

COMMUNITY ENERGY PLANNING: GETTING TO IMPLEMENTATION IN NEW BRUNSWICK

WORKSHOP SUMMARY REPORT



DECEMBER 2015

Project Supporters



THE J.W. MCCONNELL
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Workshop Overview

On November 24 and 26, 2015, the QUEST NB Caucus, in partnership with the *Community Energy Planning: Getting to Implementation in Canada* initiative, hosted two workshops focused on Community Energy Plan (CEP) implementation in New Brunswick (NB) communities.

The workshop presentations can be found here: <http://gettingtoimplementation.ca/category/resources/workshop-resources/>

Workshop participants in the City of Saint John on November 24 include:

- | | | |
|-----------------------------------|---|--------------------------------------|
| - Coastal Transport | - Village of McAdam | - Town of Quispamsis |
| - Change Your Corner | - Mech Power | - Town of Riverview |
| - City of Charlottetown | - City of Moncton | - City of Saint John |
| - Town of Dalhousie | - New Brunswick
Community College | - The Saint John Energy
Committee |
| - City of Fredericton | - The New Brunswick
Department of
Environment and Local
Government | - Saint John Energy |
| - The Gaia Project | - NB Power | - Siemens Canada |
| - Town of Grand Bay-
Westfield | - Town of Perth-Andover | - Town of St. George |
| - Hanwell | - QUEST New Brunswick | - Town of Stratford |
| - Halls Creek
Development | | - Town of Summerside |
| - Hardman Group | | - Town of Sussex |
| | | - Thoughtful Dwellings |

Workshop participants in the City of Bathurst on November 26 include:

- Ville de Bathurst
- Commission de services régionaux Chaleur
- Ville de Dalhousie
- Énergie NB
- Village de Petit-Rocher
- Groupe Savoie
- QUEST NB
- Roy Consultants
- YHC Environnement

What follows is a summary of the presentations and interactive discussions that took place during the workshops.

CEP Activities in New Brunswick

CEPs provide a pathway for communities to become Smart Energy Communities. Smart Energy Communities improve energy efficiency, enhance reliability, cut costs, and reduce greenhouse gas emissions. They integrate conventional energy networks (electricity, natural gas, district energy, and transportation fuel) in communities to better match energy needs with the most efficient energy source; integrate land use; and harnesses local energy opportunities. Smart Energy Communities can be characterized by 6 technical principles and 6 policy principles. Read the principles at <http://www.questcanada.org/principles-smart-energy-communities>

There is progress being made on CEP development and implementation across New Brunswick (NB):

- There are 33 communities in NB that are members of the Federation of Canadian Municipalities Partners for Climate Protection (PCP) Program.
- Fredericton, Edmundston, Bathurst and Bouctouche, representing 11 percent of the population in NB, have PCP Local Actions Plans (LAPs). These LAPs contain many of the same components of a CEP.
- YHC Environnement is nearing the completion of energy and emissions inventories, and local action plans, in 17 communities in NB
- There are many community energy projects underway in NB that are not yet part of a CEP. Table 1 lists some examples of municipal actions and community-wide actions. In some cases communities are working solely on corporate energy initiatives and have indicated an interest in expanding activities to focus on community-wide energy initiatives.

Table 1 – Examples of Community and Corporate Energy Actions in New Brunswick

Community Name	Community-Wide Actions	Corporate Actions
Bathurst	<ul style="list-style-type: none"> Achieved PCP Milestone 5 in 2014 	<ul style="list-style-type: none"> Completed energy efficiency upgrades in municipal buildings including the KC Irving Regional Centre Established monitoring for measures related to buildings, vehicle fleets, street lights, water/sewage and waste
Dalhousie	<ul style="list-style-type: none"> Examining micro-hydro opportunities at the Charlo Dam 	<ul style="list-style-type: none"> Piloted LED street light program Installed an electric vehicle charging station Signed an agreement with Efficiency NB committing to reduce energy consumption
Fredericton	<ul style="list-style-type: none"> Developed a PCP LAP in 2010 and tracking completed until 2012 Launched the Green Matters initiative focused on sustainability in Fredericton 	<ul style="list-style-type: none"> City-wide energy management network for monitoring and re-commissioning energy projects Built strong relationships with energy distributors, resulting in the implementation of a number of load shedding and energy efficiency measures
Moncton	<ul style="list-style-type: none"> Provided free public transit during Environment Week Increased number of bike lanes and trails 	<ul style="list-style-type: none"> Started a traffic signal optimization program Installed an electric vehicle charging station at City Hall Assessed biomass heating potential in new capital project
Perth Andover	<ul style="list-style-type: none"> Completed over 100 residential energy audits and energy efficiency retrofits Conducted public outreach and education on the benefits of energy conservation Created the Swim and Skate for free program which provides residents with free access to recreational activities funded by the savings from energy efficiency projects 	<ul style="list-style-type: none"> Signed a beneficial partnership agreement with Efficiency NB to achieve Energy Smart objectives Installed LED street lights
Saint John	<ul style="list-style-type: none"> Business and technical analysis and pre-feasibility study completed for the implementation of a Green Thermal Utility fueled by sea water cooling, raw sewage, industrial waste energy and/or waste heat from buildings 	<ul style="list-style-type: none"> Energy management plan for City fleet Conducted over 90 energy audits and retrofits

CEP Opportunities

There is a significant opportunity to develop implementable CEPs across NB, including upgrading the existing PCP LAPs. Some of the foundational pieces are in place to enable greater development and implementation of CEPs:

- The provincial government is becoming increasingly supportive of renewable sources of electricity, including from municipalities – CEPs can help municipalities identify projects that align with new regulation
 - For example the draft Locally-owned Renewable Energy Projects that are Small Scale (LORESS) (Production local d'énergie renouvelable à petite échelle) regulation, set to come into effect in early 2016, has been established to procure 80 megawatts of local renewable power
- NB Power is also becoming increasingly supportive of CEPs and community energy projects
 - NB Power has signaled an openness to develop new partnerships with community stakeholders to advance community energy projects
 - NB Power has administered a Net Metering program which has seen strong uptake
 - There has been strong uptake of solar projects in NB, despite longer than average payback periods compared to other parts of Canada
- There is consensus that technology and customer needs are changing rapidly and CEPs provide an opportunity for community stakeholders to innovate and integrate
- A CEP can also help tailor solutions for communities based on their values and available resources
- There is a strong value proposition to compliment NB Power's energy mix with biomass and alternative sources of generation. Communities should consider QUEST's policy and technical principles as they undergo the development of a plan: <http://www.questcanada.org/principles-smart-energy-communities>

CEP Challenges

There are some challenges that are preventing the development and implementation of more CEPs in NB.

- The first step for developing a CEP is an energy inventory, including electricity, natural gas, other fuels, transportation, waste and water. There is currently no standard approach for developing inventories in NB. There may be a role for the provincial government to play in establishing these standards.
- It is not clear among community stakeholders if and how land use policies might enable stronger uptake of community energy projects. For example, there is uncertainty about whether Local Improvement Charges can be used to finance energy projects.
- NB has many unincorporated towns and regional service districts – these regions would benefit from CEPs but may not have the capacity develop CEPs in a traditional approach due to capacity constraints. In some cases, these communities might not have the time or skills to develop and implement a CEP. Alternative models for CEP development and implementation must be considered for small, rural and remote communities in NB.
- There is a large proportion of households living below the poverty line and on fixed incomes. As a result, utilities are limited in their ability to increase rates to pay for technologies that might be supportive of energy efficiency and distributed generation.
- NB Power is aware that there is a need to shift load during peaks to avoid having to install new and costly generation however the mechanisms to shift demand are still being developed and tested. A CEP may provide communities an opportunity to participate in reduce and shift demand..

Considerations for Implementation Going Forward

Communications

- Identify political and community champions to advocate for community energy planning
- Use key messages that can obtain buy-in and support throughout election cycles
- Engage community stakeholders early and in a meaningful way
 - Community groups might be able to help disseminate the message and access funding
- Ensure staff from other departments within the municipality feel a sense of ownership over the CEP
- Identify quick wins that might help garner the support needed to develop a CEP
- Ensure the people operating the buildings and technology understand their role

Funding

- Exploring as many grant opportunities as possible (e.g. provincial, utility and national programs)
- When calculating the feasibility of a project focus on return on investment in addition to pay back period
- Consider all possible community partnerships

Cultural Change

- Civic engagement is critical for tapping into conservation opportunities and is already underway in some communities
- Conserving energy and changing habits should be perceived as fun. Some ways to do this include embedding energy consideration into cultural activities as well as encouraging competitions among neighbours.
 - For example: the Town of Perth Andover Swim and Skate for Free program redistributes energy savings from community-wide conservation efforts to provide free swimming and skating for the community.

Implementation Tools

- Bylaws can be a powerful tool for implementation. Communities can consider how to embed energy into bylaws and other local land use policies to encourage greater uptake of community energy projects.
- Communities can also consider how design guidelines can be upgraded to include considerations about building orientation.