

Embed the CEP into Plans

Council Strategic Plans

A Strategic Plan is a council-led plan that identifies priorities, typically over a four year period. It can also include a 20-40 year vision.

Strategic Plans 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 and plans like community energy plans, environmental master plans, or targeted plans and policies related to energy. It also allows funds to be allocated to these types of studies.

Council Strategic Plan in City of Coquitlam, British Columbia:

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 energy⁵¹

Council Strategic Plan in Burlington, Ontario: The Burlington 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 Plan⁵²

The City of Burlington successfully developed and adopted a CEP in 2014.⁵³

Official Land Use Plans and Regulations

This includes overarching land use plans that, depending on the Province or Territory and the community, can be called an Official Plan, Official Community Plan, Development Plan, Master Plan, Municipal Plan, or Comprehensive Plan

Official Plans are documents that outline growth objectives and guide the land use planning of a community. For many communities Official Plans guide all land use making decisions. CEP actions related to integrating land use and transportation, enhancing energy efficiency, and accelerating the implementation of distributed energy resources, can be included in an Official Plan.

The Regional Municipality of York, Ontario: The Regional Municipality of York 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.⁵⁴

The Resort Municipality of Whistler, British Columbia: The Resort Municipality of Whistler notes in its Official Community Plan that "As a signatory to the BC Climate Action Charter the Council of the Resort Municipality of Whistler has expressed its understanding that anthropogenic emissions of greenhouse gases are affecting the global climate; that reducing these emissions is therefore beneficial and important to all citizens; and that governments must act promptly to mitigate climate change. The Municipality considers it appropriate to adopt targets, policies and actions intended to reduce the emission of greenhouse gases within Whistler and resulting from activities related to the ongoing operation of the resort community. The targets are stated below, along with related policies and actions. Other relevant policies and actions are found throughout the OCP, because the Municipality recognizes that reducing greenhouse gas emissions can be achieved by all sectors of the resort community, and in all aspects of its operation."⁵⁵

Secondary Plan (Official Plan Amendment)

Secondary Plans 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.

Secondary Plan in the City of Toronto, Ontario: 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

- 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.
- 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.
- 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.⁵⁶

Other Plans - Transportation Plan, Urban Forest Management Plan, Housing Plan, Solid Waste Plan, Economic Development Plan, Sustainability Plan

Most CEPs will contain actions that relate to transportation, urban forest management, housing and solid waste, among others. Staff developing these plans should become aware of the actions in the CEP and how they impact their work plans.

Communications Plans

The communications department is often responsible for overseeing internal and external communications. Embed the CEP into internal communications often, and into external communications when appropriate.

Internal Communications

- Update staff on CEP implementation often through internal communications channels
- Encourage staff to share anecdotes on CEP implementation with the communications department so that they may be disseminated frequently

External Communications

- Engage with the public when deemed appropriate (e.g. for program implementation and significant CEP updates). See *Strategy 7: Engage Community Stakeholders and Recognize their Implementation Progress*
- Some local governments administer household/business surveys. Consider including questions within the survey that may provide data for Key Performance Indicators. See *Strategy 8: Monitor and Report on CEP Implementation*

⁵¹ 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

⁵² City of Burlington (2011). Burlington, Our Future – Strategic Plan 2011-2014. <http://cms.burlington.ca/AssetFactory.aspx?did=19272>

⁵³ City of Burlington (2014). Community Energy Plan. <https://www.burlington.ca/en/live-and-play/community-energy-plan.asp>

⁵⁴ 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

⁵⁵ Note that the Province of BC passed legislation in 2008 requiring all BC municipalities to develop energy reduction and GHG emission targets and to identify actions to meet those in their Official Community Plans by 2010, and all Regional Districts in their Regional Growth Strategies by 2011. This legislation encouraged all BC communities to recognize that climate action is within their jurisdiction. In addition, communities were invited to voluntarily sign a Climate Action Charter which had further commitments in return for some funding. This helped set the stage for years of impressive growth in the number of CEPs being developed and actions being implemented.

⁵⁶ City of Toronto (2014). Scarborough Centre Secondary Plan. <http://www1.toronto.ca/planning/5-scarborough-centre.pdf>

Embed the CEP into Policies

Zoning By-laws

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 by-laws and amendments can be used to encourage or require intensification targets, the integration of land use and transportation, the acceleration of alternative modes of transportation, distributed energy resources, and energy efficiency requirements.

Energy efficiency in the City of Halifax, Nova Scotia: In 2010, a series of by-laws and by-law amendments were adopted by Halifax City Council whereby a Memorandum of Understanding was signed between the City and Refreshments Canada requiring the vending industry to voluntarily improve the energy efficiency of the vending machine fleet over 3 years. The estimated cost savings of the program were \$500,000 per year and an annual reduction of 5,000 tons of GHG emissions. VendingMisers installed on the vending machines resulted in a 25-50 percent reduction in energy consumption per machine.⁵⁷

Distributed energy resources in the City of Vancouver, British Columbia: In 2013, the City of Vancouver adopted a by-law requiring owners of new buildings proposed for construction and existing buildings undergoing significant alterations in the Southeast False Creek neighborhood to connect to the local district energy system.⁵⁸

Distributed energy resources in the City of Calgary, Alberta:

The City of Calgary adopted revisions to the Centre City By-law providing incentives for green building features including district energy connections, co-generation facilities and electric vehicle charging stations, among others.⁵⁹

Increasing density and compact, mixed-use communities in the

City of Calgary, Alberta: The City of Calgary adopted a zoning by-law 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.⁶⁰

Increasing density and compact, mixed-use communities in

Koo's Corner, British Columbia: 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.⁶¹

Increasing density and compact, mixed-use communities in

the City of Richmond, British Columbia: The City of Richmond identified as a priority in its 2014 Community Energy and Emissions Plan to review subdivision by-laws to encourage transit-oriented design to support investments in active transportation infrastructure.⁶²

Parking incentives in the City of Hamilton, Ontario: The City of Hamilton amended its Zoning By-law to support 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.⁶³

Height and Density Bonusing

Height and density bonusing allows developers to exceed height and density limits established in zoning by-laws, in exchange for community benefits.

Height and density bonusing in the City of Port Coquitlam, British Columbia: 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 in designated areas within the municipality. Funds collected are deposited into the City's facilities amenity fund and the social housing amenity fund and are allocated to meet council's strategic goals.⁶⁴

Community Improvement Plans

Community Improvement Plans (CIPs) allow cities/communities to create the conditions to increase densities and/or encourage brownfield redevelopment for a designated area within a municipality. CIPs can help trigger development supportive of active transportation, use of public transportation and can even help concentrate development, and consequently energy end use, in a way that improves the business case for distributed energy resources.

CIPs in Moncton, New Brunswick: 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 program aims to enhance mixed-use, sustainable and transit-oriented development in the downtown core.⁶⁵

CIPs in Calgary, Alberta: In 2002, The Apex Corporation completed The Renaissance at North Hill, in Calgary. The project 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.⁶⁶

⁵⁷ Regional Municipality of Halifax (2010). Energy Efficiency Initiative: Vending Machines. <https://www.halifax.ca/council/agendasc/documents/100504ca1131.pdf>

⁵⁸ City of Vancouver (2013). Energy Utility System Bylaw No. 9552. <http://former.vancouver.ca/blStorage/9552.PDF>

⁵⁹ 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

⁶⁰ 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>

⁶¹ Canada Housing and Mortgage Corporation (n.d.). Residential Intensification Case Studies: Koo's Corner, Vancouver, B.C. <https://www.cmhc-schl.gc.ca/en/inpr/su/sucopl/upload/Koo-s-Corner-Vancouver-B-C.pdf>

⁶² City of Richmond (2014). Community Energy and Emissions Plan. http://www.richmond.ca/___shared/assets/ceep37697.PDF

⁶³ 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>

⁶⁴ Canada Green Building Council (2014). LEED Policy Database. http://leed.ca/gbc.org/LEED/projectprofile_EN.aspx

⁶⁵ 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>

⁶⁶ Canada Mortgage and Housing Corporation (n.d.) Residential Intensification Case Studies: The Renaissance at North Hill Calgary. <https://www.cmhc-schl.gc.ca/en/inpr/su/sucopl/upload/The-Renaissance-at-North-Hill-Calgary-Alberta.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.⁶⁷

Plans of subdivision in the City of Toronto, Ontario: The City of Toronto requires large development proposals within a Community Energy Plan area to submit an Energy Strategy. This requirement applies to Plans of Subdivision and Official Plan and Zoning By-law amendments.⁶⁸

Plans of subdivision in the City of Richmond, British Columbia: The City of Richmond identified as a priority in its 2014 Community Energy and Emissions Plan to review subdivision by-laws to encourage transit-oriented design to support investments in active transportation infrastructure.⁶⁹

Development Permits and Development Permit Systems

Development permit areas/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.

Development permit areas in Calgary, Alberta: 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.⁷⁰ A secondary suite is a separate living unit created within a single-family home. A by-law allowing secondary suites encourages neighbourhood intensification.

Site Plan Control

Site plan control is a tool that local governments 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.

Site plan control in Toronto, Ontario: 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.⁷¹

Development Cost Charges

Development cost charges in the City of Penticton, British

Columbia: The City of Penticton reduces

Development Cost Charges for low energy impact developments by 50 percent.⁷²

Development cost charges in the Niagara Region, Ontario: 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.⁷³

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.

Parking Charges in the Town of Banff, Alberta: 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.⁷⁴

⁶⁷ (see Subdivision bylaw and Building Bylaw in Community Planning Act: http://laws.gnb.ca/en/showdoc/c/c-12/ga:s_59#anchorga:s_59)

⁶⁸ City of Toronto (July 2016). Energy Strategy Terms of Reference. http://www1.toronto.ca/static_files/CityPlanning/PDF/energy-strategy.pdf

⁶⁹ City of Richmond (2014). Community Energy and Emissions Plan. http://www.richmond.ca/___shared/assets/ceep37697.PDF

⁷⁰ 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>

⁷¹ City of Toronto (n.d.) Toronto Green Standard. <http://www.toronto.ca/greendevlopment>

⁷² 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)

⁷³ Niagara Region (n.d.). Development Charges Reduction Program. <https://www.niagararegion.ca/business/property/reductions.aspx>.

⁷⁴ Town of Banff (2014). User Pay Parking. <http://banff.ca/index.aspx?nid=934>

Framework Methodology

The *Community Energy Implementation Framework* has been developed as part of the *Community Energy Planning: Getting to Implementation in Canada* initiative. It has been informed by:

- An in-depth review of 50 CEPs across Canada
- Interviews with 33 representatives from the communities of the 50 CEPs reviewed
- Input from over 800 stakeholders through workshops and focus groups in British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Québec, New Brunswick, Nova Scotia, Prince Edward Island, Yukon, Northwest Territories and Nunavut⁷⁵
- Desk-top research on community energy planning including topics such as the value proposition as well as the role of provincial, territorial and federal government
- Testing the Framework Strategies in three GTI Pilot Communities: Campbell River, British Columbia, Calgary, Alberta and the Region of Waterloo, Ontario
- Input from the GTI Advisory Committee and other expert advisors

⁷⁵ The sample of CEPs reviewed and communities interviewed can be found in the National Report on Community Energy Plan Implementation. The organizations engaged in the workshops can be found in the Workshop Summary Report. Both reports are available at www.gettingtoimplementation.ca

Resources to Get Started with your CEP

The following resources are available to help communities get started with their CEP.

Community Energy and Emissions Plan Guide (Community Energy Association) http://communityenergy.bc.ca/?dml_download_category=planning

Community Energy Planning Primer for New Brunswick Municipalities (QUEST) <http://www.questcanada.org/files/download/cdf2901ca26f85f>

Advancing Integrated Community Energy Planning in Ontario: A Primer (QUEST) <http://www.questcanada.org/primer>

How to Create a Local Action Plan (Federation of Canadian Municipalities) http://www.fcm.ca/Documents/tools/PCP/Reaching_Milestone_3_How_to_Create_a_Local_Action_Plan_to_Manage_Energy_and_Emissions_EN.pdf

Passing Go: Moving Beyond the Plan (Federation of Canadian Municipalities) https://www.fcm.ca/Documents/tools/GMF/SS_PassingGo_EN.pdf

Community Energy Planning Guide (Natural Resources Canada) http://gettingtoimplementation.ca/wp-content/uploads/2014/11/CommunityEnergyPlanningGuide_en.pdf

Community Energy Planning in Yukon: Determining Priorities of Local Governments (Yukon Energy Solutions Centre) http://www.energy.gov.yk.ca/pdf/determining_cep_priorities_sfs_final.pdf

Illustrated Guide to Community Energy (Collaborative for Advanced Landscape Planning) <http://www.energyexplorer.ca/guide/>

Cleantech Community Gateway <http://ctcg.org/our-process/>

Case Study Reference Guide

The following case studies offer best practices for operationalizing the strategies identified in the *Community Energy Implementation Framework*.

Case Study 1: CEP Renewal in the City of Yellowknife, Northwest Territories

The City of Yellowknife adopted a CEP in 2006. With a target year of 2014, Yellowknife aimed to reduce its corporate GHG emissions by 20 per cent and its community GHG emissions 6 per cent, based on 2004 levels. It budgeted \$500,000 annually for energy efficiency, renewable energy conversions and public awareness. By February 2013, the City surpassed its target and the projects implemented now save the City an estimated \$528,000 per year.⁷⁶

One of the last steps initiated during the implementation of the CEP was the adoption of a renewal process for the plan. This renewal process included the development of a strategy for public and community stakeholder engagement to support the creation of a CEP for 2015-2025. Yellowknife has since embarked on a process where a new assessment of the Community's GHG emissions will be completed and new targets will be established.

Case Study 2: Measuring the Widespread Economic Benefits in the City of London, Ontario

The City of London, Ontario has conducted an economic analysis to measure various economic impacts and potential benefits of implementing their Community Energy Action Plan (CEAP).⁷⁷ The analyses, conducted in-house, demonstrate community-wide energy spending, the proportion of energy spending leaving the local economy and the potential to recirculate energy spending based on the implementation of their plan.

The approach undertaken and resources are available here:

- Energy spending analysis: <http://gettingtoimplementation.ca/wp-content/uploads/2016/08/City-of-London-Energy-Data-and-Prices-Analysis-2013.xlsx>
- Video supporting energy spending analysis: *Turning energy data into energy dollars* <https://vimeo.com/120112918>
- Infographic on energy spending: <http://gettingtoimplementation.ca/wp-content/uploads/2016/03/London-Energy-Spending.png>
- The City of London has also produced infographics based on the analyses, available here: <https://www.london.ca/residents/Environment/environmental-initiatives/Pages/Infographics.aspx>

Case Study 3: Measuring Green Jobs in Durham Region, Ontario

The Region of Durham Community Climate Change Local Action Plan highlights the estimated environmental, economic and social impacts of implementation. The plan is available at: Durham Region (2012). From Vision to Action Region of Durham Community Climate Change Local Action Plan. https://www.durham.ca/community/climate_change/2012DurhamLAP.pdf

Case Study 4: Measuring the Impacts of Sustainable Communities on Local Retail Sales New York

City, New York The New York City Department of Transportation created a methodology for measuring the economic impacts of improved streetscapes and active transportation infrastructure on retail sales. The study is available here: New York City Department of Transportation (December 2013). The Economic Benefits of Sustainable Streets. <http://www.nyc.gov/html/dot/downloads/pdf/dot-economic-benefits-of-sustainable-streets.pdf>

Case Study 5: Framing the Value Proposition, Edmonton, Alberta

The City of Edmonton, Alberta (population 812,000) adopted Edmonton's Community Energy Transition Strategy in April 2015 and a corresponding City Policy C585 in August 2015.⁷⁸ The Strategy, which represents a renewal and upgrade of their 2001 plan, was approved unanimously by City Council. Based on extensive citizen consultation, the strategy includes twelve strategic courses of action and an eight-year action plan with more than 150 tactics.

There is a lesson to be learned in how Edmonton's Sustainable Development Department communicated the need for the strategy. First, it was framed as a risk management strategy designed to protect Edmonton's quality-of life from climate and energy risks. Secondly, it provided a compelling economic business case involving ten community-scale programs (for advancing energy conservation, energy efficiency and renewable energy uptake) that would deliver a net public benefit of \$3.3 billion over 20 years.

⁷⁶ City of Yellowknife (2014). CEP Infographic. https://www.yellowknife.ca/en/living-here/resources/Energy/DOCS-384685-v1-CEP_2014_Infographic.PDF

⁷⁷ City of London (2014). Community Energy Action Plan <https://www.london.ca/residents/Environment/Energy/Pages/Community-Energy-Action-Plan.aspx>

⁷⁸ The City of Edmonton Community Energy Transition Strategy and its supporting analyses is available at: City of Edmonton (2015). Edmonton's Community Energy Transition Strategy. http://www.edmonton.ca/city_government/environmental_stewardship/energy-transition.aspx

Case Study 6: Establishing a Committee of Council in Yellowknife, Northwest Territories

The Community Energy Planning Committee was established by City Council on September 10, 2007, following the completion of the Community Energy Plan (CEP).⁷⁹ The Committee is chaired by the Mayor and includes representatives from across the Community. The primary purpose of the Committee is to assist the City of Yellowknife in an advisory capacity to ensure the CEP is implemented and evolves in an effective manner. The scope of the Committee is to report and make recommendations to City Council through the appropriate standing Committee of Council on the progress and direction of the CEP implementation.⁸⁰

Case Study 7: Establishing a Governance Framework for Edmonton's Community Energy Transition Strategy, Edmonton, Alberta

Edmonton City Council formed an Energy Transition Advisory Committee.⁸¹ Committee members serve two year terms and sets out to encourage and promote the strategy, provide advice to Council regarding the implementation of the strategy and assist Council in developing performance measures.

Case Study 8: Stakeholder Engagement in the City of Kelowna, British Columbia

In 2012, the City of Kelowna adopted a Community Climate Action Plan containing 87 actions to be implemented by 2020. Of those actions, 59 were assigned to the local government and 28 were assigned to community stakeholders, including utilities, provincial government and others. In an effort to ensure that community stakeholders understood their roles in the implementation of the plan, the City of Kelowna circulated letters to the organizations responsible for implementing actions in the plan. These letters enabled the City of Kelowna to move forward on implementing actions that are not within its jurisdiction.⁸²

Case Study 9: Stakeholder Engagement in Markham, Ontario

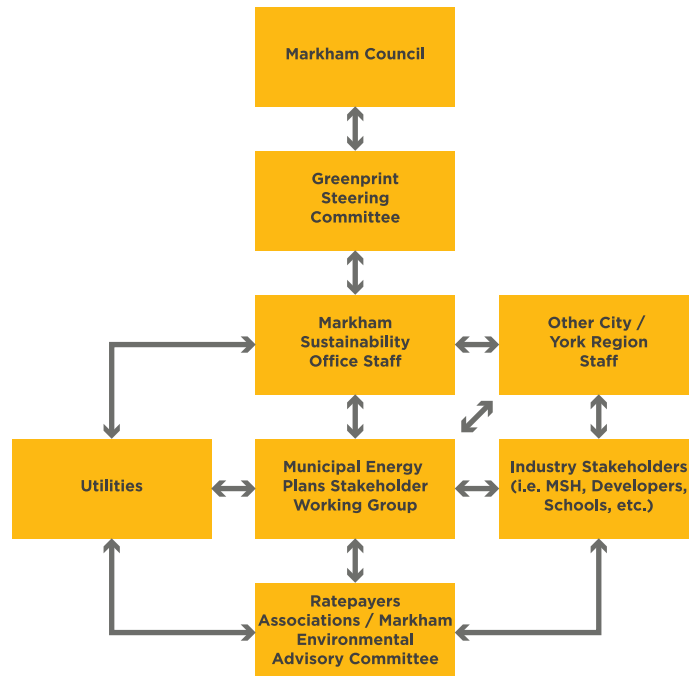
In 2014, the City of Markham began to develop a Municipal Energy Plan (MEP). As part of the MEP, the City created a Stakeholder Working Group.⁸³

The desired outcome of the Stakeholder Working Group is to provide recommendations and feedback on the development of Markham's MEP including:

- Identifying energy opportunities and solutions to increase local energy production and conservation
- Identifying synergies between industry stakeholders to implement MEP recommendations⁸⁴

The following chart illustrates the organizational structure overseeing the MEP.

Municipal Energy Plan Organizational Chart



⁷⁹ City of Yellowknife (2007). Community Energy Planning Committee <https://www.yellowknife.ca/en/city-government/community-energy-planning-committee.asp>

⁸⁰ Terms of Reference: https://www.yellowknife.ca/en/city-government/resources/Current_Committees_of_Council/Community-Energy-Planning-Committee-Terms-of-Reference.pdf

⁸¹ City of Edmonton (2016). Energy Transition Advisory Committee. https://www.edmonton.ca/city_government/city_organization/energy-transition-committee.aspx

⁸² Personal Communication, Michelle Kam, September 2016.

⁸³ The City of Markham City of Markham. (2015). Appendix A: Municipal Energy Plan Stakeholder Working Group Stakeholders. Retrieved from <http://framework.gettingtoimplementation.ca/wp-content/uploads/2016/10/Appendix-A-Markham-Municipal-Energy-Plan-Stakeholder-Working-Group-Stakeholders.pdf>

⁸⁴ City of Markham. (2015). Municipal Energy Plan Stakeholder Working Group Terms of Reference & Work Plan. Retrieved from <http://framework.gettingtoimplementation.ca/wp-content/uploads/2016/10/Appendix-B-Municipal-Energy-Plan-Project-ToR-Work-Plan-101216.pdf>

Case Study 11: Public Engagement on Community Energy in London, Ontario

The City of London, Ontario has documented public engagement efforts in a document entitled *Learning from People: A Background Document for the Community Energy Action Plan*: https://www.london.ca/residents/Environment/Energy/Documents/Learning_from_People.pdf

As part of the development of the *Community Energy Action Plan*, the City of London undertook a campaign called ReThink Energy London. The City of London held a Community Energy Strategy Workshop and the London Roundtable on the Environment and the Economy to inform the development of the *Community Energy Action Plan*. Community Energy Strategy Workshop included an interactive energy mapping exercise that involved 31 participants from electrical, natural gas and thermal utilities, internal departments, environmental and transportation advisory committees and provincial staff, among other stakeholders. The city's energy map was used to help stakeholders identify energy opportunities and risks, and to generate ideas and principles for energy actions in key areas such as buildings, transportation and low carbon energy generation in the City of London. Outcomes from the workshop can be found here: https://www.london.ca/residents/Environment/Climate-Change/Documents/London_FINALSummaryofWorkshop_May11.pdf

Case Study 12: City of Yellowknife Community Energy Plan Communications Plan, Northwest Territories

The City of Yellowknife Community Energy Plan Communications Plan describes a detailed approach for engaging with the public.⁸⁵ At the core of the plan, there is a recognition that in order to reduce GHG emissions across the community, Yellowknife residents and businesses must change current energy use practices. This requires a shift in awareness, attitudes and behaviour with respect to GHG emissions. The overall communication goal of the plan is to inform Yellowknife residents of changes that the City of Yellowknife will make and to implement communication programs that encourage ongoing reductions in Yellowknife GHG emissions.

Case Study 13: Fort Providence, Northwest Territories

In 2007 and 2008 the community of Fort Providence, Northwest Territories (population 735), in partnership with the Arctic Energy Alliance, developed an energy profile.⁸⁶ The objective of this exercise was to provide the community, and key decision makers, with a snapshot of energy use in the community.

The energy profile was developed to communicate a large quantity of energy data, including energy consumption, energy end use, cost of energy, and GHG emissions. Similar to any community that looks at energy use and costs per capita, the energy profile revealed significant opportunities to conserve energy and improve efficiency within the community.

Case Study 14: Halifax Vending Machine Energy Efficiency By-laws, Nova Scotia

In 2010, a series of by-laws and by-law amendments were adopted by Halifax City Council whereby a memorandum of Understanding was signed between the City and Refreshments Canada requiring the vending industry to voluntarily improve the energy efficiency of the vending machine fleet over 3 years. The estimated cost savings of the program were \$500,000 per year and an annual reduction of 5,000 tons of GHG emissions. VendingMisers installed on the vending machines resulted in a 25-50 percent reduction in energy consumption per machine.⁸⁷

Case Study 15: Net Zero Community in London, Ontario

West Five (www.west5.ca) is a 70 acre, mixed-use site located in London, Ontario. The site is being developed by Sifton Properties, in partnership with S2E Technologies. When completed, the neighbourhood will include 2,000 residential units, commercial and retail space, and parkland. The development will include a number of Smart Energy Community Principles,⁸⁸ including energy efficient buildings (e.g. the use of enhanced insulation), the use of renewable energy resources (e.g. solar shingles) and matching land use needs and mobility options (e.g. siting services such as grocery stores at community terminals nodes). The site will include London's first net-zero office building and net zero townhomes.

Case Study 16: Monitoring and Reporting on Implementation Progress in the City of Guelph, Ontario

CEP reporting is coordinated annually by the Community Energy division of the Business Development and Enterprise department, and presented to the Corporate Administration, Finance & Enterprise Committee (this Committee is appointed by Council and made up of Councillors). A dashboard is used to display progress within eight key activity categories, plus a description of the status for each individual activity.

Case Study 17: Monitoring and Reporting on CEP Implementation in the City of London, Ontario

The City of London Community Energy Action Plan (CEAP) was adopted in 2014. Alongside the plan, the City of London developed a background document describing a methodology for monitoring and reporting on community energy use.⁸⁹ The background document describes a methodology for developing annual energy and emissions inventories. The document describes how the City of London will also work with stakeholders to develop new Key Performance Indicators, including economic, transportation, and energy performance indicators. The results from energy and emissions inventories, and other Key Performance Indicators will be included in an annual progress report outlining implementation progress of the CEAP.

⁸⁵ City of Yellowknife (2007). Yellowknife Community Energy Plan Communication Plan. https://www.yellowknife.ca/en/living-here/resources/Energy/DOCS-375889-v1-2006_CEP_Communication_Plan.PDF

⁸⁶ Arctic Energy Alliance. Fort Providence Energy Profile 2007/08: <http://aea.nt.ca/files/download/205>

Case Study 18: Efficiency One, Nova Scotia

Efficiency One in Nova Scotia, formerly Efficiency Nova Scotia, has provided on-site energy managers for organizations such as Cape Breton University, Capital District Health Authority, Dalhousie University and Nova Scotia Community College. These embedded energy managers help to identify and coordinate projects to achieve substantial energy efficiency savings. For example after first six months of the partnership between Efficiency One and Capital Health in 2012, several projects were initiated totalling savings of \$118,000 per year.⁹⁰

Case Study 19: Community Energy Planning Alternatives for Small Communities – Eco-Ouest

Eco-Ouest, led in partnership with CDEM, SSD, has developed a program designed to help provide expertise to smaller municipalities in Manitoba, Saskatchewan and Alberta that face resource and capacity constraints for CEP development and implementation. Eco-Ouest has partnered with rural municipalities in each of these provinces to create energy and GHG emissions inventories and Climate Change Local Action Plans such as the inventory for the Rural Municipality of St. Clements and plans for the Rural Municipality of Saint-Laurent and Rural Municipality of Taché. CDEM also incorporates a regional perspective by comparing neighbouring communities' energy and emissions performances and sharing successful projects and case studies.⁹¹

Case Study 20: Yukon Energy Solutions Centre

The Yukon Energy Solutions Centre is part of the Energy branch in the Government of Yukon Department of Energy, Mines and Resources.

The Energy Solutions Centre offers energy-related services such as:

- The Yukon Energy Solutions Centre is part of the Energy branch in the Government of Yukon Department of Energy, Mines and Resources.

The Energy Solutions Centre offers community-level energy services to such as:

- Providing technical information and financial incentives to encourage the use of energy efficient appliances and heating systems at the local level
- Providing comprehensive energy planning services, including energy baseline assessments and policy reviews
- Providing training courses to build local technical capacity to implement community energy plans and projects
- Participating in outreach and public education on the health, safety, economic and environmental benefits of energy efficiency and renewable energy

To learn more about the Energy Solutions Centre visit <http://www.energy.gov.yk.ca/about-the-energy-branch.html>

Case Study 21: Integrated Financial Planning in the City of Coquitlam, British Columbia

Coquitlam's award-winning integrated financial planning framework is comprised of three separate but complementary planning processes. These processes result in a set of integrated plans that support the overall vision and mission of the City and align activities and resources to achieve the strategic goals and annual business plan priorities set by Council.

- Council's Strategic Plan – aspirational, future-looking plan, updated every four years following the municipal election. It articulates the vision, mission, values and broad strategic goals. Progress of the plan is monitored through an annual review of key performance measures and accomplishments
- Business Plan – translates the high level strategic goals into annual business plan work items and priorities, established by Council. A set of performance measures are reviewed annually to monitor success of the business plan
- Financial Plan – provides the resourcing strategy to support the strategic and business plans. Updated annually, it is a five-year plan that includes both operating and capital components

Evaluation of achievements informs the next cycle of planning. For example, the City's performance is reviewed every four months with a Trimester Report to Council. It includes an update on the progress of the work items under the Business Plan priorities and a review of operating and capital budget variances, labour vacancies, economic indicators including construction and development activities, and major spending during the trimester. The intent of the report is to view the City's activities and progress balanced with the status of the City's financial and human resources.

In this model, it is important that staff responsible for developing and implementing the CEP ensure that its goals and actions are reflected in Council's (strategic) plan and that these goals and actions maintain a high profile throughout the budgeting/financial plan process.

Case Study 22: Parking Incentives in Hamilton, Ontario

The City of Hamilton amended its Zoning By-law to support 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.⁹²

⁸⁷ Regional Municipality of Halifax (2010). Energy Efficiency Initiative: Vending Machines. <https://www.halifax.ca/council/agendasc/documents/100504ca1131.pdf>

⁸⁸ <http://www.questcanada.org/thesolution/principles-smart-energy-communities>

⁸⁹ City of London (December 2013). Reporting on Progress: Background Document for the Community Energy Action Plan. https://www.london.ca/residents/Environment/Energy/Documents/Reporting_on_Progress.pdf

⁹⁰ Capital Health (n.d.) Efficiency Nova Scotia – About Us. <http://www.cdha.nshealth.ca/about-us/efficiency-nova-scotia>

⁹¹ CDEM. (n.d.). Eco-West. Retrieved from CDEM Website: <http://www.cdem.com/en/sectors/green-economy-1/eco-west>

⁹² 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>

Appendix IV

Federal, Provincial and Territorial Organizations

One of the greatest success factors to CEP implementation is engaging with other communities and with organizations that have the tools needed to accelerate implementation. The following organizations and communities of practice may have information available to help find the tools needed to implement particular aspects of your CEP.

British Columbia

Community Energy Association (CEA)
communityenergy.bc.ca

QUEST BC Caucus
<http://www.questcanada.org/caucus/bc>

BC Mayor's Climate Leadership Council
<http://communityenergy.bc.ca/bcmclc/>

Union of BC Municipalities (UBCM)
<http://www.ubcm.ca/>

Planning Institute of British Columbia (PIBC)
info@pibc.bc.ca

BC Climate Action Toolkit
<http://www.toolkit.bc.ca/>

Alberta

QUEST Alberta Caucus
<http://www.questcanada.org/caucus/ab>

Alberta Energy Efficiency Alliance (AEEA)
<http://www.aeea.ca/>

Alberta Professional Planners Institute (APPI)
<http://www.albertaplanners.com/>

Alberta Council for Environmental Education (ACEE)
<http://www.abcee.org/>

Alberta Urban Municipalities Association (AUMA)
<http://www.auma.ca/>

Alberta Association of Municipal Districts and Counties (AAMDC)
<http://www.aamdc.com/>

Alberta Innovates
<http://www.ai-ees.ca/>

Municipal Climate Change Action Centre (MCCAC)
www.mccac.ca

Saskatchewan

Eco-Ouest
<http://eco-ouest.com/en/>

Conseil de la Coopération de la Saskatchewan (CCS)
<http://ccs-sk.ca/>

Saskatchewan Research Council (SRC)
<http://www.src.sk.ca/industries/energy/pages/default.aspx>

Saskatchewan Professional Planners Institute (SPPI)
<http://sppi.ca/>

Saskatchewan Urban Municipalities Association (SUMA)
<http://www.suma.org/>

Saskatchewan Economic Development Association (SEDA)
<http://www.seda.sk.ca/index.cfm>

First Nations Power Authority of Saskatchewan (FNPA)
<http://www.fnpa.ca/>

Manitoba

Conseil de développement économique des municipalités bilingues du Manitoba (CDEM) Eco-West
<http://eco-ouest.com/en/>

Manitoba Professional Planners Institute
<http://www.mppi.mb.ca/>

Ontario

QUEST Ontario Caucus
www.questcanada.org/caucus/on

Ontario Professional Planners Institute
<http://ontarioplanners.ca/>

Association of Municipalities of Ontario
www.amo.on.ca/

Québec

Agence de l'efficacité énergétique
<http://www.efficaciteenergetique.gouv.qc.ca/>

Association Québécoise pour la maîtrise de l'énergie (AQME)
<http://www.aqme.org/>

Climatisation et chauffage urbains de Montréal (CCUM)
ccum.com

Conseil Patronal de l'Environnement du Québec (CPEQ)
<http://www.cpeq.org/fr>

Fédération Québécoise des Municipalités
<http://fqm.ca/>

L'Ordre des Urbanistes du Québec
<http://www.ouq.qc.ca/>

QUEST Caucus du Québec
<http://eco-ouest.com/en/>

Regroupement national des conseils régionaux de l'environnement (RNCREQ)
<http://www.rncreq.org/>

Hydro Québec
<http://www.hydroquebec.com/promoteurs/developpementurbaindurable/>

Atlantic Provinces

QUEST Nova Scotia Caucus
<http://www.questcanada.org/caucus/ns>

Union of Nova Scotia Municipalities (UNSM)
<http://www.nmto.ca/governance/nunavut-association-municipalities>

QUEST New Brunswick Caucus
<http://www.questcanada.org/caucus/nb>

Association of Municipal Administrators of New Brunswick
<http://www.amanb-aamnb.ca/>

Atlantic Planning Institute
<http://www.atlanticplanners.org/>

Clean Foundation
clean.ns.ca

Ecology Action Centre
<https://www.ecologyaction.ca>

EOS Eco-Energy
eosecoenergy.com

Territories

QUEST North Caucus
<http://www.questcanada.org/caucus/north>

Yukon Energy Branch
<http://www.energy.gov.yk.ca/publications.html>

Association of Yukon Communities
<http://www.ayc-yk.ca/>

Council of Yukon First Nations
<http://cyfn.ca/>

Yukon Conservation Society
<http://yukonconservation.org/>

Yukon Research Centre
<http://yukoncollege.yk.ca/research>

Arctic Energy Alliance
aea.nt.ca

NWT Association of Communities (NWTAC)
<http://www.nwtac.com/>

Nunavut Association of Municipalities (NAM)
<http://www.nmto.ca/governance/nunavut-association-municipalities>

National

Natural Resources Canada
<https://www.nrcan.gc.ca/energy/efficiency/communities-infrastructure>

Canadian Energy Research Institute (CERI)
<http://www.ceri.ca/>

Federation of Canadian Municipalities (FCM)
www.fcm.ca/home.htm

The Natural Step
<http://www.naturalstep.ca/>

Sustainable Development Technology Canada (SDTC)
<https://www.sdte.ca/en>

Sustainable Cities
<http://sustainablecities.net/>



Get engaged in the GTI initiative by visiting

www.gettingtoimplementation.ca where you can:

- Learn more by reading the latest project research
- Access the web-based Community Energy Implementation Framework and Community Energy Implementation Readiness Survey
- Sign up for our newsletter and receive updates about the initiative

