



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

COMMUNITY ENERGY PLANNING:  
GETTING TO IMPLEMENTATION IN CANADA  
WORKSHOP SUMMARY REPORT

SEPTEMBER 2015

**Project Supporters**

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## Introduction

While 180 communities across Canada have a Community Energy Plan (CEP), all communities are facing challenges when it comes to implementation. Earlier this year, the *Community Energy Planning: Getting to Implementation in Canada* initiative hosted nine regionally-focused workshops across Canada to discuss CEP implementation challenges and successes in Canadian communities.

The objectives of the workshops were to:

- Foster collaboration and share expertise among community energy planning practitioners in Canada.
- Inform the development of a national Community Energy Implementation Framework being developed as part of the *Community Energy Planning: Getting to Implementation in Canada* initiative.

The workshops included presentations and interactive roundtable discussions which served to share lessons learned CEP implementation in different regions across Canada. The primary topics discussed during the workshops included:

- CEP drivers and approaches
- Leadership and engagement
- Data, decision making and demonstrating success
- Integrating CEPs into everyday decision making
- Capacity constraints and opportunities
- Federal, provincial and territorial energy policies and subsidies
- Energy literacy

The workshops revealed that there are many commonalities and many differences that factor into CEP implementation in communities across Canada.

This report describes common concerns, considerations and approaches for CEP implementation described in the workshops. It is organized into common topics and themes that emerged in each of the workshops. The degree to which each of the topics were discussed varied from workshop to workshop. The primary takeaways from each of the regional workshops are identified in the Appendix.

# Workshop Takeaways

## Summary of Workshop Takeaways

### 1. CEP drivers and approaches

- 1.1 The drivers for developing and implementing CEPs are similar across Canada, however they vary from community to community, depending on factors such as community size and demographics, economic base and energy supply mix.
- 1.2 Developing and implementing a CEP is a valuable process for a community. There are many scales at which a CEP can be developed.

### 2. Leadership and engagement

- 2.1 Political, staff and community leadership is critical when a CEP is just getting started.
- 2.2 It is possible to cultivate leadership and support for CEPs.
- 2.3 Engaging other community stakeholders early in the CEP process can help accelerate CEP implementation.

### 3. Data, decision making and demonstrating success

- 3.1 Data is needed to identify energy needs, and for measuring and reporting on progress. Data can help build and maintain support from decision makers and should be presented clearly and at an appropriate scale.
- 3.2 Energy utilities and provincial/territorial agencies have a critical role to play in providing communities with the energy data they need to develop an inventory, prioritize actions and monitor progress.

### 4. Integrating CEPs into everyday decision making

- 4.1 Integrating CEPs into plans and processes at the municipal level is important for moving ahead on implementation.

The following table highlights various strategies discussed for institutionalizing CEPs.

- 4.2 Effort is required to take advantage of potential opportunities and to integrate CEP activities with real estate sector.

### 5. Capacity constraints and opportunities

- 5.1 Financial and human resources capacity constraints are present in all communities. The challenges vary based on the context of the community.
- 5.2 There is a significant opportunity for communities to build the capacity needed to implement CEPs through improved engagement and partnerships with community stakeholders.

### 6. Federal, provincial and territorial energy policies and subsidies

- 6.1 Federal and provincial policies and subsidies have a significant role to play in the uptake of conservation and alternative energy programs.

### 7. Energy literacy

- 7.1 CEP implementation depends on energy literacy at the political, staff, stakeholder, and public level.
- 7.2 Municipalities can enhance stakeholder and public literacy through benchmarking and by integrating education programs with skills needed within the community.

# 1. Community Energy Plan Drivers and Approaches

## 1.1 The drivers for developing and implementing CEPs are similar across Canada, however they vary from community to community, depending on factors such as community size and demographics, economic base and energy supply mix.

Some of the top drivers for developing and implementing a CEP include:

- Economic Development
  - Reducing energy spending
    - Keeping money in the local economy
    - Freeing up budget for other community services
  - Job creation
  - Enhancing the competitiveness of the community
    - Attracting and retaining businesses due to improved costs and reliability
    - Fostering a culture of conservation and smart energy use
    - Creating opportunities for businesses that already exist to integrate energy systems
- Mitigating Risks
  - Reducing energy costs and volatility and improving energy affordability
  - Enhancing energy reliability and resilience, particularly for critical users like hospitals
    - Finding alternatives to address grid capacity constraints and assessing alternatives to defer or avoid energy infrastructure costs
    - Addressing energy security and reliability of supply Reducing greenhouse gas (GHG) emissions
- Improving air quality and community health

Overall, the workshops revealed that there are real advantages to developing and implementing a CEP. CEPs can help identify community energy needs and priorities. They enable community stakeholders to coordinate efforts as they relate to energy and have the potential to illustrate how energy fits into other decision making processes within the community. CEPs can also help to foster a corporate and community culture around energy conservation.

## 1.2 Developing and implementing a CEP is a valuable process for a community. There are many scales at which a CEP can be developed.

Alternate scales for CEP development and implementation include:

- Integrating energy into existing plans and policies
  - Some small communities might incorporate energy policies/actions into existing municipal documents and plans, rather than creating a new CEP (e.g. official plans, transportation plans, waste planning, etc.)
- Neighbourhood scale
  - Larger communities might develop neighbourhood-scale CEPs
- Utility scale
  - Plans could be developed to correspond with opportunities and constraints associated with electricity, natural gas and thermal distribution systems
- Regional scale
  - CEPs could be led by a regional municipality, or by another planning body representing a collection of municipalities

## 2. Leadership and Engagement

### 2.1 Political, staff and community leadership is critical when a CEP is just getting started.

- A strong political champion is essential for leading a vision for the community, motivating staff and shifting attitudes to build a culture of awareness around energy
- It is also important to have leadership within municipal departments, including planning, finance and engineering departments and the Chief Administrative Officer's office
- Community leaders can play an important role in driving specific actions in a CEP (e.g. public transit, energy efficiency, etc.)

### 2.2 It is possible to cultivate leadership and support for CEPs.

- If presented with a strong value proposition, it is possible to garner political, staff and stakeholder leadership to support the development and implementation of a CEP
- The value proposition of the CEP should resonate with the stakeholder group from which you are trying to garner support, and data should be used to support the value proposition
- It may help to have a community stakeholders validate the CEP (e.g. a real estate professional or chamber of commerce board member)
- An incremental CEP may help to garner support where none exists, as it enables the municipality to adapt to public and stakeholder reactions to the plan
- In First Nations and remote communities, the process of garnering support may be more communal. Large public and stakeholder meetings are often held to determine how a CEP can help address the needs of community stakeholders

### 2.3 Engaging other community stakeholders early in the CEP process can help accelerate CEP implementation.

- Utilities, provincial staff, real estate developers, and chambers of commerce were all listed as critical stakeholders to engage

## 3. Data, Decision Making and Demonstrating Success

### 3.1 Data is needed to identify energy needs, and for measuring and reporting on progress.

- Energy data (including electricity, natural gas and other fuels, thermal, transportation and waste data) is critical for community energy planning. It enables communities to:
  - Create an energy profile of the community and can help staff and decision makers understand how energy is being used
    - Communities with resources can turn data into energy maps, though this approach might not be necessary or practical for small communities
  - Understand how much money is being spent on energy and how much is leaving the local economy
  - Conduct accurate cost/benefit analyses and prioritize actions in a pragmatic way
    - Communities can then tackle actions with short payback periods to demonstrate success. Communities have found that this approach can build confidence and breed support for investing in actions with longer payback periods
    - There are tools available for smaller communities, including the RETScreen Software Suite available through Natural Resources Canada, which helps communities conduct feasibility analyses for energy efficiency, renewable energy and energy performance projects
  - Track and monitor progress of implementation (common performance indicators include: % of people commuting by public transit, km of bike lanes, solid waste diverted from landfill)
  - Benchmark performance within the community and against other communities
  - Send signals to the private sector about the value of investing in community energy projects

### 3.2 Data can help build and maintain support from decision makers and should be presented clearly and at an appropriate scale.

- Data needs to be presented to decision makers in an easy-to-understand way. For example, energy use data could be translated into relevant takeaways for decision makers, such as the amount of money being spent on energy in the community
- Questions remain around what level of granularity of data is needed
- Data management and analysis requires expertise
  - Communities may garner support for actions in their communities by demonstrating analyses done in other communities

### 3.3 Energy utilities and provincial/territorial agencies have a critical role to play in providing communities with the energy data they need to develop an inventory, prioritize actions and monitor progress.

- There are real barriers to accessing and analyzing data
  - Some utilities or private transportation organizations may not want to share data associated with energy use
- The British Columbia Community Energy and Emissions Inventory, led by the Government of British Columbia with BC Hydro, FortisBC, the Insurance Corporation of British Columbia and landfills, provides communities with energy end use data every two years
  - Applying this approach to data collection and dissemination in other provinces and territories could help communities kick-start the development and implementation of CEPs
- Legislative approaches to collecting data may help communities accelerate CEP implementation

## 4. Integrating CEPs into Everyday Decision Making: Lessons Learned

### 4.1 Integrating CEPs into plans and processes at the municipal level is important for moving ahead on implementation.

The following table highlights various strategies discussed for institutionalizing CEPs.

**Table 1: Strategies for Institutionalizing a CEP**

<p><b>Integrate the CEP into existing planning policies and regulations</b></p>	<ul style="list-style-type: none"> <li>- Official community plans</li> <li>- Strategic plans</li> <li>- Transportation plans</li> <li>- Key performance indicators within municipal departments</li> <li>- Bylaws</li> <li>- Development applications</li> <li>- Design standards checklists</li> </ul> <p><i>Example:</i> The City of Halifax, Nova Scotia developed a bylaw requiring all vending machine owners to install a device that would reduce the amount of time the machine runs for, resulting in a 50 percent reduction of energy consumed by the machines. The payback period was less than six months.</p>
<p><b>Establish an organizational structure to implement the plan</b></p>	<ul style="list-style-type: none"> <li>- Set up committees such as:             <ul style="list-style-type: none"> <li>- An advisory committee (made up of senior municipal staff)</li> <li>- A stakeholder advisory committee</li> <li>- A committee of council</li> <li>- An implementation committee</li> <li>- A new governance structure</li> </ul> </li> </ul> <p><i>Example:</i> The City of Edmonton, Alberta renewed its 2001 CEP in 2015. The new Energy Transition Strategy outlines a leadership and citizen engagement strategy. It describes the establishment of a community leadership body, and new committees and subcommittees with real accountability</p> <p><i>Example:</i> The City of Guelph, Ontario established a holding company, Envida Community Energy Inc., to implement distributed energy projects across Guelph.</p>
<p><b>Integrate the CEP into annual budgets</b></p>	<ul style="list-style-type: none"> <li>- Integrate the CEP into both the capital budget and the operations and maintenance budget</li> <li>- When comparing projects, emphasize life cycle cost of projects, as some energy projects might have a higher upfront cost, but can lower operations and maintenance costs in the long-term</li> <li>-</li> </ul>

### 4.2 Communities continue to face challenges integrating CEP efforts with the real estate sector.

- Some real estate developers are making significant progress on implementing energy efficiency homes
  - Some examples include: Landmark Homes and Brookfield Residential in Alberta, Integrated Designs Inc. in Saskatchewan and Sifton Properties in Ontario
  - Energy efficient homes often have other benefits including improved air quality, water savings, and less noise
- Many developers perceive energy efficient developments to be of lower priority
  - Developers place priority on building to achieve a lower purchase price for customers rather than community GHG targets
- Some municipalities have started to take action on establishing requirements or providing incentives for improved energy efficiency. Some examples include:
  - Bylaws requiring developers to connect to district energy systems
  - Establishing building standards on energy efficiency that exceed the provincial/territorial building code
  - Establishing requirements in development applications for developers to meet energy standards established by the municipality

## 5. Capacity Constraints and Opportunities

### 5.1 Financial and human resources capacity constraints are present in all communities. The challenges vary based on the context of the community.

#### Financial Capacity Constraints

- Municipalities of all sizes have limited resources available to fund projects and are often constrained in their ability to generate new revenues with existing fiscal tools available to local governments
- There is a need for improved understanding/considerations around the differences between funding planning, funding capital investments, funding operations and maintenance and funding training
- Funding programs might not help overcome broader implementation challenges
- Implementation may be accelerated from funding sources including:
  - Provincial and utility funding programs
  - The Federation of Canadian Municipalities Green Municipal Fund
  - Alternative financing models, such as Energy Service Companies (ESCOs), Energy Performance Contracts (EPCs) and other public-private partnerships (P3s)

#### Human Resources and Partnerships

- The skills and capacity gaps vary from community to community.
- When addressing capacity constraints, consider where capacity is needed, for example:
  - From an operations/maintenance perspective (e.g. users may not know how to operate equipment once it is installed)
  - From a strategic perspective (e.g. staff may not have the skills to advance energy planning and implementation within the community)
  - From a data management perspective
- Many communities do not have a designated staff person in charge for implementing the CEP
  - Designated staff have demonstrated the ability to reduce energy spending and 'pay for themselves'. They can also help to break down silos within a community and help integrate the CEP indicators into other municipal processes (e.g. Efficiency One Embedded Energy Manager)

**5.2 There is a significant opportunity for communities to build the capacity needed to implement CEPs through improved engagement and partnerships with community stakeholders.**

The following table highlights funding and partnership models described in each of the regional workshops.

**Table 2: Regional Funding and Partnership Opportunities**

<b>British Columbia</b>	<ul style="list-style-type: none"> <li>– The City of Surrey partnered with Simon Fraser University and Powertech Labs to fund an Executive Industrial Research Chair in Energy Systems for Smart Cities position that ties in with their Economic Investment Action Plan to develop the clean energy industry. Surrey is home to roughly 10 percent of British Columbia's clean technology sector. Surrey also partnered with Kwantlen Polytechnic University to establish Foresight Cleantech Accelerator Centre to act as a hub for clean technology innovation in Surrey</li> </ul>
<b>Alberta</b>	<ul style="list-style-type: none"> <li>– The Climate Change Emissions Management Fund has provided funding to accelerate community energy projects, including a waste to energy project in Taber, Alberta</li> <li>– The City of Calgary implemented a Light Rail Transit project extending the green line to Seton, a neighbourhood at the south end of Calgary. The project was implemented through a P3 partnership</li> </ul>
<b>Manitoba</b>	<ul style="list-style-type: none"> <li>– Manitoba Hydro has launched a lighting pilot project. The Government of Manitoba is also working with Manitoba Hydro to identify other opportunities to stimulate other alternative energy markets that will help communities save money on electricity, such as biomass heating systems.</li> <li>– Manitoba Hydro also has funding opportunities to move projects forward. It has partnered with Rona, Home Depot, Home Hardware, McMunn and Yates, Costco, Canadian Tire and Federated Co-op locations throughout the province to offer half-priced LED lights. It also offers a long-term flat rate on electricity for municipal buildings</li> <li>– Eco-West will work with municipalities in Manitoba to advance community energy plans and projects</li> </ul>
<b>Ontario</b>	<ul style="list-style-type: none"> <li>– Local Improvement Charges legislation enables Ontario land owners to integrate investments in energy projects directly onto local property tax bills</li> <li>– The Municipal Energy Plan program supports the development of MEPs in Ontario.</li> </ul>
<b>Nova Scotia</b>	<ul style="list-style-type: none"> <li>– The Municipality of Digby, with the Town of Digby and the Municipality of Clare partnered to establish a community energy trust to invest in research, development and infrastructure for tidal power and other community energy projects such as LED lighting, electric vehicles and public transit</li> <li>– Regional Enterprise Networks, led by the Nova Scotia Department of Municipal Affairs, is a mechanism for building partnerships and establishing priorities in different regions across the province</li> <li>– Halifax worked with the provincial government to allow solar heating projects to be funded through property tax bills</li> <li>– Nova Scotia Power will begin a Commercial HVAC Program in September 2015. The program will enable building owners to implement building automation technologies. The investment will appear on customer bills (4.99% for 5 years)</li> <li>– The Atlantic Canada Opportunities Agency Innovative Communities Fund supports projects that build the economies of Atlantic Canadian communities.</li> <li>– The Digby Wind Project was established as part of the Nova Scotia Power's 2004 RFP for wind power</li> <li>– Dalhousie University conducted a study on the feasibility of using electric vehicles as a storage opportunity for renewable energy in Digby</li> </ul>
<b>Yukon, Northwest Territories and Nunavut</b>	<ul style="list-style-type: none"> <li>– Communities in the north have resources and the will in place to implement projects but are struggling with high staff turnover</li> <li>– Organizations like the Arctic Energy Alliance are working to bring the skills needed to communities in the north (particularly in the Northwest Territories)</li> <li>– The Champagne and Aishihik First Nations purchased a community bus in 2013 using Gas Tax funds that is used for transporting residents to community events, as well as access the grocery store and services located in Whitehorse.</li> <li>– Many communities in the north would prefer to foster and utilize local expertise, however there are cases where external consultants may be needed to fill gaps in expertise</li> <li>– Capacity building exercises should concentrate on the staff and roles that currently exist</li> </ul>

## 6. Provincial and Territorial Policy Opportunities

### 6.1 Federal and provincial policies and subsidies have a significant role to play in the uptake of conservation and alternative energy programs.

- Federal, provincial and territorial policies can accelerate community energy planning and/or the implementation of specific actions (e.g. energy efficiency projects, district energy, transit projects or alternative energy projects)
- Policy gaps and/or the presence of energy subsidies often act as disincentives for implementation
- The key points of discussion regarding federal, provincial and territorial policies are described in the following table.

**Table 2: Provincial and Territorial Policy Opportunities and Considerations for CEP Implementation<sup>1</sup>**

<b>Nova Scotia</b>	<ul style="list-style-type: none"> <li>– Communities are interested in clean energy but are not interested in paying more to shift off coal</li> <li>– In 1995, Nova Scotia adopted a target of achieving a 50 percent solid waste diversion rate by all municipalities by 2000. The target was achieved and exceeded and offers a good example of legislation supporting CEP implementation</li> </ul>
<b>North</b>	<ul style="list-style-type: none"> <li>– Energy subsidies for residents of northern and remote communities send market signals resulting in behaviour that do not compel users to conserve (e.g. electric hot water heaters, which are highly inefficiency compared to alternative technologies commonplace in many parts of the north)</li> <li>– The real cost of energy should be visible so that there is an incentive to conserve               <ul style="list-style-type: none"> <li>○ For example, in most northern communities housing is government-owned, and there is little or no private sector housing market. This ownership structure provides residents and tenants will little incentive to conserve</li> </ul> </li> <li>– Government of the Northwest Territories Capital Asset Retrofit Fund Program had \$1.47 million redirected from operational savings (projected savings reaching \$1.72 million for 2014-2015) to fund energy saving projects including biomass boilers, building envelope upgrades, LED lighting and upgrading building components with energy efficient and responsive systems</li> <li>– Territorial governments can use policies rather than direct funding to drive implementation</li> <li>– Territorial governments are a critical player when it comes to capacity building. Territorial governments can fund projects (e.g. Biomass project funded in the Northwest Territories), engage in education and awareness building, and lead by example by implementing projects and kick-starting industries</li> <li>– The Government of Nunavut is working to bring programs to Nunavut Arctic College to build the skills needed to advance energy knowledge in the territory (e.g. Building operators and managers, and building inspectors)</li> </ul>
<b>Québec</b>	<ul style="list-style-type: none"> <li>– The low cost of hydro-electricity in Québec acts as a disincentive for the uptake of alternative energy projects</li> <li>– Québec's Cap and Trade program is helping to drive the business case for energy projects</li> <li>– Municipalities are interested in community energy however they are seeking a signal from the provincial government to take significant action</li> </ul>
<b>British Columbia</b>	<ul style="list-style-type: none"> <li>– Support for CEPs from the provincial government through legislation, providing inventories and carbon pricing, has cultivated an environment that is very supportive of CEPs and project implementation</li> <li>– The province can enhance coordination to encourage more transit projects</li> <li>– Limits on the resale of electricity are a disincentive for electric vehicle charging projects</li> </ul>
<b>Alberta</b>	<ul style="list-style-type: none"> <li>– In Alberta, residential end uses account for 18 percent of electricity demand (compared to 50 percent in most other provinces and territories). Electricity prices are about 6 cents per kilowatt hour compared to about 15 cents in Ontario</li> <li>– There is a significant opportunity for the Government of Alberta to implement energy efficiency policies and programs</li> </ul>
<b>Saskatchewan</b>	<ul style="list-style-type: none"> <li>– There is a role for the provincial government to play. Some suggestions include:               <ul style="list-style-type: none"> <li>○ Enabling smart meters to obtain data</li> <li>○ Reviewing the Saskatchewan Cities Act to allow for tools such as Local Improvement Charges</li> <li>○ Examining legislative approaches for enabling the uptake of CHP and energy efficiency</li> </ul> </li> </ul>

<sup>1</sup> See the *National Report on Policies Supporting Community Energy Plan Implementation* for a complete list of legislation and programs supporting CEP implementation. The report is available at [www.gettingtoimplementation.ca](http://www.gettingtoimplementation.ca)

## 7. Energy Literacy

### 7.1 CEP implementation depends on energy literacy at the political, staff, stakeholder and public level.

- A dialogue is needed among elected officials, municipal staff, stakeholders and the public about the costs associated with energy, the value associated with investing in energy projects and products, and the risks associated with underinvesting in community energy
- Program administrators should ensure that energy technologies and products are available and that supply chains can support the delivery of products to consumers. This consideration is most prevalent in northern and remote communities
- Successful implementation of energy programs depends on uptake by end users
  - The County of Richmond in Nova Scotia launched a Property Assessed Clean Energy program (PACE) which was recently cancelled due to poor uptake
  - Efficiency One in Nova Scotia launched a program providing communities with low cost LED lights and only seven communities across the province took part in the program

### 7.2 Municipalities can enhance stakeholder and public literacy through benchmarking and by integrating education programs with skills needed within the community.

- Benchmarking can result in improved energy literacy for elected officials, municipal staff, stakeholders and the public
  - Studies and pilot initiatives have demonstrated that benchmarking (either at the residential, commercial, or inter-municipal level) improves awareness about energy consumption and can have a significant impact on reducing energy demand
  - Energy labelling and other competitions to conserve energy may result in similar outcomes
- Communities should identify where they are falling short on skills needed to implement energy technologies and programs and consider working with education and training institutions to fill the gaps
  - The implementation of new technologies and systems often requires new skills and training. Stakeholders adopting new technologies should consider whether there is adequate capacity to operate new energy systems and technologies

## Conclusion: Considerations for Accelerating Implementation

While 180 communities across Canada have a CEP, all communities need help getting to implementation.

**The areas in which communities need the most support getting to implementation include:**

- Strategies for fostering leadership at the political, staff and community level
- Strategies for overcoming financial and human resources constraints
- Methods for integrating CEPs into every day processes for community stakeholders, including municipalities, utilities and the real estate sector

The *Community Energy Planning: Getting to Implementation in Canada* initiative will be releasing a draft Community Energy Implementation Framework in October 2015. The Framework will be a tool to help communities overcome the common challenges identified in the workshops and accelerate the implementation of CEPs. The Framework will be tested and refined in three pilot communities varying in size and location across Canada in 2016.

## Appendix – Regional Workshop Summaries

The following summaries describe the discussions that took place during the regional workshops that were unique to the particular region in which the workshop was taking place.

Workshop materials, including agendas and presentations, can be found at [www.gettingtoimplementation.ca](http://www.gettingtoimplementation.ca)

# Community Energy Planning: Getting to Implementation in British Columbia

Vancouver, British Columbia, December 3, 2015



## Topics of Discussion

- Implementing CEP actions and technologies – challenges and opportunities
- Institutionalizing CEPs
- Building the economic case for CEPs

## Key Takeaways

### *Implementing CEP Actions*

- Support for CEPs from the provincial government through legislation, providing inventories and carbon pricing, has cultivated an environment that is very supportive of CEPs and project implementation
- When seeking support for actions, it is critical to communicate key messages that resonate with decision makers
- Demonstrating success through low-risk, low-cost actions can help garner support for further action
- There are several examples of district energy projects in British Columbia
  - For communities looking to implement district energy project, be warned that the process can be long. Some of the common roadblocks to moving district energy projects forward include right-of-way access and the pricing structure for district heating or cooling.
  - District energy projects have a stronger business case in places with higher population densities
- Many BC communities are facing challenges moving forward on transportation and transit actions
  - There is a need for greater municipal authority on transit projects in British Columbia and more fiscal tools to enable municipalities to pay for the costs of transit projects

### *Institutionalizing CEPs*

- Communities often state the risks associated with the turnover of elected officials. One way to mitigate this risk is to institutionalize the CEP as much as possible when there is a political leader in place
- In smaller communities, formalizing the meeting process may not be as effective
- If a community does not have a lot of capacity, consider alternative meeting models that reduce the time required from other departments to work on the CEP. (e.g. establish a quarterly meeting in an effort to reduce constant correspondence)

### *The Economic Case for CEPs*

- Decision makers are interested in knowing how much money spent on energy is leaving the local economy
- It helps to show the payback period on projects
- Tools like marginal cost abatement curves can help to make a compelling case around where effort should be spent
- Project implementation can be translated to employment impacts, GHG emissions reductions, and other indicators
- If your community is lacking capacity, try to show the analysis that was done in other communities

## **Participants<sup>2</sup>**

Alberta Real Estate Foundation  
Association of Municipalities of Ontario  
BC Hydro  
Bizcat  
Boston Consulting  
British Columbia Institute of Technology  
Capital Regional District  
City of Dawson Creek  
City of Duncan  
City of Edmonton  
City of Langley  
City of New Westminster  
City of North Vancouver  
City of Port Moody  
City of Richmond

City of Surrey  
City of Vancouver  
City of Vernon  
Collaborative for Advanced Landscape Planning  
Comox Valley Regional District  
District of Barriere  
District of Lake County  
District of Wells  
Federation of Canadian Municipalities  
FJG Consulting  
Metro Vancouver  
Municipality of North Cowichan  
Natural Resources Canada  
Nelson Hydro  
Netherlands Consulate General

Northern Rockies Regional Municipality  
Pacific Institute for Climate Solutions  
Real Estate Foundation of British Columbia  
Resort Municipality of Whistler  
Simon Fraser University  
Sustainable EDGE  
Swedish Energy Agency  
Town of Golden  
Township of Langley  
Union Gas  
University of British Columbia  
Village of Granisle  
Village of Lumby  
Vineyard Technology Consulting

<sup>2</sup> In addition, GTI hosted two webinars on July 28 and 29, 2015 which included 28 participants.

# Community Energy Planning: Getting to Implementation in Nova Scotia

Acadia University, Wolfville, Nova Scotia, May 14, 2015



## Topics of Discussion

- Building the case for community energy planning
- Implementing CEPs in resource-constrained communities

## Key Takeaways

### *Building the Case for Community Energy Planning*

- Nova Scotia is one of the highest producers of GHGs per capita in Canada. There is a significant opportunity for communities to take action on energy
- All communities in Nova Scotia are required to have Municipal Climate Change Adaptation Plans (MCCAPs) however MCCAPs do not typically focus specifically on energy needs within communities
- Decision makers want to know what the internal rate of return is on projects, taking into account the full life cycle cost of investments
- Solar projects and energy efficiency were a focal point of the workshop
  - The installed capacity of solar thermal energy in Nova Scotia is doubling every two years
  - Energy efficiency projects, many of which are led by Efficiency One (formerly Efficiency Nova Scotia) have demonstrated significant success in communities across Nova Scotia

### *Implementing CEPs in Resource-Constrained Communities*

- Communities lacking financial capacity can enable projects to move forward through by-laws and regulations
- Communities can partner with Energy Services Companies (ESCOs) to finance and implement projects
- Identify 'obvious' partners (e.g. big industry) to work with as a way to pursue low hanging fruit, demonstrate success and obtain buy in
- Small communities can combine resources to accelerate implementation
- Having a dedicated staff person to drive CEPs and energy projects forward is critical
  - Embedded energy managers have demonstrated success in Nova Scotia
- Community champions are needed to drive energy planning and implementation

### *Considerations for Communities in Nova Scotia Going Forward*

- Successful implementation depends on the uptake of programs
  - The County of Richmond Property Assessed Clean Energy program (PACE) was recently cancelled due to poor uptake
- Municipal program design can significantly influence energy projects
  - For example, when issuing a Requests for Proposal (RFP) for energy equipment procurement look beyond lowest cost alternatives and consider life-cycle costs. Energy efficient products may cost more at the onset but may last longer than alternatives and provide longer-term returns for communities

## **Participants**

Acadia University  
Annapolis County  
Antigonish County  
Town of Bridgewater  
District of Digby  
Ecology Action Centre  
Efficiency One  
Equilibrium Energy

City of Halifax  
Heritage Gas  
County of Kings  
LED Roadway Lighting  
Liteco  
Minas Energy  
Nedco  
Nova Scotia Community College

Nova Scotia Department of Energy  
QUEST Nova Scotia  
Simon Fraser University  
Solar Global Solutions  
Town of Wolfville  
Town of Yarmouth  
Union of Nova Scotia Municipalities

## Community Energy Planning: Getting to Implementation in the North

Coast High Country Inn, Whitehorse, Yukon, May 20, 2015



### Topics of Discussion

- Community energy planning in a northern context
- Integrating CEPs into everyday decision making
- Building support and capacity of CEPs in the north

### Key Takeaways

#### *Community Energy Planning in a Northern Context*

- This workshop focused on community energy planning in Nunavut, the Northwest Territories and Yukon
- Communities in the north are not connected to the national grid and therefore must produce their own energy or import diesel, propane or natural gas to fuel their communities. Energy security, supply and affordability are therefore key drivers for community energy planning in the north
- Risks associated with energy are well understood in the north and many communities are already feeling the effects of climate change
- Territorial governments are supportive of CEPs

#### *Integrating Community Energy Planning into Everyday Decision Making*

- Improved integration between decisions made at the territorial level and at the community level could improve implementation
  - Energy subsidies, which help keep energy prices more affordable, can act as a disincentive for switching to alternative, and typically cleaner and more reliable, energy sources
    - Liquefied natural gas presents an opportunity to tap into a fuel source that is less expensive and more reliable than diesel
    - Most housing in the north is territorially-owned, giving little incentive to residents to invest in energy efficient products
- Communication with communities is critical for gaining support for projects
  - Projects will not move forward without social license
  - Community engagement must take place in the primary language of the community
- Alaska has developed a regional approach to planning, based on regional energy opportunities and constraints. Plans are implemented via regional stakeholder advisory groups, which establishes accountability for implementation. The process has led to the successful implementation of conservation efforts and community-scale energy projects, helping the state avoid building costly capital projects
  - In the Yukon, communities have focused on community plans, rather than regional plans. Many communities have developed a corporate energy plan first, and then integrated community energy actions into corporate energy plans.

#### *Building Support and Capacity for Community Energy Planning in the North*

- High staff turnover is a challenge for moving plans forward in the north
- There is a need to training equipment operators to use new technologies
- Energy efficient products are often unavailable in northern communities, making it challenging to fully implement energy programs
- One of the greatest needs for transportation is finding alternatives transportation options for moving between communities in the north and for fly-in only communities
- Organizations like the Arctic Energy Alliance and the municipal associations can help to bring in skills needed to develop plans

### **Participants**

Alaska Energy Authority  
Arctic Energy Alliance  
ATCO - Yukon Distributor  
Biomass North Ltd  
Burwash Landing / Beaver Creek  
CANNOR  
City of Whitehorse  
Climate Change Secretariat

College - Yukon Research Centre  
Government of the Northwest Territories  
Department of Public Works and Services  
Government of Nunavut  
Government of Yukon  
NT Energy  
Pembina  
Town of Inuvik

Tipping Point Strategies  
Trondek Hwichen First Nation  
Urban Systems  
Williams Engineering  
Yukon Development Corporation  
Yukon Energy Corporation

## La planification énergétique communautaire au Québec

McGill University, Montréal, Québec, June 4, 2015



### Topics of Discussion

- The Québec context of community energy planning
- Energy pricing and CEP implementation

### Key Takeaways

#### *The Québec Context of Community Energy Planning*

- There are fewer perceived drivers for CEPs in Québec because electricity is clean and inexpensive
- Municipalities are interested in implementing community energy projects but there is not a clear signal from the provincial government to pursue CEPs
- Political commitment and supportive policies and programs are needed to advance community energy planning in Québec
- Québec could draw on lessons learned from British Columbia as both provinces have integrated electricity generation, transmission and distribution system operated by a crown corporation.

#### *Energy Pricing and CEP Implementation*

- In Québec, electricity costs are really low. In order to be viable, alternative energy projects often require subsidies, which can be unpopular
- Carbon pricing regimes can help drive the business case for CEPs

#### *Considerations for Québec Going Forward*

- Is there a potential to develop province-wide energy plans that can be used as a basis for community and neighbourhood scale plans?
- Industrial parks might be another appropriate scale for CEPs

### **Participants**

Centre des technologies du gaz naturel  
Climatisation et chauffage urbains de Montréal  
Coalition Canadienne de l'Énergie Géothermique  
Conseil du bâtiment durable du Canada  
DC PRO Engineering  
Econoler  
Gaz Métro  
La Fédération canadienne des municipalités

La fondation de la famille J.W. McConnell  
Ministère de l'Énergie et des Ressources naturelles  
Montreal Climate Action  
Phoenix Energie  
Poly-Énergie inc.  
Regroupement national des conseil régionaux de l'environnement  
Ville de Montréal  
Ville de Plessisville

## La planification énergétique communautaire au Québec

Université McGill, Montréal, Québec, Le 4 juin, 2015



### Sujets de discussion

- La planification énergétique communautaire au Québec
- Prix de l'énergie et mise en œuvre de la planification énergétique communautaire

### Éléments clés à retenir

#### *La planification énergétique communautaire au Québec*

- Au Québec, les éléments perçus comme favorisant la planification énergétique communautaire sont moins nombreux, puisque l'électricité est une énergie propre et abordable.
- Les municipalités souhaitent mettre en œuvre des projets énergétiques communautaires, mais la position du gouvernement provincial quant à la planification énergétique communautaire est floue.
- L'avancement de la planification énergétique communautaire au Québec passe par un engagement politique ainsi que des programmes et des politiques de soutien.
- Le Québec pourrait s'inspirer des constats tirés par la Colombie-Britannique : le système de production et de distribution d'électricité de celle-ci est lui aussi géré par une société d'État.

#### *Prix de l'énergie et mise en œuvre de la planification énergétique communautaire*

- Au Québec, le prix de l'électricité est très bas. La viabilité des projets d'énergie de remplacement dépend donc souvent de subventions, une façon de faire parfois mal vue.
- Les régimes de fixation des prix du carbone peuvent renforcer le bien-fondé de la planification énergétique communautaire.

#### *Considérations pour l'avenir québécois*

- Serait-ce possible d'élaborer des plans énergétiques provinciaux qui pourraient servir de base aux plans visant les collectivités et les quartiers?
- Les parcs industriels pourraient-ils faire l'objet d'une planification énergétique communautaire?

### **Participants**

Centre des technologies du gaz naturel  
Climatisation et chauffage urbains de Montréal  
Coalition Canadienne de l'Énergie Géothermique  
Conseil du bâtiment durable du Canada  
DC PRO Engineering  
Econoler  
Gaz Métro  
La Fédération canadienne des municipalités

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Phoenix Energie  
Poly-Énergie inc.  
Regroupement national des conseil régionaux de l'environnement  
Ville de Montréal  
Ville de Plessisville

# Community Energy Planning: Getting to Implementation in Alberta

Edmonton, Alberta, June 18, 2015



## Topics of Discussion

- The case for community energy planning in Alberta and approaches for CEPs
- A provincial approach to community energy planning

## Key Takeaways

### *The Case for Community Energy Planning in Alberta and Approaches for CEPs*

- There is strong interest from municipalities to develop and implement CEPs
- Champions are critical for moving forward to CEP development and implementation
  - The City of Edmonton's Energy Transition Strategy, which is data-driven and focused on mitigating risks in Edmonton, has garnered support from decision makers and offers a good model for other municipalities looking to develop and build support for CEPs
- There is an opportunity for improved dialogue and coordination between municipal staff and the real estate sector
  - Municipalities could work with real estate developers make buildings district energy-ready
  - The Canadian Gas Association CHP Working Group is preparing a case study about CHP to help clarify questions related to the technical aspects and the payback period of CHP projects

### *A Provincial Approach to CEPs in Alberta*

- Legislative approaches are needed which rethink and support a new energy future in Alberta
- Some suggested legislative changes to support CEP implementation include:
  - Providing resources to municipalities that are difficult to obtain (e.g. negotiating data sharing agreements with utilities and vehicle registration agencies)
  - Implementing energy efficiency programs, incentives and regulations (e.g. mandating energy efficiency components in capital projects financed by the province, or committing to building LEED buildings or implementing energy efficiency technologies to demonstrate success for the private sector market)
  - Relaxing the restrictions on property owners to export energy from micro generators
  - Developing requirements for CEP development
  - Examining options for using the Climate Change and Emissions Management Fund to drive conservation projects.
  - Consider the role of the province in drawing out the full costs and benefits of actions. Consider carbon pricing as an option for pricing externalities that are not accounted for in current energy prices
  - Leading by example

## **Participants**

Alberta Agriculture and Rural  
Development  
Alberta Council for  
Environmental Education  
Alberta Energy  
Alberta Energy Efficiency  
Alliance  
Alberta Innovates  
AltaGas Utilities Inc.  
ATCO Gas  
Athabasca University

Brookfield Residential  
Canadian Gas Association  
Carthy Foundation  
City of Edmonton  
City of Red Deer  
ENMAX  
Federation of Alberta Gas Co-  
ops  
FVB Energy Inc.  
Landmark Group of Builders  
Maine Consultants

Power Ecosystems Inc.  
Stantec  
Town of Black Diamond  
Town of Devon  
Town of Leduc  
Town of Morinville  
Town of Olds  
Town of Stony Plain  
Town of St-Paul  
University of Alberta

## Community Energy Planning: Getting to Implementation in Saskatchewan

Saskatoon, Saskatchewan, June 26, 2015



### Topics of Discussion

- Building the case for CEPs in Saskatchewan
- Implementing CEPs and energy projects in Saskatchewan

### Key Takeaways

#### *Building the Case for CEPs in Saskatchewan*

- Energy costs in Saskatchewan are very low, providing few incentives to consider community energy plans and projects. Additionally, there is little appetite for carbon pricing
- Saskatchewan is seeing more of a grassroots approach to community energy
  - o Communities want more opportunities to meet in person to share lessons learned and to build momentum for community energy projects
    - Several workshop participants expressed an interest in starting a QUEST Saskatchewan Caucus
  - o Some considerations from communities looking to develop a CEP include:
    - Monitoring and reporting progress is critical for maintaining ongoing support for energy plans and projects
    - Tie CEP to other municipal goals (e.g. housing, economic development, quality of life)
- There is a role for the provincial government to play. Some suggestions include:
  - o Enabling smart meters to obtain data
  - o Reviewing the Saskatchewan Cities Act to allow for tools such as Local Improvement Charges
  - o Examining legislative approaches for enabling the uptake of CHP and energy efficiency projects

#### *Implementing CEPs and energy projects in Saskatchewan*

- SaskEnergy is currently leading the administration of natural gas energy efficiency programs including the Commercial Boiler Program and the Commercial HVAC Program. SaskEnergy has partnered with SaskPower on efficiency programs, including delivering an Energy Efficiency Rebate for New Homes.
- Integrated Designs Inc., based in Saskatchewan, is leading the implementation of Net Zero developments across Canada
- Municipalities can consider Energy performance contracts (EPCs) to finance and implement energy projects
  - o EPCs shift technical and financial risks away from communities

### **Participants**

CDEM  
 City of Prince Albert  
 City of Saskatoon  
 Conseil de la Coopération de la Saskatchewan  
 Eco Smart Developments  
 Federation of Canadian Municipalities  
 First Nations Power Authority of Saskatchewan  
 MIE Energy  
 Government of Saskatchewan Ministry of Education  
 Government of Saskatchewan Ministry of Environment  
 Mitsubishi Hitachi Power Systems Canada

New North – SANC Services Inc.  
 Prairie Wild Consulting  
 Rock Paper Sun  
 Saskatchewan Association of Rural Municipalities  
 Saskatchewan Urban Municipalities Association  
 Saskatoon Light & Power  
 SaskEnergy  
 SaskPower  
 Sunridge Residential  
 University of Saskatchewan