

**LOCAL GOVERNMENT  
CAPACITY ASSESSMENT  
FOR  
COMMUNITY ENERGY AND  
EMISSIONS PLANNING**



Prepared for:

**BC Hydro Sustainable  
Communities Group**

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*Appendices have been included as a separate document. They include interview tools and interview transcripts (not to be shared without consent).*

## 1.0 Executive Summary

Interest in community energy and emission planning is rapidly growing across BC driven by both policy change and genuine interest in climate protection, sustainability and energy security. Even before the groundswell of interest emerging out of the Premier's ambitious climate change commitments, there was recognition by practitioners that successful planning and implementation requires significant local capacity building. Local governments have the capacity to be excellent delivering agents on the ground. If local governments are to play a significant role in helping the province achieve its ambitious greenhouse gas reduction targets, and BC Hydro achieve its ambitious DSM targets, communities across the province require further capacity development.

### **Project Objectives and Methodology**

This project has two primary objectives:

- Identify local government capacities necessary for developing and implementing community energy and emissions plans, with an emphasis on knowledge and skills development; and
- Preliminarily identify strategies for building these local government capacities.

The findings were drawn from thematic analysis of semi-structured interviews of local government staff in early and advanced stages of community energy and emission planning, and experienced community energy advisors. This research is informed by a literature review of complementary studies.

Developing meaningful programs to support fulfillment of the Climate Action Charter commitments<sup>1</sup> and Local Government Act requirements to develop and implement targets, policies and actions in OCPs and RGSs depends on critical research. This project was conducted for BC Hydro's Sustainable Communities Group to inform their community energy planning program development. The findings, however, can also be used by provincial government departments, educational institutions, and other agencies serving local governments and communities.

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<sup>1</sup> Climate Action Charter commitments ostensibly involve carbon neutral local government operations by 2012 and development of complete, compact, energy efficient communities.

## Key Findings and Capacity Building Opportunities

While the research focuses on skills and knowledge, interviewees could not over emphasize the importance of other capacities, e.g.: financing, staff time, traditional organizational design. These latter priorities are discussed in lesser detail. Knowledge and skills, moreover, are not sufficient to make significant headway in advancing sustainable energy and climate protection.

A primary objective in designing educational programming is to avoid a ‘one-size fits all’ approach. Design educational programs with multiple audiences in mind. Rural and urban requirements are different. So are council and staff requirements.

The research identified **six key constituencies** with subtly different skill and knowledge needs.

1. Mayor and Council
2. Senior Management Team
3. CFO and Finance Department
4. “Energy” Program Managers: Engineers and Planners
5. Communications and Outreach Staff
6. Building and Development Line Staff: Permit Clerks and Inspectors

**Five skill and knowledge clusters** with varying depths or intensities were identified. Preliminary content for these clusters was explored in more detail:

1. Energy and Emissions knowledge – Introductory and Advanced Levels
2. Business Case and Triple Bottom Line Evaluation – Introductory and Advanced Levels
3. Strategic Management – Introductory and Advanced Levels
4. Communications and Engagement
5. Green Building and Development 101

Potential delivery approaches and partners to meet these knowledge and skills requirements was preliminarily explored.

Key capacity issues arising within the context of different **community sizes** included:

- Staff time and funding for small communities;
- Leadership and organizational alignment for medium and large communities;
- Partnerships with local governments for community outreach in regional districts.

## 2.0 Literature Review

Capacity building programs for community energy and emissions planning are at an early stage of development. Several modest and important research initiatives examining local government capacity needs were reviewed to inform this project.

### Capacity Themes

From this literature review, six major capacity themes were identified as the underlying barriers and breakthroughs for advancing community energy and emission planning goals. A seventh theme was added and all theme descriptions refined and enhanced in response to the interviews.

**Table 1: Final Capacity Themes from Literature and Interviews**

Theme	Description
1. Internal Energy and Emission Knowledge	Energy management, local/low-carbon energy supply,
2. Funding and Finance Knowledge and Skills	Knowledge of /access to external funding, inadequate funding, and internal financial analysis and policies
3. Technical and Strategic Support	Third party guidance, training, tools
4. Staff time and Responsibility	Inadequate staff time to devote to this priority, sheer number of orphan projects, and size of jurisdiction
5. Leadership and Buy-In	Council and senior management interest/support/knowledge, departmental priorities, public support
6. Community Outreach and Engagement Skills	Partnerships, public engagement, external communication and education
7. Internal Governance / Organizational Alignment	Internal engagement, integration across government into traditional activity (practices, budgets, policies...)

### Literature Summary

#### *Business Case Supporting Energy Planning Implementation – Elevate Consulting – 2006*

- Research, including a series of local government focus groups, was conducted in order to answer the question, “How can senior governments and other relevant support agencies work together more effectively to assist local governments across BC with undertaking energy, greenhouse gas, and/or air quality planning and implementation?”

- An appreciation was gained for how energy-based planning processes are often inadequately funded, unnecessarily cumbersome, inconsistently applied and not properly positioned to be fully integrated and implemented through traditional planning at the local level.
- Two principle strategies were recommended:
  - Enhanced program coordination and integration, notably in the form of an integrated, high profile ‘First Stop’ information resource centre with dedicated staff qualified to directly assist local governments. Online resources would include directories of funding programs and relevant professionals, baseline inventory data, planning ‘toolkits’, business case expertise and best practices.
  - Regionally supplied expertise and training for local government staff, including: workshops and training sessions - technical and non technical - in areas such as project management, inventories, planning, partnerships; Technical, economic, financial, legal and social marketing support for local governments; Establishment of peer networks.

### ***Energy Planning Survey – CEA – 2006***

- In 2006 47 local governments indicated a lack of funds as the major barrier to energy planning. Tools and support for funding guides and assistance (technology guides, case studies and on-the-ground assistance) were considered highest priority. (Note: Since 2006 the province and utilities have introduced a number of funding initiatives to begin to address this.)
- Adding energy targets to OCPs and bylaws was identified as potentially useful measure. (Note: Since 2006 the province has advanced this agenda with Bill 27 and new building codes)
- The other major barrier identified was lack of staff time. This is often directly related to funding but can also be related to organizational priorities/direction.
- Other barriers identified:
  - Cost-effectiveness of actions
  - Lack of knowledge by council or staff
  - Perceived risks of new technologies
- Lack of council interest was *not* considered a major barrier

### ***Green Developers Round Table – Smart Growth BC – 2007***

- In 2007, Green Developers from across BC met at the Smart Growth Forum in Victoria. They had a closed door meeting where they discussed the challenges of advancing more sustainable developments within the policy context created by local governments, regional districts and the Province.
- “Municipalities are not getting green design” is a major finding.
- Developers often seeking out their own energy production – geo-exchange etc. These end up being incentives for their buyers. The businesses are creating incentives for them to use them over traditional energy sources.

- Most challenging element is convincing the RDs and Municipal govt that the bylaws need to be changed.
- Local governments and the province are obstructing energy innovation in design.
- Development process is slowed down if you want to build or do something that is different from the norm. The Approval process is tedious and requires specialized funding.

### *Energy Planning Survey – CEA – 2008*

- In 2008, 49 local governments indicated that:
  - Lack of funds and staff time were still large barriers to energy planning (as in the 2006 survey).
  - Tools and support for funding guides and assistance (technology guides, case studies and on-the-ground assistance) were considered highest priority
  - Along with learning opportunities for renewable energy.
- 84% were very interested in education and training for staff and elected officials:
  - 65%-71% wanted to learn more about certain renewable energy technologies. In order of interest: heat recovery (e.g. wastewater treatment plant), district energy, ground/air/water source heat pumps, solar water/space heating ;
  - 90% were interested in learning more about different options for ownership and operation of local energy utilities, with 63% interested in local government ownership with private sector operation.

### *BC Hydro Community Energy Plans Research – QRA Inc. – 2008*

- In 2008 a community energy planning focus group of local government leaders, consultants and developers was conducted for BC Hydro.
- Top barriers to energy planning, most notably for smaller communities, were identified as:
  - Community and council support – the public could not see the cost-effectiveness of energy planning, payback was too long-term. Subsequently, council support was affected by the lack of public support
  - Priority-setting in the face of immediate issues that municipalities must address
  - Funding
  - Lack of knowledge
  - Effectiveness of building bylaws
- Key factors to success:
  - Cooperation – multiple departments, multiple jurisdictions
  - Community engagement
  - Realistic goals, deadlines, focused governance and informed leadership
  - Energy planning built into asset management/infrastructure reporting
  - Funds to build a guiding team
  - Catalyst projects (for community buy-in)

Over and above capacity themes that were identified in the literature review and enhanced during the interviews, this previous research can help inform program design. Some of those lessons include:

- A basic knowledge of climate change and sustainable energy catalyzes elected official and senior management interest in this agenda. Political and senior management champions are decisive in making progress.
- While still in their infancy, there is already a range of financing and educational programs out there. Strategic coordination amongst programs can reinforce objectives, create synergies, and reduce confusion and overhead for local governments.
- While new local government policies, programs and projects are essential, existing local and provincial policies, programs and projects require some adjustment in order to effectively manage energy and emission growth. Many existing practices are undermining progress.
- Staff with a clear and ongoing mandate to energy and emission management is critically important to the long term viability and success of action plans. A lack or absence of staff with an ongoing energy and emission mandate is a barrier to success.

### 3.0 Interview Methodology

This research was conducted as a qualitative analysis of 11 ethnographic semi-structured phone interviews from April 1<sup>st</sup> until April 30<sup>th</sup>, 2009. The interview tools (Appendix A) were developed using a mixture of thematic analysis (Kerlin, 1998) and Appreciative Inquiry (Cooperrider & Whitney, 2005). Thematic analysis was used to categorize internal capacity needs as identified by the literature review (Table 1). These capacities helped structure the interview as points for further discussion.

Appreciative Inquiry methodologies are built to support the collection of “best practices” from the respondent. These methods also support the interviewee in expressing how they overcame challenging barriers, and thus help identify what bridges were needed to react positively to those challenges.

#### Interviewee Selection

The 11 interviewees provided their expertise on a voluntary basis. They represented a diversity of professions and geographic locales and can be separated into two constituencies:

1. Energy and emission planning professionals supporting local governments, and
2. Staff from engaged local governments.

BC Hydro’s Sustainable Communities’ Senior Key Account Manager was actively involved in the nomination and selection of these interviewees.

Three energy and emissions planning professionals were selected from private sector/non-profit organizations who have had expertise in advising communities across British Columbia (Table 2). These experts were chosen to represent the agencies and organizations that support local governments and already have educational or community outreach projects occurring.

**Table 2: Community Energy Consultants**

Consulting Company	Interviewee Position
Community Energy Association	Manager, Community Outreach and Strategy
The Sheltair Group	Senior Environmental Engineer
Whistler Centre for Sustainability	Strategic Energy & Emissions Manager Whistler

Similar to the planning professionals above, we selected eight local government staff with experience in advancing energy and emissions planning in their district or local government (Table 3). These interviewees were further characterized by being either a) already actively engaged in community energy plans, or b) actively starting a community energy planning process. The interviewees represented a diversity of local government positions and size:

**Table 3: Local Government Interviewees<sup>2</sup>**

Local Government	Interviewee Position	Representation
Metro Vancouver	Senior Engineer, Policy and Planning	Regional district
Peace River Regional District	GM of Development Services	Regional district
District of Ucluelet	Director of Planning	Small local government
Village of Harrison Hot Springs	CAO	Small local government
District of Langford	Deputy City Planner	Medium local government
City of Prince George	Environmental Manager	Medium local government
City of Surrey	Senior Planner	Large local government
District of North Vancouver	Director of Community Development	Large local government

## Data Analysis

Each interview lasted approximately one hour and was recorded as electronic notes (see Appendix B). Using thematic analysis, recorded notes were compared to the six major themes identified in the literature review (Table 1) with an emphasis on 1.) Internal Energy & Emission Knowledge, and 2.) Finance Knowledge and Skills. Themes were refined to strengthen alignment with the interview data. Given its dominance in the interviews and tangential reference in the literature, an additional theme was developed: Internal Governance and Organizational Alignment.

The findings were then separated into knowledge and skill clusters, organized by key constituency. Additional capacities were organized by community size. Informed by interviewees and a deep knowledge of the BC local government sector, delivery approaches and partners were identified to address the skill and knowledge priorities for the key local government constituencies. This preliminary analysis was groundtruthed and supplemented in an online survey with all the interviewees.

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<sup>2</sup> Written feedback was also received from Judith Cullington, Councillor, City of Colwood.

## 4.0 Skills and Knowledge: Capacity Building Priorities

Local government is not a homogenous group. The research identified **six key constituencies** with subtly different skill and knowledge needs:

1. Mayor and Council
2. Senior Management Team
3. CFO and Finance Department
4. “Energy” Program Managers: Engineers and Planners
5. Communications and Outreach Staff
6. Building and Development Line Staff: Permit Clerks and Inspectors

While not all local governments had some of these specialized staff, it is the typical function of these constituencies that was important. For example, communications staff typically designed, delivered or reviewed all communications and outreach for the general public. In some local governments line departments do all of this work. In such a situation, it is the communications function that would be important for a line department to consider.

**Five skill and knowledge clusters** with varying depths or intensities were identified:

1. Energy and Emissions knowledge – Introductory and Advanced Levels
2. Business Case and Triple Bottom Line Evaluation – Introductory and Advanced Levels
3. Strategic Management – Introductory and Advanced Levels
4. Communications and Engagement
5. Green Building and Development 101

The key constituencies each have different skill and knowledge requirements selected from this list.

A variety of effective **delivery approaches** were preliminarily explored. With significant resources, it *might* be possible to develop an extensive new program to build all this capacity across all these key constituencies in all local governments. However, like a successful energy and emission management program, the principle of **integrate over initiate** helped inform potential approaches and partners.

There are numerous well-established, educational programs addressing complementary skills and knowledge with immense credibility within their constituency. Integrating energy and emission

knowledge into these programs increases their relevance, and critically strengthens the content that is already being delivered; community energy and emission management, after all, involves a subtle but substantively different approach to governing, planning, and implementing urban design. Integration is more cost effective and increases the likelihood that staff with limited time and professional development support will acquire the knowledge. Lastly, delivering different elements and sharing different perspectives of this *new* knowledge in a variety of fora, will reinforce the learning.

At the same time, given the breadth, depth and ongoing demand for building skills and knowledge, it is likely that some new programs will be developed. Some preliminary thoughts on how they could be delivered are articulated.

## Skills and Knowledge Content Development: Opportunities

The content for the skill and knowledge clusters is outlined below. The following section then explores the unique skill and knowledge requirements according to the key constituency and how it can most effectively be delivered.

### 1. Energy and Emissions Knowledge

While energy and emissions activity cuts vertically across and horizontally through all local government departments, few staff or elected officials have ever been required to think deeply about energy and emissions. Nor have many staff or elected officials been required to think about the vulnerability of their community and public infrastructure to climate change, or the implications of potential energy spikes for transportation and buildings. When this knowledge is acquired, and staff and council begin to see the opportunity for strategic, long-term infrastructure investment and how climate protection and sustainable energy dovetails other community priorities, the foundation for a new agenda is laid. Key constituencies have different depths of knowledge and skills in this cluster, thus an introductory and advanced level.

#### Introductory level content:

- understanding role of energy & emissions, and climate in community
- target setting and precedents
- key energy sources and sinks in community – e.g. opportunities

#### Advanced level content:

Introductory content plus:

- understanding atmospheric stability
- role energy plays in corporate operations and community wide activity
- externalized costs and triple bottom line intro
- integrated land use & transportation planning

- for waste heat recapture
- co-benefits on livability, health and economic development, infrastructure costs, etc.
- features of low carbon / sustainable energy communities
- strategic steps for managing energy & emissions
- energy & emissions planning processes & best practices
- big picture - several big strategic wins for community
- active transportation opportunities
- rich appreciation of co-benefits and the greatest local opportunities to dovetail climate and energy with other community priorities
- calculating energy use for different development scenarios
- inventory tools, understanding baselines
- energy management & offsets (carbon sinks vs. credits)
- energy mapping for different development scenarios
- example frameworks of action
- renewable energy technologies
- basic local energy utility design, governance, management options
- approaches to reduce community energy use and promote renewable energy infrastructure
- understanding of local government authority, energy and emissions policy potential
- understanding benchmarking

## 2. Business Case and Triple Bottom Line Evaluation

Understanding and developing business cases for energy and emission management as well as more integrated triple bottom line rationales for taking action were top knowledge requirements. Most interviewees appreciated that supporting premium efficiency buildings, facilities and neighbourhoods is strategic, but they don't necessarily understand the financial analysis or innovative financial tools to make it happen. Introductory or advanced knowledge and skills in this area is critical for advancing a meaningful local agenda.

### Introductory level content:

- life cycle costing, basics
- advantages of integrated design
- carbon financing and offsets, basics
- co-benefits of action
- asset management, basics
- financial opportunities/risks from Community Energy Utilities
- the cost of inaction, economic impacts in the future

### Advanced level content:

Introductory content plus:

- triple bottom line (TBL) budget and project evaluation
- life cycle costing, advanced
- asset management, advanced
- carbon financing and offsets, advanced
- carbon life cycle analysis
- cost benefit analysis with carbon life cycle and life cycle costing integration
- basic local energy utility design, governance, management options
- classic risk assessment of climate impacts and adaptation
- benefits and revenue streams of local energy

### 3. Strategic Management

Successful energy and emission action plans involve unique management approaches. Climate and energy is a new agenda with new policies and practices that running up against tried and true approaches. Some projects require extensive cross-departmental collaboration. Energy and emission inventories are not recognized as new business tools that can inform broader local government activity.

#### Introductory level content:

- integrating energy & emissions, intro existing business activities, basics
- communicating climate
- pragmatic organizational structures and processes
- funding options basics
- energy & emissions inventories as business tools, basics
- Understanding local government potential to influence energy & emissions

#### Advanced level content:

Introductory content plus:

- integrating energy & emissions into existing business activities, advanced
- energy & emissions inventories as business tools, advanced
- innovative organizational structures and processes
- strategic internal engagement processes
- project monitoring and evaluation
- information and action flow
- aligning departmental climate and energy priorities with business
- advanced funding options, grant streamlining

### 4. Communications and Engagement

The role of the individual is critical in energy and emission management. A highly pedestrian oriented community can be created, but ultimately individuals determine their transportation mode. Through the services they offer, local governments have more pervasive relationships with citizens than other levels of government. Local governments cannot tackle climate change in their communities individually. Good plans depend on partnerships.

Constructive rapport with individuals, businesses, non-profits, public sector organizations, key sectors, communities requires effective communications and engagement. Many public members are still **sceptical about climate change and how it impacts their everyday lives** and this compromises the case for emission management. Community-based social marketing and other forms of public education and engagement can address this, if done well within the specific context of the community and rolled out with other mutually reinforcing policy instruments

**Content (all levels):**

- framing climate and energy for key constituencies
- understanding key constituency interests and motivations
- communications material development
- public engagement frameworks
- community based social marketing basics
- facilitation techniques
- communications material development
- understanding Web 2.0 basics (engagement/networking)

**5. Green Building and Development 101**

Transportation, land use, infrastructure, buildings – local government decisions on these sectors profoundly shape local emissions. A basic understanding of standards, best practices, good processes and great policies can maximize sustainability. The depth and focus of this capacity building would be shaped by the unique requirements of the key constituency.

**Content (all levels):**

- green rating systems, basics
- building performance standards, basics
- integrated land use and transportation, site, neighborhood and community basics
- sustainable infrastructure basics - energy, water, waste water, solid waste
- local government authority to influence these sectors
- integrated design process
- green practice policy potential

**Delivery Approaches and Partners: Opportunities**

As mentioned above, the research identified six local government audiences that have varying educational priorities. The following section identifies potential delivery approaches and partners to build the unique knowledge and skill needs according to these constituencies.

Interviewees also stressed the importance of remaining sensitive to different community scales. Small, rural, and/or remote communities tend to have fewer staff and more constrained resources. This is addressed in somewhat greater depth in the next section exploring capacities beyond skills and knowledge. The crux of the difference from an educational perspective is that such communities will likely require additional external human resource support to fill these knowledge (and time) gaps from

BC Hydro, Fraser Basin’s Smart Planners, consultants, or some kind of shared energy manager at the regional level.

### **Key Constituency: Mayor and Council**

Elected officials with a foundation of knowledge in climate and energy play critical roles in advancing this agenda internally with staff and consolidating community support. Essential knowledge includes an appreciation of community vulnerability to climate change, but more importantly an understanding of how reducing emissions and advancing energy sustainability dovetails other community priorities. Many interviewees felt that high priority should be given to this constituency’s educational needs.

#### **Considerations for learning**

- Council members have limited time; they want high-level concepts, key messages. For this reason, their educational needs will be at the introductory level.
- They need to know WHY they should care – i.e. economic impact, charter commitments, and competitive advantage. They are looking for a Vision - political guidance – focused on how to advance climate change to different constituencies in their community.
- They need to see it to believe it; while not always possible, face-to-face, in situ learning is optimal; more visual, less detail - need short and concise argument.
- High profile or credible validators significantly strengthen resonance of content. High impact validators make a particularly compelling case e.g. BC Hydro engagement strengthens credibility. BC Hydro CEO would even more so. Community-specific champions can also be helpful in reinforcing the message.

**Mayor and Council Skill and Knowledge Priorities**

- Energy and emissions knowledge – Introduction
- Business case / TBL – Introduction
- Strategic management – Introduction

#### **Potential Delivery Approach and Partners**

*Integrate into existing events/activities:*

- Integrate content into **UBCM Councillor boot camp** (this could potentially be made into a train-the-trainer session so that councillors in attendance have the tools to go back and share their insights with other councillors and senior staff).
- Presentation at **regional board** or regional UBCM events. Coordinate this with key ministries: MCD, Environment; EMPR, Health, Transportation, Finance.
- Develop workshops for existing conferences such as the UBCM AGM, perhaps in partnership with the Climate Action Secretariat or Key Ministries.

- Offer business case training in connection with existing **Municipal Financial Authority** events.
- Develop material that can be integrated into "new council" orientation materials.

*Create new activities and tools:*

- **Success Story Tours** (BC, US, Europe). Energy management tours to Europe organized by the Federation of Canadian Municipalities in previous years were very successful in getting Councillors excited, engaged and aware. If anything like this were done, providing participants with presentation tools to share their learnings can maximize impact.
- Have a high profile validator present material to council in a 20-30 minute presentation. If one can generate the interest and time commitments, hold a half day community-specific workshop.
- Foster **peer learning networks** with the help of other engaged Mayors/Councils (in their region, provincially & beyond) for sharing struggles and successes.
- Develop customized corporate sessions with Applied Professional Universities (e.g. RRU, BCIT, SFU City, Selkirk, Northern Lights, UNBC).
- Coordinate **visiting facilitation** with Energy consultants and/or NGOs, (e.g. BC Sustainable Energy Association, Community Energy Association, HB Lanarc, Pembina Institute, Stantec/Sheltair...).
- Connect education with a more comprehensive **awards program/rating system** recognizing local gov/community energy performance with different indicators.

***Key Constituency: Senior Management Team***

Senior Management with a foundation of knowledge in climate and energy play critical roles in advancing this agenda internally with staff. Senior Management sets the priorities and creates the structures and processes for the rest of the organization. For some educational programming, other senior staff such as the City Solicitor would be appropriate to include. Understanding how climate, energy and emissions relate to community and the opportunity to reinforce other community priorities is essential. Appreciating the unique management requirements and the broad local government co-benefits for advancing a new agenda in an institution with deep institutional traditions is important.

## Considerations for learning

- Senior management have limited time; and while they influence council, they also take direction from council.
- They do not want to be seen as lagging behind; there is a desire to be innovative and progressive. However, there is a tendency to be risk adverse as they are responsible for bottom line costs.
- This group has good online potential and would work well in small groups although hands-on and one-on-one experience is preferable; they like details, specifically related to finance.
- High profile or credible validators significantly strengthen resonance of content. High impact validators make a particularly compelling case e.g. BC Hydro engagement strengthens credibility. BC Hydro CEO would even more so. Community-specific champions can also be helpful in reinforcing the message.

### Senior Management Skill and Knowledge Priorities

- Energy and emissions knowledge – Introduction
- Business case / TBL – Introduction
- Strategic management – Introduction & Advanced for select senior management team

## Potential Delivery Approach and Partners

### *Integrate into existing events/activities:*

- Integrate learning into existing training programs held by Professional Associations e.g. **Canadian Association of Municipal Administrators, Local Government Management Association**.
- Develop workshop for existing conferences such as the UBCM and MFA AGMs, perhaps in partnership with the Climate Action Secretariat, Professional Associations or key ministries: MCD, Environment; EMPR; Health, Transportation, Finance.

### *Create new activities and tools:*

- **Success Story Tours** (BC, US, Europe). Energy management tours to Europe organized by the Federation of Canadian Municipalities in previous years were very successful in getting Councillors excited, engaged and aware. If anything like this were done, providing participants with presentation tools to share their learnings can maximize impact.
- Hold a half-day workshop with select champions, using a **train-the-trainer** model. This can be done in connection with Energy consultants and/or NGOs, (e.g. BC Sustainable Energy Association, Community Energy Association, HB Lanarc, Pembina Institute, Stantec/Sheltair...).
- Foster **peer learning networks** with other engaged senior staff (in their region, provincially & beyond) for sharing struggles and successes.

- Develop customized **certificate courses** with Applied Professional Universities with the potential to ladder to academic certification (e.g. RRU, BCIT, SFU City, UBC Extension, Selkirk, Northern Lights, UNBC). This could potentially be online, ideally developed within study groups to increase peer to peer learning potential.
- Provide education in the form of an **organizational audit** to help this constituency determine options for integrating energy planning into their regular activity. For example, recommendations for bringing energy metrics into the financial reporting structure.
- Coordinate **regional workshops** with key ministries: MCD, Environment; EMPR; Health, Transportation, Finance and/or Fraser Basin Council Smart Planning.

### **Key Constituency: CFO and Key Finance Staff**

Strong financial analysis underpins successful climate and energy work. Finance staff with a strong understanding of life-cycle costing, carbon life cycle analysis and carbon finance are better able to integrate energy management practice into existing financial mechanisms. Building in financial metrics is critical to the success of energy and emissions planning. Financial feasibility is a strategic tool of persuasion.

#### **Considerations for learning**

- Detailed financial information needed; bottom line cost concern.
- Excellent online learning potential with this group; solid peer networks to partner with.
- While only tangentially related, integrating climate impact and adaptation risk analysis is very complementary.

**CFO and Key Finance Staff Skill and Knowledge Priorities**

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- Energy and emissions knowledge – Introduction
- Business case / TBL – Advanced

#### **Potential Delivery Approach and Partners**

*Integrate into existing events/activities:*

- Use existing tools like the **Federation of Canadian Municipalities’ online asset management** seminar.
- Integrate learning into existing conferences or training programs like the CFO Bootcamp held by Professional Associations e.g. **Government Finance Officers Association**.
- Offer business case training in connection with existing **Municipal Financial Authority** programming if any. Other potential partners are Pacific Carbon Trust.

*Create new activities and tools:*

- Develop practical, **standardized tools** like concise workbooks, fill-in-the blank spreadsheets, and action-planning frameworks that identify common stream-lined approaches. And foster peer to peer networks, perhaps with the help of the Government Finance Officers Association.
- Develop customized **certificate courses** with Applied Professional Universities with the potential to ladder to academic certification (e.g. RRU, BCIT, SFU City, Selkirk, Northern Lights, UNBC). This would ideally be online, developed within study groups to increase peer to peer learning potential.

### **Key Constituency: “Energy” Managers: Engineers and Planners**

The key audience here is those staff leading energy and emissions work. They can be climate change or energy program managers. Often they are keen staff in engineering, planning or public works that do this as part of a bigger job. There may be more than one person in an organization. These staff can benefit from a good basic understanding of the technical, policy and strategic knowledge for advancing energy management in most communities. While they may not have the greatest authority in an organization, these staff are the linchpins to successful planning and implementation.

#### **Considerations for learning**

- Direction to this group comes from senior management.
- Appreciation of technical detail is an asset, but not essential.
- They want time-saving tools that fit into fit into daily processes & systems e.g. concise and straightforward workbooks; implementation focus needed.
- Small LGs lack staff numbers and time; additional on-the-ground assistance is best.
- Excellent online learning potential with this group; solid peer networks to partner with.

#### **“Energy” Managers: Engineers and Planners Skill and Knowledge Priorities**

- Energy and emissions knowledge – Advanced
- Business case / TBL – Advanced
- Strategic management – Advanced
- Communications and engagement

#### **Potential Delivery Approach and Partners**

*Integrate into existing events/activities:*

- Integrate learning into existing training programs held by Professional Associations e.g. **Assoc of Prof Engineers & Geo BC, Planning Institute of BC, Local Government Management Association**. Ideally, new educational programs are recognized by these professional associations

- Develop workshops/side events at existing conferences such as the PIBC annual conference, ideally in partnership with the Climate Action Secretariat, Professional Associations or key ministries: MCD, Environment; EMPR; Health, Transportation, Finance.
- Integrate learning into **existing webinar series** sponsors e.g. Federation of Canadian Municipalities, Community Energy Association, BCSEA.
- Offer business case training in connection with existing Municipal Financial Authority programming.

*Create new activities and tools:*

- Develop practical, **standardized tools** like concise workbooks, fill-in-the blank spreadsheets, and action-planning frameworks that identify common stream-lined approaches.
- Coordinate regional workshops or **peer-learning networks** that provide participants with standardized inventory tools and streamlined approaches to implementation in partnership with the Climate Action Secretariat, Professional Associations or key ministries.
- Develop customized **certificate courses** with Applied Professional Universities with the potential to ladder to academic certification (e.g. RRU, BCIT, SFU City, Selkirk, Northern Lights, UNBC). This would ideally be online, developed within study groups to increase peer to peer learning potential.
- Fund **Regional Energy Managers** to provide training and support on-site as a shared ‘staff’ person. Or put together a travelling Energy Team that offers the same services in less dedicated amounts of time.
- Provide education in the form of an **organizational audit** to help this constituency determine options for integrating energy planning into their regular activity. For example, recommendations for bringing energy metrics into the financial reporting structure.
- Potentially partner with the International Association of Public Participation to develop climate specific engagement training.
- Partner with Energy consultants and/or NGOs, (e.g. BC Sustainable Energy Association, Community Energy Association, HB Lanarc, Pembina Institute, Stantec/Sheltair...) to provide **community-customized consultation** direction/advice/planning.

### **Key Constituency: Communications and Outreach Staff**

This group does not always exist as dedicated staff, especially in smaller communities, but it could include social planners and select staff in public works responsible for outgoing public communications. The role of the individual is critical in energy and emission management. A highly pedestrian oriented community can be created, but ultimately individuals determine their transportation mode. Through the

services they offer, local governments have more pervasive relationships with citizens than other levels of government. Local governments cannot tackle climate change in their communities individually. Good plans depend on partnerships. Constructive rapport with individuals, businesses, non-profits, public sector organizations, key sectors, communities requires effective communications and engagement.

### Considerations for learning

- This group tends to have knowledge for getting community buy-in, community connections.
- Key delivery mechanisms: municipal/RD publications/websites
- Excellent online learning potential with this group.

#### Communications and Outreach Staff Skill and Knowledge Priorities

- Energy and emissions knowledge – Introduction
- Communications and engagement

### Potential Delivery Approach and Partners

#### *Integrate into existing events/activities:*

- Integrate learning into existing conferences or training programs held by Professional Associations.
- Partner with the **International Association of Public Participation** to develop climate specific engagement training.

#### *Create new activities and tools:*

- Develop a full day workshop for select champions, using a **train-the-trainer** model. This can be done in connection with communications consultants and/or NGOs, (e.g. for communications: Communicopia, Pembina Institute, FBC Smart Planning, e.g. for energy knowledge: BC Sustainable Energy Association, Community Energy Association, HB Lanarc, Pembina Institute, Stantec/Sheltair).
- Work with partners to develop a thorough **communications and public education strategy** from which local governments could benefit. Focus should be climate action as a co-benefit to other priorities like health. Develop material specific to different audiences: general public, architects, engineers, developers and trades.
- Coordinate **regional workshops** or peer-learning networks that provide participants with **standardized communications materials** in partnership with the Climate Action Secretariat, Professional Associations or key ministries.

### **Key Constituency: Building and Development Line Staff: Permit Clerks and Inspectors**

Local government permit clerks and inspectors are involved in almost all new developments and all new and significant retrofits in the province. These staff and their offices are potentially high impact leverage points for change. Their contact with builders, developers and Do-It-Yourself citizens is powerful. Building their skills and knowledge and designing programs for these offices to extend to their communities is potentially very valuable. A basic understanding of standards, best practices, good processes and great policies can maximize sustainability.

#### **Considerations for learning**

- Receive direction from middle management
- Learning must fit into daily processes & systems
- They understand the language and needs of builders and developers.
- Risk averse and play by the book

#### **Building and Development Line Staff Skill and Knowledge Priorities**

- Energy and emissions knowledge – Introduction
- Green building and development 101
- Communications and

#### **Potential Delivery Approach and Partners**

##### *Integrate into existing events/activities:*

- Work with senior management to integrate learning priorities into **performance goals, new staff orientation guides** and **professional development programs**.
- Integrate green building learning into existing workshop series offered by Lighthouse Sustainable Buildings Centre, Cascadia Green Building Council

##### *Create new activities and tools:*

- Develop a full day workshop for select champions, using a **train-the-trainer** model. Or a series of **lunch and learns** for all staff. These can be done in connection with consultants and/or NGOs, (e.g. for green buildings: Lighthouse Sustainable Buildings Centre, Cascadia Green Building Council, e.g. for energy knowledge: BC Sustainable Energy Association, Community Energy Association, HB Lanarc, Pembina Institute, Stantec/Sheltair).
- Coordinate **regional workshops** or peer-learning networks that provide participants with standardized tools such as communications materials, **development checklists** in partnership with the Climate Action Secretariat, Professional Associations or key ministries.

## Next Steps

It was beyond the scope of this project to fully evaluate and explore these options. It will be necessary to carry out further analysis to strategically identify cost-effective, high impact partnerships and delivery approaches.

Building knowledge and skills for other key constituencies is equally important, e.g. the building/development sector, trades, real estate agents and general public for instance. These audiences were beyond the scope of this research however the general thrust was on increasing awareness of the long-term savings in operation and maintenance from green buildings and green infrastructure. It is recommended that BC Hydro further explore skills and knowledge requirements in these constituencies and how it can interface with the work of local governments.

## 5.0 Beyond Skills and Knowledge: Additional Capacities

Although the project's emphasis was on skills and knowledge, other capacities, such as technical and strategic support; staff time and responsibility; leadership and buy-in; and internal governance/organizational alignment, were explored for three compelling reasons:

1. There is significant evidence that change in energy management involves more than knowledge and skills:

desire + knowledge and skills  $\neq$  change

Moreover, even strong financial support may not lead to change:

desire + knowledge and skills + business case  $\neq$  change

Broader institutional capacities (e.g. organizational process and structure and staff time) underpin big breakthroughs in energy and emission management:

**desire + knowledge and skills + business case + institutional capacity = change**

2. Knowledge and skills influence leadership, governance and these other identified capacities. These other capacities, in turn, influence the importance and appreciation of knowledge and skills.
3. Local government staff and energy consultants were particularly interested in the barriers and breakthroughs associated with broader capacity building.

While many of these additional capacities could be seen as cross cutting to a lesser or greater degree, different community sizes illustrated particular prominence of some capacities over others. For this reason, thematic analysis of these additional capacities has been organized according to community size below.

### Small Local Governments

#### *Staff Time; Technical and Strategic Support*

A significant capacity barrier for small local governments is staff time. Staff time is at a premium in most small communities where one person is taking on what normally might be three different roles in a larger community. Because of this lack of time, the immediate needs of the community take priority and there is little time to gain a solid understanding of energy planning.

Provincial legislative changes, commitments to deadlines and climate funding have all been effective drivers and incentives for action. However, it was felt by local government representatives that many of the tools needed have not been created to support this work. *“There is tremendous pressure without guidance or support,”* according to one CAO. Programs promised by the province to provide tools and assistance have been ineffective because of the province’s own staff capacity crunch – both time and knowledge. Small communities require external expertise to not only guide but actually get the job done.

### **Funding**

Funding is another major capacity barrier for many small local governments because their tax base is also small. In Harrison Hot Springs, the low number of residents matched with the high number of visitors makes it difficult for them to keep up with regular infrastructure maintenance.

The district of Ucluelet found that innovative partnerships with the private sector and provincial government support was helpful enough for them to realize major elements of their energy and emissions plans. However, financial incentives and support will be needed to go beyond planning into implementation as they have been challenged with moving to alternative energy sources because the buy-back rate is inadequate to make a business case.

Consultant interviewees felt the highest priority for small local governments is a better understanding of the opportunities and tools that *are* actually available to them. Each of the consultants outlined the challenge in terms of time, interpretation, and “hoop jumping” to negotiate incentives and financial support from the BC government and other funding sources (e.g. BC Hydro). *“Negotiating the quagmire of incentives is one of the largest barriers to small, over-stretched governments.”*

### **Small Community Opportunities**

- There is potential for achieving some economies of scale among small communities, to share staff time, resources, knowledge and processes at a regional scale. Ideally, new funding from utilities and the BC Government can support these priorities.
- Successful efforts by BC Hydro and the province to coordinate, streamline and extend grant programs and applications would reduce administrative burden and provide some confidence and security in longer term opportunities. Special consideration should be given to multi-year

funding, supporting implementation over just planning, and adopting practices and implementing projects that aren't necessarily innovative but highly effective.

## Medium and Large Local Governments

### *Leadership and Buy-In*

Leadership and Buy-In was one of the major “capacity” barriers identified by both medium and large local government samples. Funding and staffing were not dire situations for initial energy and emissions planning. However, without commitment and leadership from council and senior management, continued progress was seen as nearly impossible.

Taking a leadership role often means risk-taking, added expense and the ability to sell the importance of emission reduction to the public. Interviewees felt that most of the general public still don't understand the importance of energy planning and/or sustainability and how it affects their everyday lives.

*“Without political and public support it's just a pretty plan on a shelf... It's not about having just one champion; we need an ‘enthusiasm virus.’”*

There was broad agreement that investing in education and skills development in senior management and Council will have a significant return in their commitment to the agenda. This is a new agenda and there is limited awareness of the broad co-benefits of climate protection and sustainable energy.

### *Internal Governance / Organizational Alignment*

Traditional local government organizational structure plays a central role in the leadership capacity barrier. Staff in medium and large local governments who have the knowledge and passion to act have limited direct influence on council or senior management. Without clear Council and senior management direction, most staff will continue with the conventional energy, resource and capital-intensive approach to urban design and service delivery. Among the sample interviewed, watershed moments happened in the wake of senior decision-maker engagement – council members and senior management. For Prince George and Langley it was an engaged city manager and influential mayor that made the difference. For the City of North Vancouver it was a visionary council who had been persuaded by an FCM program that packed them off to Europe to experience innovative and practical energy management first-hand.

Given their larger size, these local governments also have difficulty achieving organizational alignment with energy management. There is great opportunity in integrating climate action into traditional local government activity such as planning practices and policies, budgets, etc. But this is often not realized due to perceptions of complexity at the larger scale.

### *Medium and Large Local Government Opportunities*

- Focusing on council and senior government constituencies as a priority group for building knowledge and skill capacity will help to change both these capacity barriers into opportunities. Building staff expertise in energy management can also effect change here as a few interviewees noted that knowledgeable staff who can be articulate and visionary are able to find ways to finance and 'sell' climate action to their senior management and council.
- It was noted that being a progressive leader also means being willing to take risks. It helps if council and senior staff are backed up by a sound business case and recognized through awards programs. BC Hydro is in a position to help local governments reduce the inherent risk in energy leadership and the associated expense.
- All local governments are currently expected to add emission targets and reduction actions to their OCPs. They are also encouraged to develop ICSPs to receive gas tax funding and they are encouraged to develop CEEPs. BC Hydro and the provincial government could help local governments improve organizational alignment with energy management by working with one another to find synergies for action within these varying mandates.

## **Regional Districts**

### *Partnerships for Community Outreach*

For Regional Districts, cooperative partnerships with the local governments in their region have significant potential for energy and emission management. Renewable energy resource mapping and land use and transportation planning are regional in nature. If communities can work together in a region, they can develop strong policies that would support one another in their implementation.

In the Peace Region, communities embody a spirit of cooperation because they do in fact depend on one another for many things. The region is made up of many small, rural communities that do not have

the capacity to take on energy planning on their own. There are still differing levels of support, however, and education for local government leaders was thought to be helpful. Most particularly, education geared to empower leaders with an understanding of the business case for emission reduction that will help reduce the tax burden on their communities. For Metro, the opportunities for reduction are huge, but cooperation among its large municipalities requires big players at the table. Not all the communities have the will or support to move forward, and for many it is just one champion working on energy on the side of their desk.

### *Regional District Opportunities*

- Hosting regional workshops and facilitating regionally-based assistance are examples of delivery approaches mentioned above that would help build this capacity.
- Encouraging and supporting regional cooperation can lead to a number of collaborative synergies, such as:
  - Regional Energy Manager for Buildings & Fleets
  - Regional Community Energy Utility
  - Regional Offset Regime
  - Regional Renewable Energy Strategy
  - Regional Food and Agriculture Strategy
  - Renewable Energy and Waste Heat Mapping

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