

COTW Presentation

Climate Change Leadership Plan Interim Update

21 September, 2017



PURPOSE

to provide an **update to Council on the Climate Action Program**, with specific attention to the **work and the development of the Climate Leadership Plan (CLP)**.



Climate Change Leadership Plan Update

BACKGROUND

25 August 2016 COTW Meeting

In August 2016, Council committed to a long-term greenhouse gas (GHG) reduction target for both corporate and community emissions of 80% GHG reduction by 2050, including a corresponding specific target of 100% renewable energy.

18 December 2016 COTW Meeting

Staff returned to brief Council with an update on completed actions and Council further supported work on the Climate Action Program, which included a commitment for funding to support a temporary 2-year Community Energy manager position and enable a suite of priority climate actions for 2017, and development of the Climate Leadership Plan (CLP).



Climate Change Leadership Plan Update

Climate Action Program Priorities and Updates

Recent progress in Victoria's Climate Action Program (CAP) has focussed on the following priorities:

- Baselining energy and GHG information and trends for community and corporate emissions;
- Development of the Climate Leadership Plan (CLP);
- Staffing of critical positions; and
- Progressing other high priority actions that can be confidently advanced as the plan is developed.



Climate Change Leadership Plan Update

Buildings

Buildings are responsible for 51% of community GHG emissions.

New Buildings

BC Step Code:

- stipulates net-zero energy standards for new buildings by 2032.
- The City is progressing stakeholder engagement and staff training. A comprehensive plan with timelines for implementation will be brought to Council in Q1, 2018.



Existing Buildings

Market Rental Revitalization Study:

- 10 years = 10,000 rental apartment renovations
- City partnering to explore policy levers and incentives
- **One Renovation:**
 - simultaneous energy efficiency upgrades that align with upcoming renovations
 - maximize affordability and minimize disruption.

Residential Energy Retrofit Incentive Programs: increase the uptake of energy retrofits and promote conversion away from heating oil

- “top up” incentives, marketing and promotion support.



Climate Change Leadership Plan Update

Transportation

The transportation sector is responsible for 39% of community GHG emissions.

- **Public Transit:**
 - Partnering with BC Transit on priority, improvement projects.
 - Enhancements are required to out-perform the conventional passenger vehicle, and
 - Make transit the first-choice in mobility.
- **Active Transportation:**
 - All Ages and Abilities Bicycle Network.
 - Harbour and City walkways
- **Electric Vehicle Adoption and Infrastructure:**
 - Working BC Hydro in the development of a EV Charging Strategy,
 - Charging guidelines for buildings, public spaces, City assets, with a focus on multi-family installations.
- **Sustainable Mobility Strategy will lead**



Climate Change Leadership Plan Update

Waste Management - Organics

The waste is responsible for 10% of community GHG emissions.

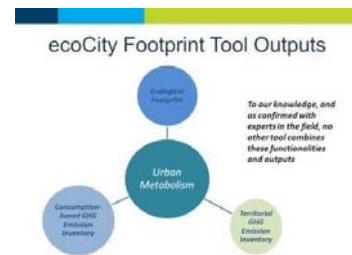
- The CLP will focus mainly on organic waste GHG emissions,
- 100% diversion of organics is the target and opportunity
- Sustainable Waste Management Strategy will focus on all waste issues, with a primary focus on principles of Circular Economy and zero-waste approach



EcoCity Footprint Tool

Collaboration with BCIT/USDN/Cities

- Examining embodied GHG of goods and service, not just GHG produced territorially
- The ecoCity footprint tool generates consumption-based GHG emissions inventory for communities.
- Consumption GHG ~2/3rd of all GHG emissions

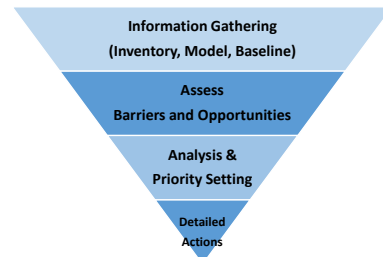


Climate Change Leadership Plan Update

Climate Leadership Plan (CLP) Development

The development of the CLP has progressed on a number of fronts

- research on policy and best practice
- Update the City's community and corporate GHG inventory, GHG Emissions forecast to 2050,
- Input from staff and stakeholders – including input 38 subject matter experts from 27 organizations.
- Evaluation and prioritization of actions, and
- Development of actions.



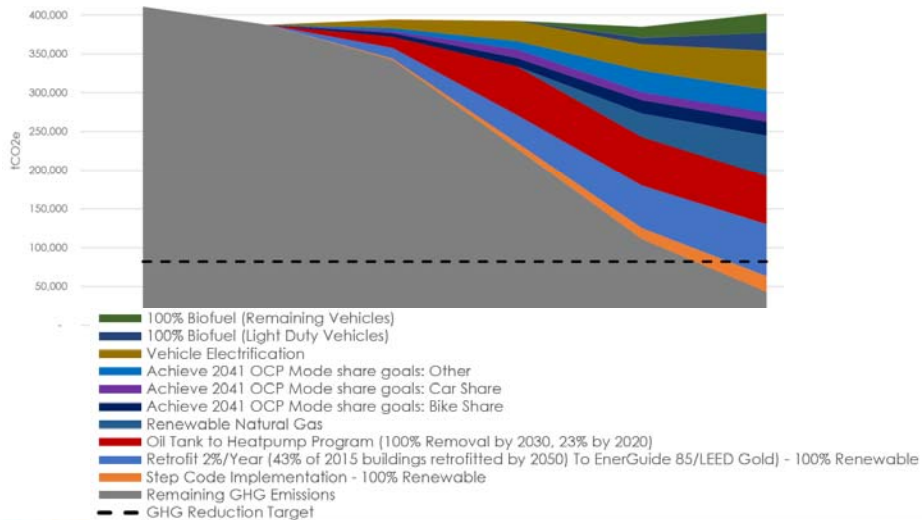
BARRIER TYPE	ACTION TYPE
Cost/Affordability	Information (timely/accurate)
Ability to influence	Leadership by Example
Convenience	Incentives (financial)
Information (lack or poor quality)	Incentives (non-financial)
Aesthetics	Education and Outreach
Jurisdictional	Partnering and Advocacy
Policy	Policy and Regulation
Technology	
Time	
Beliefs and Understanding	



Climate Change Leadership Plan Update

Preliminary GHG Modeling Analysis

Modelling out key strategies further defines City's roles...



Climate Change Leadership Plan Update

Grand Challenges

Buildings:

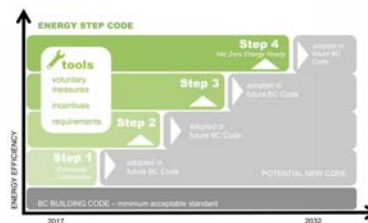
- "Clean Comfort" (fuel switching away from fossil fuels to renewable (hydro, RNG))
- Maximizing energy efficiency
 - Aggressive adoption of BC Step Code (new)), and
 - Deep energy retrofits (existing)

Transportation:

- a transformative mode-shift to public transit,
- increases in cycling and walking mode share, and
- electrification of the communities' vehicle fleet
- Sustainable Mobility Strategy will dictate actions and plans

Solid Waste:

- 100% diversion of organic waste



Source: BCHydro and www.sap.mit.edu

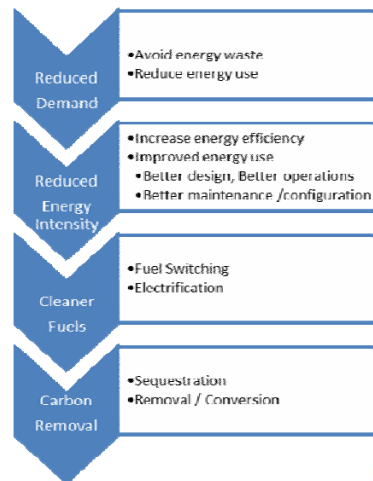


Climate Change Leadership Plan Update

CLP Structure and City Roles



- **CLP Sections**
 - Vision, Mission, Values
 - GHG emissions information and forecast,
 - Breakthrough Goal Areas and Actions
 - Implementation Plan, and
 - Performance and Reporting.
- **Three defined roles for the City:**
 - Educate, Inform and Encourage
 - Influence
 - Control
- **Challenges:**
 - Accurate and Timely Information
 - Economic Argument
 - Barriers and Opportunities - Finding strategies that WORK!
 - Urgency



Climate Change Leadership Plan Update

Key Principles

- **Energy is visible** – energy use, trends and impacts are clearly known, owned and actioned;
- **Clean, affordable energy for all** – The public has access to affordable, renewable and smart energy options;
- **Help make smarter energy choices, easier** – The City has a role to help the community reach a clear understanding of energy options, trade-offs, performance, risks and benefits; and
- **Lead by example** – The City is a leader on climate mitigation and adaptation, investing prudently and wisely to inspire meaningful GHG improvements and reduce long-term risks.
- **Land Use....**
- **Adaptation...**



Climate Change Leadership Plan Update

Upcoming Decisions...December

- **GHG Economic Study** – Investment priority, interim results and review
- **Timing and Step** – new buildings (BC Step Code)
- **Retrofit Strategy** – existing buildings
- **Continued leadership** – active transportation
- **Support Radical Improvements to Transit**
- **Communication, Education and Awareness Campaign**
- **GHG and Land Use**
- **GHG targets and timelines**
- **Funding Strategy**



Climate Change Leadership Plan Update

CLP Next Steps

Action

Proposed Timing

Draft CLP – SME / Peer review and feedback	November, 2017
Draft Plan to Council for review and comment	December, 2017
CLP Engagement Commences – Community	January, 2018
Climate Action Economic Assessment Tool Complete	1 February, 2018
Final Draft Presentation to Council	1 April, 2018
Annual Climate Action Program Report	1 June, 2018



Climate Change Leadership Plan Update

September 21, 2017 Staff Recommendation

That Council: Accept this Climate Action Program Update report for information



Climate Change Leadership Plan Update

Reference Slides



Climate Change Leadership Plan Update

2. Low-Carbon Transportation

Overarching Requirement:

To maximize the shift to clean transportation and zero-emission vehicles.

Related Policy: OCP Section 7: Transportation and Mobility

Key Considerations:

- Rapid development of Active Transportation - Biketoria
- Working with partners – BC Transit, CRD
- Rapidly changing landscape: electric vehicles, car share, autonomous vehicles
- City has diversity of roles and tools, e.g. EV charging infrastructure, parking provision, policies and permitting.

Key Objectives / Action Areas:

5. Improved active transportation infrastructure / programs.
6. Support a shift towards vehicle electrification.
7. Increase transit ridership through increased efficiency and accessibility.
8. Increase car share participation.
9. Review existing and develop new policies to support low-carbon transportation.

Example Actions:

e.g. EV infrastructure support, transit priority projects, car sharing support.



Climate Change Leadership Plan Update

Where is the City of Victoria at?

2012 OCP Vision and Goals supporting climate action:

2041 Vision: Victoria is an urban sustainability leader inspiring innovation, pride and progress towards greater ecological integrity, livability, economic vitality, and community resiliency confronting the changes facing society and the planet today and for generations to come, while building on Victoria's strengths as a harbour-centred, historic, capital city that provides exceptional quality of life through a beautiful natural setting, walkable neighbourhoods of unique character, and a thriving Downtown that is the heart of the region.

OCP Section 12: Climate Change and Energy:

- A. Victoria and Victorians are more resilient to climate change and energy scarcity and costs.
- B. New and existing buildings are energy efficient and produce few greenhouse gas emissions.
- C. Transportation options reduce fossil fuel dependence, help conserve energy and produce low greenhouse gas emissions and other air contaminants.
- D. The waste stream to the regional landfill is reduced to a minimum, with recovery, re-use, recycling and composting of resources undertaken as standard practice.
- E. Victoria relies on clean, renewable, diverse and efficient energy sources.



Climate Change Leadership Plan Update

1. Corporate Leadership

Overarching Requirement:

To lead by example in the reduction of carbon emissions in both City and community.

Related Policy: Supports OCP Vision Statement: "Victoria is an urban sustainability leader..."

Key Considerations/barriers/issues:

- Resources (staff, financial, time, priorities).
- Accessible and reliable data.
- Building strong community partnerships to achieve climate action goals.

Key Objectives / Action Areas:

1. Develop a Climate Leadership Strategy.
2. Integrate climate leadership into City decisions/processes.
3. 100% renewable energy in municipal operations.
4. Empower and engage staff, citizens, and stakeholders to foster climate excellence in the community.

Example Actions:

e.g. Pricing schemes, partnering, engagement strategy



Climate Change Leadership Plan Update

4. Existing Buildings

Overarching Requirement:

To drastically improve the energy efficiency of buildings, and achieve 100% renewably powered buildings.

Related Policy: OCP Section 12: Climate Change and Energy

Key Considerations:

- Hydro power advantage.
- Programs and incentives for retrofits should be strategic. Opportunities to leverage funding and minimize administrative costs to City.
- Carbon intensive systems need to be replaced by high-efficiency systems in retrofits, (i.e. heating oil).
- Innovative financing opportunities for retrofits can be considered but are not necessarily a main barrier to action.

Key Objectives / Action Areas:

13. Develop a community building retrofit strategy.
14. Promote switch to renewable energy heating systems.

Example Actions:

e.g. Support for Provincial Oil to Heat Pump Program, build Retrofit Strategy (Res/Comm Buildings).



Climate Change Leadership Plan Update

5. Waste and the Circular Economy

Overarching Requirement:

To minimize per-capita material use and maximize waste-diversion away from landfill.

Related Policy: OCP Section 11: Infrastructure

Key Considerations:

- Programs need to be consistent (regional coherence)
- Significant behaviour change required
- Corporate leadership by example in City target setting and policy development.
- Improved tracking / info of municipal waste = high priority, and addressing information gaps.
- "Operationalize" closed-loop material management systems towards zero-waste.

Key Objectives / Action Areas:

15. Maximize the diversion of waste from the landfill.
16. Promote reduced resource intensity.
17. Develop a Circular Economy Framework for the City.

Example Actions:

e.g. Waste Management Master Plan, sustainable procurement procedures review.



Climate Change Leadership Plan Update

6. Climate Change Adaptation

Overarching Requirement:

City and community is resilient to climate change impacts

Related Policy: OCP Section 12: Climate Change and Energy, Section 17: Food Systems, Section 18: Emergency Management

Key Considerations:

- Financial/capital investment.
- Synergies with utility upgrades.
- Long-Term planning incorporates new projection and impact analyses
 - Risk and vulnerability assessment conducted in 2013 will be updated in 2017.
- New design standards, e.g. increased stormwater system capacity.

Key Objectives / Action Areas:

18. Establish a climate adaptation strategy/program for the City.
19. Continue to Integrate climate adaptation into all City processes and suitable major capital programs.

Example Actions:

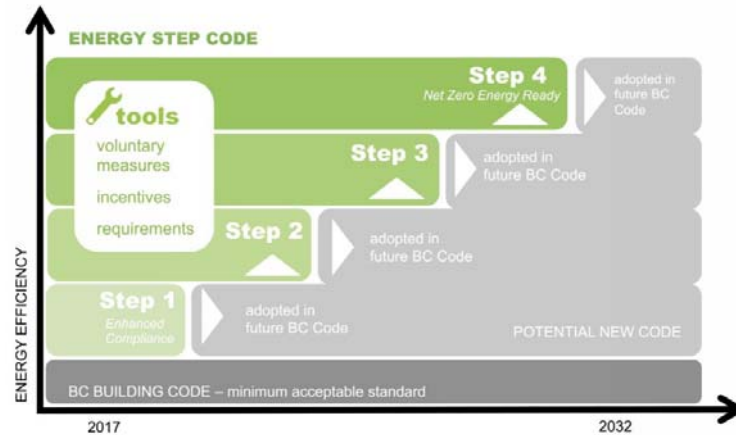
e.g. Stormwater Utility, coastal engineering programs, waterfront development, improve flood resilience, continuation of Growing in the City program.



Climate Change Leadership Plan Update

BC Step Code

- Performance based, Step 1 – Measurement to Step 4
- Implement in 3 – 5 years



Climate Change Leadership Plan Update

Targets of others

Federal Government Commitments

- 2050 target of 80% GHG reduction from 2005 levels
- All federal facilities on renewable energy by 2025.
- New federal climate action plan coming December 2016.

Provincial Government Commitments

- 2050 target of 80% GHG reduction from 2007 levels.
- Reached interim target of 6% by 2012.
- BC Building Code to make net-zero new homes requirement by 2032.
- All new vehicles will be zero-emissions by 2050. (ZEV Alliance)

Capital Regional District

- Draft Regional Climate Action Strategy committing to 61% by 2038
- Supportive actions align with the priorities identified for the City.



Climate Change Leadership Plan Update

Objectives and Priority Actions

Strategic Priority Area	Objectives
Climate Leadership	1. Develop a Climate Leadership Strategy. 2. Integrate climate leadership into City decisions/processes. 3. 100% renewable energy in municipal operations. 4. Empower and engage staff, citizens, and stakeholders to foster climate excellence in the community.
Low-Carbon Transportation	5. Improved active transportation infrastructure / programs. 6. Support a shift towards vehicle electrification. 7. Increase transit ridership through increased efficiency and accessibility. 8. Increase car share participation. 9. Review existing and develop new policies to support low-carbon transportation.
New Buildings	10. Develop plan to achieve net-zero new buildings by 2032. 11. Identify opportunities for district energy systems. 12. Explore energy labeling and benchmarking programs.
Existing Building Efficiency Retrofits	13. Develop a community building retrofit strategy. 14. Promote switch to renewable energy heating systems.
Waste and the Circular Economy	15. Maximize the diversion of waste from the landfill. 16. Promote reduced resource intensity. 17. Develop a Circular Economy Framework for the City.
Climate Change Adaptation	18. Establish a climate adaptation program for the City. 19. Integrate climate adaptation into all City processes.

