



Mitigating Climate Change with **Smart Energy Communities**

Presentation to Local Prosperity conference

November 4, 2016

Eddie Oldfield, QUEST NB Caucus Chair



> Who is QUEST?

- QUEST is the leader in advancing **Smart Energy Communities** that reduce GHG emissions, lower energy use, drive the adoption of clean technologies, and foster local economic development in Canada
- National network of over **10,000 individuals & organizations**
 - 8 Provincial & Regional Caucuses from coast to coast to coast
 - All levels of government
 - Utilities
 - Energy service providers
 - Building and land owners and operators
 - Clean technology companies



> What are Smart Energy Communities?



1. Take Advantage of Energy Efficiency

- They capitalize on the full potential of energy efficiency & conservation



2. Integrate Conventional Energy Networks

- They integrate electricity, natural gas, district energy, and transportation fuel networks



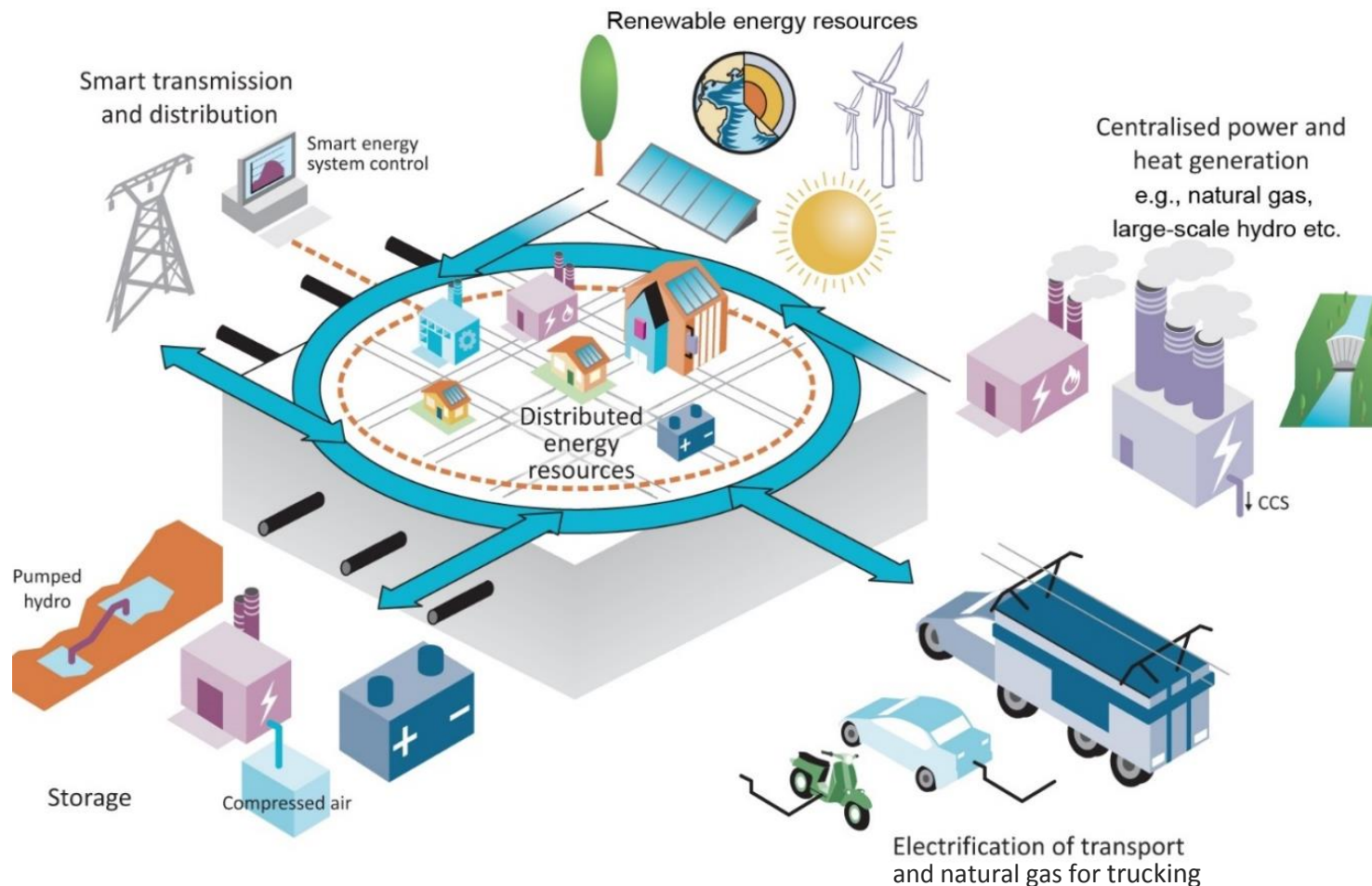
3. Harness Local Energy Opportunities

- They find opportunities tailored to their community

4. Focus on Land Use Planning

- They integrate land use, because poor land use decisions result in energy waste

> Smart Energy Communities



Source: IEA, 2014 & Government of Canada

> QUEST Technical Principals

- Improve efficiency
- Optimize exergy
- Manage heat
- Reduce waste
- Use renewable energy resources
- Use energy delivery systems strategically

> QUEST Policy Principals

- Match land use needs and mobility options
- Match energy options to local context
- Send clear and accurate price signals
- Manage risks and be flexible
- Emphasize performance and outcomes in policy and regulations
- Pursue policy and program stability

> Let's Get to the Issue

- In Atlantic Canada Communities account for **58%** of energy use and **54%** of GHGs
- Action at the community level is required to meet NB energy & climate objectives – but, they can't do it alone
- The Province has an important role to support communities become **Smart Energy Communities.**

> The Solution

- Advance **Smart Energy Communities**
- Smart Energy Communities can be facilitated through the implementation of a **Community Energy Plan (CEP)**

> What is Community Energy Planning?



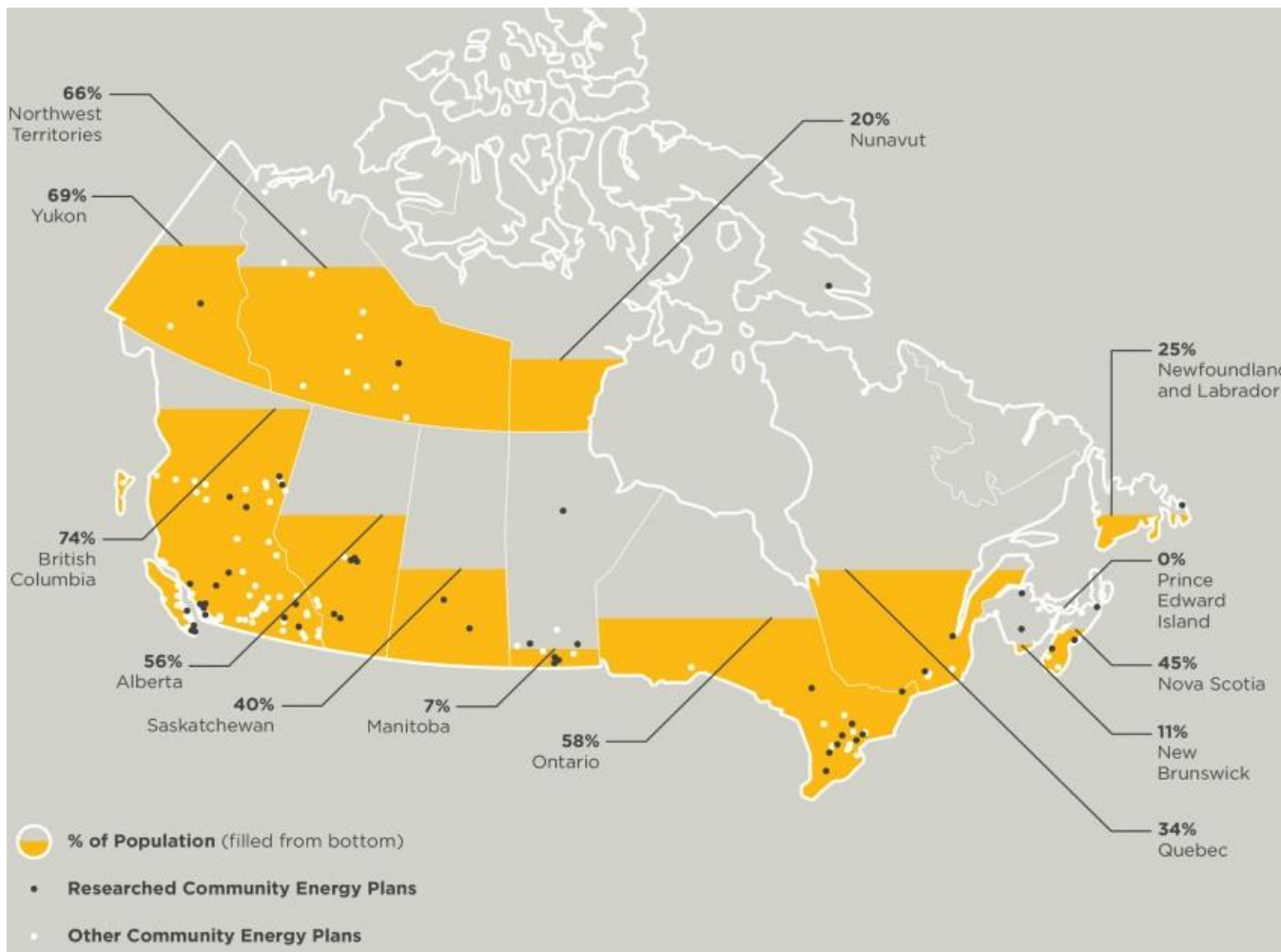
Community energy planning defines local energy priorities with a view to:

- Driving economic development
- Managing future risks and enhancing resilience
- Improving energy efficiency
- Cutting GHG emissions

> What are the Benefits of a CEP

- Our research shows – by **accelerating CEPs** provinces & territories can more effectively:
 - Reach energy conservation and **GHG emissions reduction** targets
 - Drive **economic development** and diversification
 - Accelerate alternative energy **resource development**
 - Achieve local energy **affordability, security and resilience**
 - Foster **innovation** and clean-technology development
 - Improve the **integration** of energy planning among provincial and territorial and local stakeholders

> Who Has a Community Energy Plan?



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

Source: GTI, National Report on Policies Supporting Community Plan Implementation. February 2015.

> It's Not Just About Climate Change

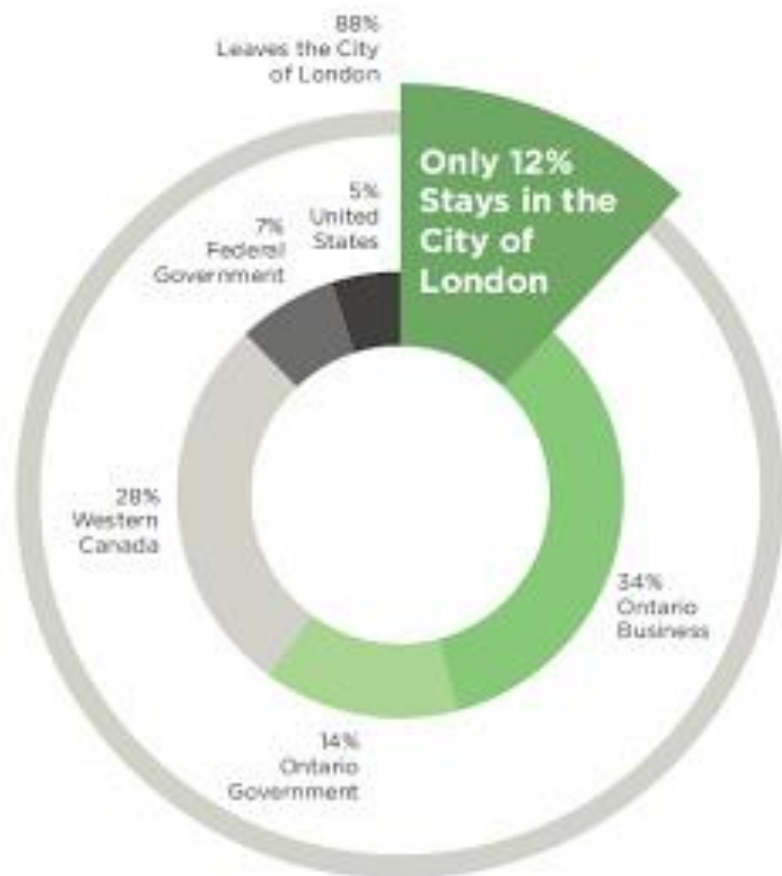
The Average Cost of Energy in Canadian Communities

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

Source: National Report on Policies Supporting Community Energy Plan Implementation. July, 2015.

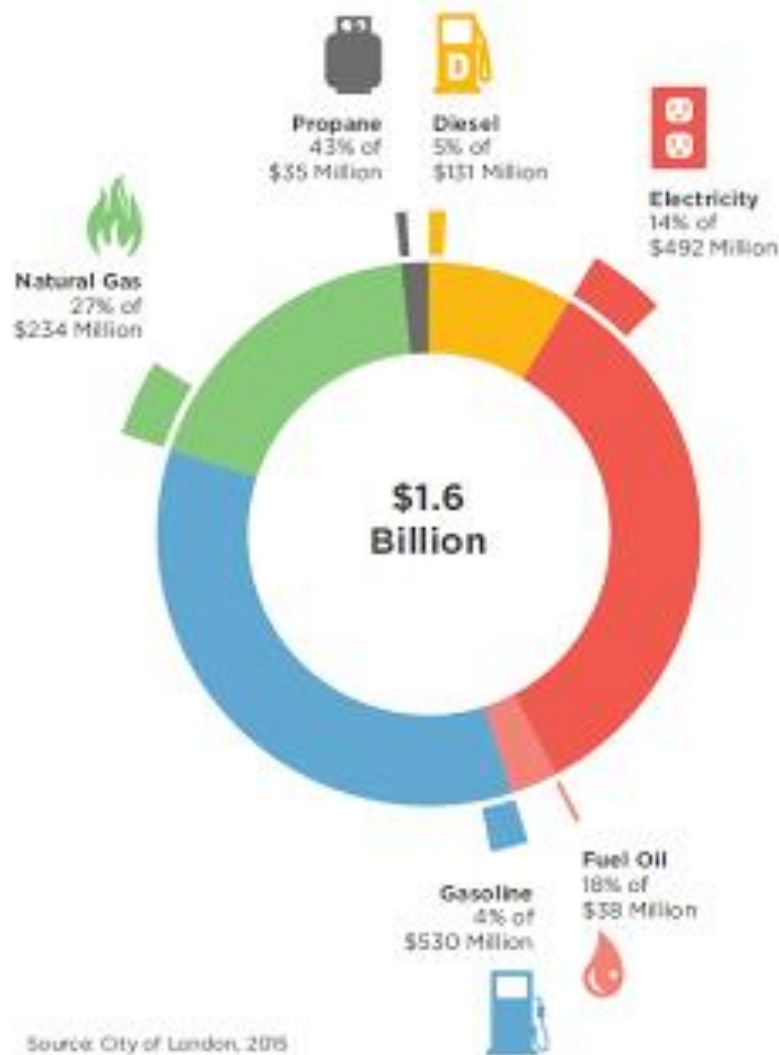
> CEPs Can Reduce Energy Costs

Figure 4 – Destination of City of London Energy Expenditures as Percentage of \$1.6 Billion Total



Source: City of London, 2015

Figure 5 – Energy Dollars Staying in City of London Ontario Economy by Fuel Type



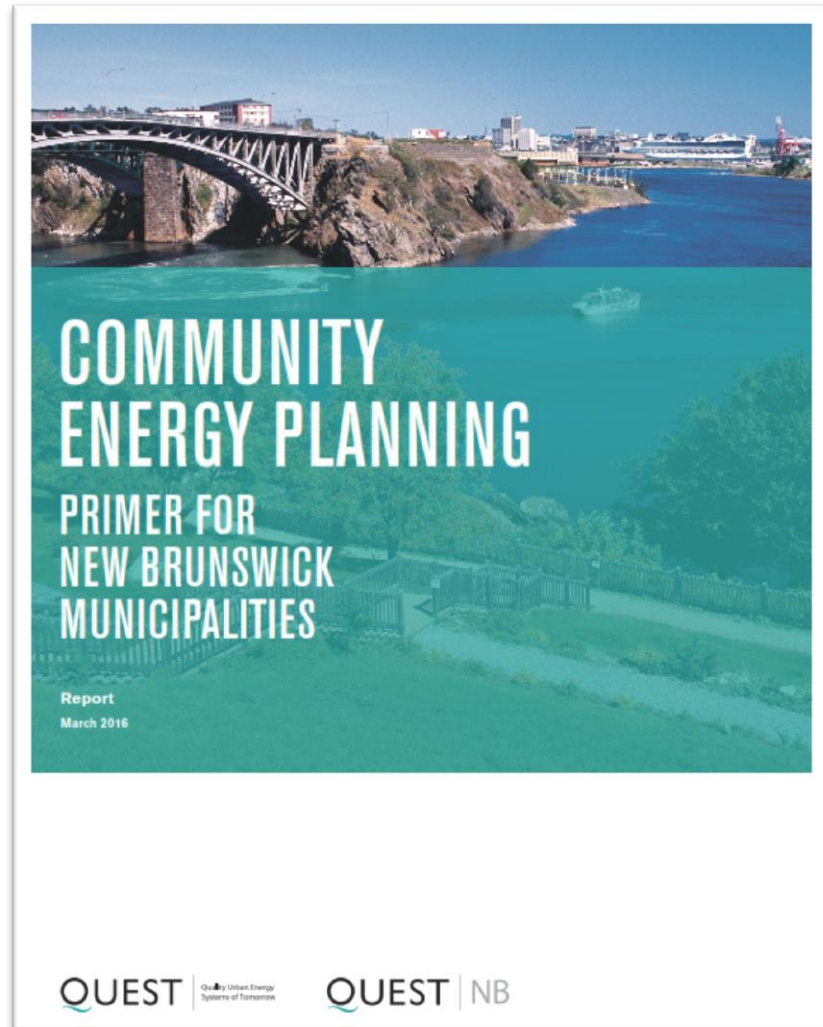
Source: City of London, 2015

> Who is QUEST NB

- **Current Chair:** Eddie Oldfield
- **40+ Participants** – including energy utilities, municipal and provincial governments, NBCC, UNB, NGOs, private sector, etc.
- **NB Power and NB Environmental Trust Fund** – supports QUEST NB, delivery of CEP Primer, workshops, webinars, and provincial inventory
- QUEST NB **plays the connector role** to bring together municipalities, utilities & energy service providers & other key stakeholders to talk about CEPs, and to align with provincial (e.g. LORESS) and national programs.

> Community Energy Planning Primer for New Brunswick Municipalities

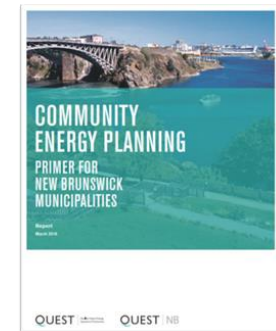
- QUEST NB – leading the way on Community Energy Planning
- 2015 NB Primer available to all NB municipalities in both official languages



> QUEST NB Success in 2015

Advancing Smart Energy Communities in NB Initiative

- Support from the NB Environmental Trust Fund and NB Power
- Hosted 4 CEP workshops across NB
- Published the **CEP Primer for NB Municipalities**
- Hosted an 8 part CEP Webinar Series
- Published all resources on the QUEST website



Spin off

- Improved collaboration between government, utilities, private sector, etc
- Support to UMNb to help 11 municipalities develop CEPs
 - Saint John, Grand Bay-Westfield, Quispamsis, Rothesay, Sussex, Petitcodiac, Rexton, Dalhousie, Perth-Andover, Woodstock, and McAdam.
- 42 municipalities are now involved in The FCM Partners for Climate Protection Program with many advancing CEPs to achieve Milestones 3 - 5

> QUEST NB Projects in 2016

- 2016 **Advancing Smart Energy Communities in NB** Initiative
 - engaging municipal & regional authorities to learn about community energy planning, exchange knowledge & collaborate on local initiatives
 - Hosting 4 CEP Regional workshops
 - Sussex, Miramichi, Perth-Andover & Campbellton
 - Already held: Saint John, Bathurst, Dalhousie, Sackville
 - 2016 CEP Webinar Series
 - Developing an inventory of CEPs in NB

> In a Nutshell

- The Province **Needs Communities** to achieve it's objectives
- Every NB community has to be part of the solution!



Eddie Oldfield
Chair
QUEST NB Caucus

eoldfield@questcanada.org

www.questcanada.org/nb



> Further Resources

- QUEST Website: www.questcanada.org
- GTI Website: www.gettingtoimplementation.com
- NB Workshops, Webinars, and CEP Primer:
www.questcanada.org/nb