

## Annex A

### Draft List of Climate Action Goals & Initiatives

(Note: This reference list is in draft, and has not yet been prioritized).

#### *Buildings - Draft Climate Action Goals & Initiatives*

Breakthrough Climate Action Goal	Proposed Initiatives
B1: Decarbonize Our Energy Supply	<ul style="list-style-type: none"> <li>i. Develop and implement an action plan to inventory, and incentivize the phasing out of heating oil and other non-renewable fuel use systems (e.g. propane) on residential, commercial, and institutional properties. Explore the use of regulatory mechanisms, and work with insurance companies to accelerate the transition away from heating oil use.</li> <li>ii. Retain a full-time Community Energy Specialist position to assist in moving the City from vision to implementation of the City's Climate Leadership Plan by addressing various barriers identified in the Plan (e.g. municipal culture and operations, community awareness, land use and building bylaws, etc.). Leverage CARIP and other external grants available to support this position.</li> <li>iii. Complete an analysis to assess the potential between efficiency and small scale renewables. Use the outcomes of this study to inform the City's broader buildings strategy on how to meet the Province's Step Code requirements.</li> <li>iv. Complete a market analysis of renewable natural gas, and rationale for City investment.</li> <li>v. Support the ongoing training of staff to gain skills unique to zero-emission buildings, and renewable energy systems.</li> <li>vi. Advocate for a higher net metering payback rate (e.g. what is available through the Ontario FIT program) which would encourage energy security whilst supporting the business case for renewable energy adoption locally.</li> </ul>
B2: Foundational Changes to Existing Building Energy Efficiency	<ul style="list-style-type: none"> <li>i. Support BC Hydro, Fortis BC, the Province, CRD, and other community organizations in the implementation of energy efficiency programs for residents, multi-family property owners, and commercial buildings. Utilize City funds, as available, to maximize available energy efficiency retrofit incentive programs to increase adoption.</li> <li>ii. Advocate that BC Hydro and Fortis BC to pilot programs that leverage "smart" technologies, such as learning thermostats to catalyze new utility incentive offerings</li> <li>iii. Develop and implement a pilot residential energy labeling program (at the time of sale) for residential homes and explore options for multifamily buildings. Based on the pilot study, develop recommendations to better support the Victoria market, whilst supporting the retention of older homes.</li> <li>iv. Support and advocate for the development of a voluntary commercial building energy benchmarking program.</li> <li>v. Develop a building retrofit strategy for MURBs and commercial buildings. Partner with property owners and managers to identify the most compelling financing tools for energy efficiency upgrades in commercial buildings and develop a formal plan to help bring the tools to market.</li> </ul>



Breakthrough Climate Action Goal	Proposed Initiatives
	<p>Take a lead role in finding solutions to advance initiatives that are economically justified and equitable.</p> <ul style="list-style-type: none"> <li>vi. Complete a study to assess the potential uptake of a Local Improvement Charges program that would tie the installation costs of fuel switching activities to property taxes.</li> <li>vii. Encourage the purchase of renewable technology by removing sales and property taxes for renewable technology or infrastructure.</li> <li>viii. Complete a study on condominium and non-market rental housing retrofits to identify strategies on how to revitalize and regenerate existing rental housing stock while preserving affordability, and improving energy performance.</li> <li>ix. Advocate for the reinstatement of the NC LiveSmartBC Program to provide a consistent process and funding source to support building retrofit programs. Continue to support and promote education and incentive programs that encourage energy conservation and efficiency.</li> <li>x. Work in partnership with the CRD to implement an informational campaign on how heritage elements can be overcome by selecting appropriate energy conservation measures. Support the campaign with financial incentives.</li> </ul>
B3: Net Zero Buildings	<ul style="list-style-type: none"> <li>i. Develop a Step Code Strategy that will review and recommend updates to zoning bylaws and City policies, based on engagement and feedback from land developers, building managers, and other affected stakeholders.</li> <li>ii. Streamline internal City processes to reduce barriers to the adoption of renewable energy systems on buildings. For example, update the current City Sustainability Checklist to include Step Code requirements for near net-zero buildings, and develop complimentary planning guidance documentation and a helpline to help achieve successful applications (e.g. create a "Want to go solar?" FAQ sheet to make it easier to navigate the City in terms of permits required).</li> <li>iii. Encourage local educational institutions, and the Province to adopt training and development program on renewable energy systems, zero-emission buildings, and the Step Code.</li> <li>iv. Support the development of a better buildings network. For example, work with the City of Vancouver and other stakeholders to develop a Zero Emission Building Centre of Excellence.</li> <li>v. Modify the City's current building policy to be that energy performance audits are required after near-zero emission buildings are operating.</li> </ul>

#### Transportation & Mobility - Draft Climate Action Goals & Initiatives

Breakthrough Climate Action Goal	Proposed Initiatives
T1: Decarbonize The Transportation System	<ul style="list-style-type: none"> <li>i. Complete an electric vehicle (EV) market adoption study to better understand the: <ul style="list-style-type: none"> <li>o anticipated local market demand for electric vehicles,</li> <li>o the needs of users (e.g. the length of charging sessions and the power required varies based on the vehicle model, charger type, and state of battery discharge),</li> </ul> </li> </ul>

Breakthrough Climate Action Goal	Proposed Initiatives
	<ul style="list-style-type: none"> <li>o barriers as it relates to adoption in SF, MF, and public access, and</li> <li>o the cost to the City in implementing such a program (e.g. low usage at public charging stations will require longer capital cost recovery without substantial growth in usage).</li> <li>ii. In support of expanding EV charging infrastructure, work with partners to complete a business case to determine the most cost-neutral and legal approach to charging for electricity use (e.g., use of third parties versus in-house operations), and pricing alternatives, including time-based rates, cost per hour, cost per kilowatt-hour, and no-cost charging.</li> <li>iii. By 2020, implement an EV strategy to expand the electric vehicle and electric bicycle charging network in publicly accessible locations. Work with developers, building owners and managers, and parking managers to add charging stations and consider electric-vehicle-ready guidelines and codes. Consider options for including DC-fast charging stations.</li> <li>iv. Support the adoption of car share programs, and low carbon vehicle use through supportive parking regulations, zoning requirements, and by-laws (e.g. Schedule C). Create a City car-sharing policy to guide the development of the City's car-sharing industry.</li> <li>v. Work with the B.C. Ministry of Energy and Mines through the provincial Clean Energy Vehicle (CEV) Program Hydrogen Fueling Infrastructure Funding program to assess if funds can be accessed to complete a feasibility/pilot study for hydrogen fueling infrastructure in the City.</li> <li>vi. Advocate to the Federal Government for more stringent average vehicle fuel economy standards.</li> <li>vii. Through an RFP process, evaluate the feasibility of strategic parking supply restrictions, toll roads and congestion pricing for vehicles (e.g. pay as you pollute programs).</li> <li>viii. Develop a prioritized list of targeted and focused policies or programs to reduce GHG and air emissions from heavy duty diesel busses and vehicles operating in the City. For example, establish a by-law using best practice emission standards (e.g. US Environmental Protection Agency (EPA) and European Commission (EC) emission standards for non-road diesel engines (Tier 1 to Tier 4) and emission factors developed for Tier 0 engines, by the California Air Resources Board (CARB), Metro-Vancouver Emission Standards, etc.)</li> <li>ix. Work with stakeholders to advocate for reducing GHG emissions from other transportation sources, including cruise ships, watercraft, sea planes, and helicopters operating in the harbor.</li> <li>x. Develop and implement incentives and programs to reduce single occupant vehicle use among small businesses in the downtown core. For example, work with the local Chamber of Commerce on the development and implementation of a telecommuting / alternative scheduling initiative (e.g. condensed work week/four-day work week).</li> </ul>
T2: Radical Public Transit Improvements	<ul style="list-style-type: none"> <li>i. Work with BC Transit and the Province to advocate for a high performing rapid transit system to serve regional populations that travel to and from the City of Victoria.</li> </ul>



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	<ul style="list-style-type: none"> <li>ii. Support the expansion and use of the transit network by accelerating transit shelter replacement and traffic signal upgrades that support increased efficiency and appeal of public transit.</li> </ul>
T3: Radical Mode Shift (Active Transportation)	<ul style="list-style-type: none"> <li>i. Develop and implement a Sustainable Mobility Strategy by 2018 that enables the City to meet established greenhouse gas (GHG) emissions reduction, mobility, and transportation targets.</li> <li>ii. Implement a study to better understand what the barriers by gender, age, demographic are to active transportation.</li> <li>iii. Continue sidewalk, pedestrian, transit, roadway, and bikeway investment projects that encourage the shift to active transportation modes.</li> <li>iv. Increase the number of secure and protected bike parking and maintenance facilities available to the public across the municipality. As applicable, enhance off-street bicycle parking standards and requirements for new private and institutional developments.</li> <li>v. Pursue the development and implementation of a bike-share program in Victoria's downtown core and other high-potential cycling areas within the municipality.</li> <li>vi. Implement policies for new construction that reduce parking requirements in exchange for increased bicycle parking and associated demand management initiatives.</li> </ul>
T4: Design Better Neighborhoods	<ul style="list-style-type: none"> <li>i. Continue to support the development of village neighborhoods with walkable and bikeable access and connections to services, nature, transit, and destinations, locally and across the city as required by the OCP and local area plans.</li> <li>ii. Implement a program to collection information from City staff to identify and assess the barriers that City employees face (or perceive they face) in their efforts to implement community -focused sustainable transport programs and policies.</li> <li>iii. Work with stakeholders through direct and indirect engagement to ensure that the Sustainable Transportation Strategy is alignment with Regional Transportation initiatives so that there is an opportunity for cross-funded initiatives.</li> <li>iv. Establish a method for projecting the lifecycle carbon emissions of land use and transportation investments to inform a strategy to reduce GHG emissions from construction activities. For example, using economic input-output lifecycle databases (such as the EIO.LCA.net model) which bases GHG emissions off total construction value by building type.</li> <li>v. Develop a plan to collect the necessary data to establish transportation specific climate action metrics, such as community measures such as vehicle kilometers traveled, walkability scores, access to transit, and bicycle ownership, commute rates.</li> </ul>

Breakthrough Climate Action Goal	Proposed Initiatives
W1: 100% Organic Waste Diversion By 2041	<ul style="list-style-type: none"> <li>i. Establish sectorial organic waste diversion targets that support the goals of eliminating organic waste going to landfill by 2050, and achieving the City's GHG emission reduction target.</li> <li>ii. Increase the overall diversion of organic waste from the landfill by working with waste haulers, food suppliers, retailers, restaurants, and households through the development and implementation of food waste education, behavioral change campaigns (e.g. Metro Vancouver Love Food; Hate Waste campaign), and incentives.</li> <li>iii. Complete a broad and comprehensive survey to understand the barriers to reducing household organic waste, yard waste, and contamination of the waste streams.</li> <li>iv. Pilot a composting rewards program and/or community composting project. Provide technical assistance and resident waste reduction resources.</li> <li>v. Undertake a value chain food study to assess where and why food waste occurs in Victoria.</li> <li>vi. Complete a study to assess the highest and best use of organic waste by stimulating end markets that recover value, reduce GHG emissions, and where possible, maintain the local nutrient cycle, from organic waste streams. Implement the recommendations of the study.</li> <li>vii. Support non-profit, private and charity sectors like the Victoria Foundation and the Food Share Network in diverting food from the pre-waste stream for redistribution to food security organizations and projects.</li> </ul>
W2: Reduce consumption related GHG emissions by Maximizing Reuse, Recycling, and Material Recovery	<ul style="list-style-type: none"> <li>i. Develop an integrated waste management plan that embraces the principles of the circular economy.</li> <li>ii. Implement a waste tracking program to develop a baseline of waste volumes, waste composition, and diversion rates across Victoria's waste streams. Use this to identify barriers to meeting the City's waste and organic's reduction targets.</li> <li>iii. Advocate to the Province to implement a Province-wide standardized waste and recycling system that is easy to understand and use.</li> <li>iv. Expand social procurement policy to include "Design Out of Waste" principles and performance metrics.</li> </ul>

Draft Climate Adaptation Goals & Initiatives

Breakthrough Climate Action Goal	Proposed Initiatives
A1: Citizen's are equipped for	<ul style="list-style-type: none"> <li>i. Work in collaboration with the CRD, Pacific Institute for Climate Solutions and stakeholders to expand public knowledge of the impacts of climate change, and the business case that supports it. Provide homeowner specific information on what families can do to mitigate and adapt to</li> </ul>



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climate change	<p>climate change. Use imagery that depicts possible impacts of projected conditions, such as the impact of King Tides on current infrastructure or the effect of future sea level rise on nearby or iconic locations can be effective at focusing the attention of the public and politicians around the challenges associated with rising sea levels. Support the initiative with targeted funding enhanced collaboration and engagement.</p> <p>ii. Institutionalize climate preparation planning and best practices in City operations, land use programs and decision-making, and monitor effectiveness of climate change preparation actions by incorporating the risks and vulnerabilities of identified climate related impacts into City Implementation Plans.</p>
A2: Changing environments and ecosystems are managed	<p>i. Incorporate biodiversity objectives into City Greenways program and expand program into parks and additional streets.</p> <p>ii. Explore the creation of Environmental Development Permit Area or other mechanism to protect and enhance shoreline and marine habitats.</p> <p>iii. Explore the creation of an Environmental Development Permit Area or other tools in Bowker Creek Watershed to improve storm water management.</p>
A3: The economy is climate proof	<p>i. Implement a public climate action awareness campaign to draw attention to the City's actions and the rationale behind the business case for mitigation and adaptation.</p> <p>ii. Review and address local policy and regulatory barriers to small scale commercial urban agriculture.</p> <p>iii. Advocate for the creation of a food and farmland trust for the Region</p> <p>iv. Advocate that the CRD complete an assessment of the regions food self-sufficiency status. Use this information to work with the CRD, Pacific Institute for Climate Solutions and stakeholders to expand public knowledge of region and island food self-sufficiency status through, for example, advertising campaigns, awards, certification, adoption of sustainability indicators and partnership with NGOs.</p> <p>v. Develop a multi-stakeholder team to develop case studies and projects to understand vulnerabilities to the local economy because of climate change.</p>
A4: Full investment in climate resilient infrastructure	<p>i. Advocate changes to BC Building Code to mitigate risks from the projected impacts of climate change to buildings and occupants.</p> <p>ii. Prioritize the upgrading of sanitary and storm drain infrastructure identified as being at risk of failure, and/or having an economic and social impact to the surrounding area should the infrastructure be overwhelmed.</p> <p>iii. Update the Emergency Preparedness Strategy to incorporate the following actions:</p> <ul style="list-style-type: none"> <li>o Partner with communications companies to improve public awareness of communication options during extreme weather events including mass communication systems.</li> <li>o Support the installation and use of power storage and supply devices to provide power to critical and essential services and infrastructure during any extended power outages.</li> <li>o Update Victoria's Emergency Management public education program to include weather related hazards and their potential</li> </ul>



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	<p>impacts (including heat waves and power outages on vulnerable populations).</p> <ul style="list-style-type: none"> <li>o Raise awareness of increased risk to vulnerable populations and critical services susceptible to over-heating during hot weather.</li> <li>o Provide information to the owners of buildings in areas vulnerable to wind storm and coastal flood impacts through emergency preparedness workshops. This information should include recommendations for how to avoid or reduce building damage and personal injury.</li> <li>o Identify suitable cooling centers and establish multi-agency duties, responsibilities and response protocols."</li> </ul> <p>iv. Advocate CRD continue drinking watershed land stewardship activities and maintenance practices to protect water quality due to increased storm and blow down activity, prolonged drought, or extreme rains.</p> <p>v. Advocate that the CRD implement water conservation programs, like the following initiatives.</p> <ul style="list-style-type: none"> <li>o Modify home water invoices and change these to "Home Water Reports," bi-monthly off-bill mailings, which should feature social comparisons to increase water consumption transparency.</li> <li>o Water meter replacements and associated upgrades.</li> </ul> <p>vi. Continue to conduct building condition assessments to rate all buildings against all hazards (seismic and climate change impacts) and encourage upgrades to current BC Building code levels wherever possible.</p> <p>vii. Continue to integrate climate change resiliency measures into local area plans using available information on climate change risks and vulnerabilities in plan development</p>
A5: Climate change risks are known and tracked	<ul style="list-style-type: none"> <li>i. Monitor and manage coastal erosion on city owned and managed lands.</li> <li>ii. As part of a communication strategy, immediately recognize impacts and threats when they occur to generate public and political interest, and support for adaptation planning. When impacts occur, capitalize on the political and social momentum to educate, and enact change.</li> <li>iii. Advocate that the CRD complete a social mapping initiative to identify target groups, buildings, and critical services that would be vulnerable to prolonged storm (wind, coastal) and heat events.</li> <li>iv. Advocate to the Province to; conduct a needs assessment to identify those Victoria citizens most at risk of climate change related food and energy insecurity, and develop strategies to address these inequalities.</li> <li>v. Update Hazard Risk and Vulnerability Assessment to incorporate climate change projections, and review on five-year cycle or more frequently.</li> </ul>

*Municipal Operations - Draft Climate Action Goals & Initiatives*

Breakthrough Climate Action Goal	Proposed Initiatives
O1: Radical Reduction in Corporate	<ul style="list-style-type: none"> <li>i. Adopt the proposed interim GHG reduction target of 60%, below 2007 levels, by 2030.</li> </ul>



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GHG Emissions	<ul style="list-style-type: none"> <li>ii. Commit to reporting annually on progress towards prioritized actions, and the interim 2030 GHG reduction target, as identified in the Climate Leadership Plan (CLP)</li> <li>iii. Commit to updating the Climate Leadership Plan, and identifying new priority GHG reduction actions by the end of 2020.</li> <li>iv. Perform an analysis of the costs and benefits of such a policy in Victoria to formulate an informed position on a carbon pricing policy for Victoria. Adopt this policy, which would include an internal cost of carbon, by 2020.</li> <li>v. Develop a strategy to incorporate climate action performance measures into the City's annual budgeting process. Collect the necessary departmental data to establish sustainability performance baselines to improve the core business (2 years to focus on the gaps), to evaluate systems and processes.</li> <li>vi. Expand the social procurement policy to incorporate the evaluation of environmental impacts, such as GHG emissions, over a product or contracted services lifecycle.</li> <li>vii. Develop an Energy and Water Conservation Management (ECM) Plan to guide high efficiency and low-carbon investments in City facilities as well as necessary O&amp;M activities to maintain the expected efficiencies / reductions in carbon over time. Set a policy to conduct energy efficiency focused operational reviews of infrastructure annually. Require commissioning on all new construction and major renovations. The ECM Plan should require the City to: <ul style="list-style-type: none"> <li>o Conduct ASHRAE Level II audits on those buildings consuming more than 2,000 GJ per year over 3 years.</li> <li>o ASHRAE Conduct Level I audit on all facilities consuming between 500 and 2,000 GJ annually over 3 years.</li> <li>o Apply to BC Hydro's Continuous Optimization Program to access funds for recommissioning larger buildings.</li> <li>o For all major retrofit activities, that have a poor payback period, work to secure partner funding.</li> </ul> </li> <li>viii. Update the Capital Asset Management Plan (CAMP) and associated policy documents to require that all new City building performance requirements align with the Step Code requirements for near net-zero buildings. Support the adoption of the change through industry workshops and staff training sessions.</li> <li>ix. Direct City staff to investigate new procurement process(es) for City-led Passive Houses or alternate near zero emissions new developments. Use pilot studies to assess the value of such a process as a tool for industry change, and GHG emission reductions. Leverage the experience gained from the above actions to inform a more specific policy to define and govern outcomes for "City-led" projects by 2020.</li> <li>x. Optimize data collection and analysis on corporate vehicle use and fuel consumption using telematics and fueling technology. Use this data to optimize fleet by targeting replacement of vehicles with lowest efficiency and utilization.</li> <li>xi. Implement a vehicle and equipment right sizing policy that prioritizes low-carbon fuels for fleet vehicles, including biodiesel, compressed natural gas, liquid natural gas, propane, and electricity where</li> </ul>



Breakthrough Climate Action Goal	Proposed Initiatives
	<p>appropriate as well as shared vehicle services that can serve City business needs.</p> <ul style="list-style-type: none"> <li>xii. Expand active transportation programs and facilities for City staff in all locations, such as providing employee transit programs, access to electric bikes, access to car share vehicles etc.</li> <li>xiii. Complete a study to identify and implement suitable alternative work style strategies (e.g. remote work and distributed teams) for City operations.</li> <li>xiv. Create a municipal car sharing program to more efficiently allocate city resources and demonstrate the value of this to City staff. Municipal car sharing programs function similarly to car sharing programs for residents. They encourage fleet sharing between city departments to provide more efficient and effective access to cars for employees, while reducing the amount of resources spent on fleet management.</li> </ul>