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## Community Climate Action Plan

# Big Move: Low-Carbon Development



### Target

By **2050, 90% of residents** can access their daily needs and efficient transit within an easy walk/roll.

## Why is it important?

- More land can be protected for nature and recreation.
- Compact neighbourhoods are easier to serve with efficient transit.
- Less infrastructure (roads, pipes, etc.) is needed, which saves taxpayers' money.
- Daily needs close by means more independence for those who can't drive.
- Cycling and walking are good for health and reducing pollution.

## What can be done now?

- **Review** current neighbourhood nodes and corridor policies, and bolster for complete community land use
- **Review** policies for urban containment and green space preservation (e.g. OCP and community plans)

## Co-Benefits

- Good health and well-being
- Decent work and economic growth
- Clean water and sanitation
- Sustainable cities and communities
- Affordable and clean energy
- Life on land

UN Sustainable Development Goals, "Climate Action" is not shown

## Who else is doing it?

- **Blatchford, Edmonton, AB** - a new zero-carbon community powered by renewable energy, linked with transit
- **UniverCity, Burnaby, BC** - a compact community with high green standards, water managed to protect salmon streams
- **Saanich, BC** - an urban containment boundary protects farmland and natural areas and concentrates development
- **Vancouver, Richmond, BC** - new climate frameworks include walkable city goals

## Policy Options

### 1A 10-Minute City

- Intensify growth in city cores and slow growth in outskirts by planning most new developments in existing neighborhoods
- Concentrate, where possible, housing in areas well-served by transit, cycling, and walking networks to make it easier to walk and bike for daily needs

### 1B Hidden Housing Solutions

- Encourage or require new single-family and semi-detached homes to be "secondary-suite-ready"
- Permit up to two accessory dwelling units per single-family home along transit corridors and commercial areas and TRU (e.g. a ground-floor suite and a laneway home)

### 1C Green New Neighborhoods

- Encourage or require higher sustainable development standards for new subdivisions through incentives or regulations (examples below):
  - Homes built in new neighbourhoods must achieve a higher standard of energy efficiency and/or use a low-carbon energy system for space and water heating
  - Require enhanced protection and/or restoration of healthy ecosystems impacted by the development of new neighborhoods (e.g. green stormwater infrastructure and tree canopy requirements)

### 1D Urban Containment

- Create an urban containment boundary that encompasses existing developed areas of the city (i.e. new development will occur only in previously developed areas of the city)

## How does it rank?

Based on modelling and best practices review, each Big Move was ranked against these four criteria in order to determine feasibility and potential impact.



**Emissions Reduction** - the relative emissions impact of the action.

**City Influence** - the amount of control or authority the City has to implement the action.

**Ease of Implementation** - how easy the action would be to implement.

**Co-Benefits** - benefits the action could achieve, other than emissions reductions (e.g. improve air quality).



# Community Climate Action Plan Big Move: Car-Light Community



## Target

By **2050, 50% of trips** in Kamloops to be by active transportation and transit.

### Why is it important?

- Reducing car and truck traffic makes our city safer and healthier.
- Lively, walkable neighbourhood centres are good for local businesses.
- Separated bike lanes encourage people to cycle.
- E-bikes make it easier to climb hills and ride longer distances.
- Reducing car/truck carbon pollution is one of the biggest climate actions the city can take.

### What can be done now?

- **Design and budget** a complete cycle network
- **Explore and develop** superblock pilot projects
- **Commission** E-bike/cargo-bike strategy
- **Commission** an urban freight strategy for efficient and low-carbon goods movement
- **Review** low-emission zone policies underway in other BC cities

### Co-Benefits

- Good health and well-being
- Decent work and economic growth
- Industry, innovation, and infrastructure
- Reduced inequality
- Sustainable cities and communities

UN Sustainable Development Goals, "Climate Action" is not shown

### Who else is doing it?

- **Barcelona and Vitoria-Gasteiz, Spain** - world leading neighbourhood conversions to low-emission superblocks<sup>1</sup>, converting excess space to parks
- **Uppsala, Sweden** - invested in cycling networks such that cycling is now the leading mode of transport in the urban centre
- **Paris, France** - heavy subsidies for E-bikes and E-bike sharing program

<sup>1</sup> Superblocks are aggregates of city blocks with traffic restricted to the roads around the outside. The Guardian, 2016.

### Policy Options

2A

#### Low-Emissions Superblocks and Zones

- Downtown superblock pilot to convert streets into areas that prioritize walking/ cycling, greenspace, and/or public gathering
- Prioritize low-emissions vehicles in certain areas of city

2B

#### Active Mobility

- Accelerate the build-out of the cycling and walking network to make it easy, safe, and accessible to walk, cycle, and "roll"
- Provide incentives for E-bike and cargo-bike purchases, and secure bike parking with access to electricity
- Support development of micro-hubs that enable low-carbon freight delivery or shared mobility services (e.g. bike sharing, scooter sharing)

2C

#### Transit and School Bus Service Tune Up

- Optimize transit service to the community's land use
- Increase transit frequency in areas of increased population and employment densities
- Extend school bus service to cover students who live more than 1.6 km from school (currently 4 km)
- Implement a walking school bus program for students who live less than 1.6 km from school

2D

#### City-wide Transportation Demand Management

- Support the implementation of transportation demand management programs that help people make fewer trips by car and use more sustainable transportation options such as transit, ridesharing, walking, and biking

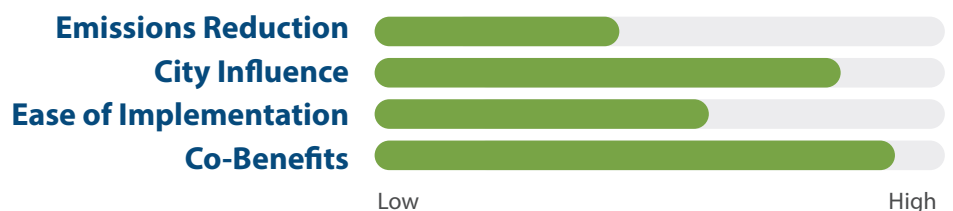
2E

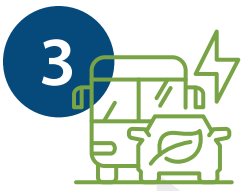
#### Kamloops Car Share

- Support the development of a city-wide car-share program to reduce the number of privately-owned vehicles operating in the city and encourage more sustainable modes of transportation

### How does it rank?

Based on modelling and best practices review, each Big Move was ranked against these four criteria in order to determine feasibility and potential impact.





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## Community Climate Action Plan

# Big Move: Zero-Emissions Transportation



### Target

By **2050, 85% of kilometres driven** by Kamloops registered passenger vehicle owners to be by zero-emissions vehicles.

## Why is it important?

- Switching to EVs reduces one of the city's biggest sources of GHGs.
- All-battery EVs emit no pollution from the tailpipe, meaning healthier air to breathe.
- BC has a clean electricity grid, so going electric is a big win for the climate.
- EVs have lower maintenance costs.

## What can be done now?

- **Adopt** an EV-ready bylaw for new development
- **Begin** planning and budgeting for publicly accessible EV charging
- **Initiate** a green finance and policy review for retrofitting buildings for EV charging and low-carbon heating
- **Commission** an urban freight strategy for efficient and low-carbon goods movement

## Co-Benefits

- Good health and well-being
- Affordable and clean energy
- Decent work and economic growth
- Industry, innovation, and infrastructure
- Sustainable cities and communities

UN Sustainable Development Goals, "Climate Action" is not shown

## Who else is doing it?

- **New Westminster, BC** - target 50% of all kilometres driven by vehicles registered in city to be ZEVs by 2030
- **Langley, BC** - heavy-duty vehicle policy is in process
- **Scotland** - developed a utility-led roadmap to zero-emission cities that quantified needed EV charging stations and heat pumps
- **New York and California, USA** - ZEV for medium- and heavy-duty vehicles projects in place or under consideration

## Policy Options

### 3A Zero-Emissions Vehicle Strategy for Light-Duty Vehicles

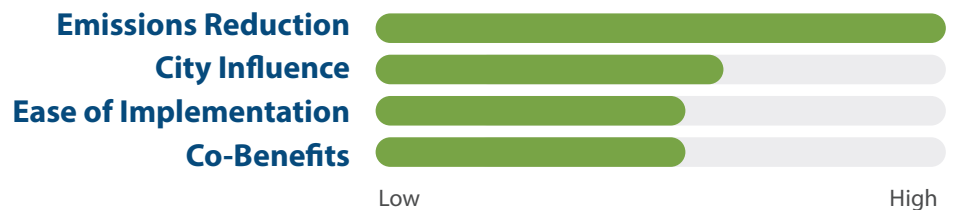
- Advocate for stronger zero-emission vehicle (ZEV) mandates from provincial/federal governments
- Develop a public charging network and require EV charging in new developments
- Encourage EV adoption through incentives and outreach
- Develop zero-emission zones and ZEV priority parking
- Encourage EV car-share, taxi, and ride hailing

### 3B Enhanced ZEV Strategy for Medium- and Heavy-Duty Vehicles

- Support BC Transit's Low Carbon Fleet Program, which aims to replace diesel buses with electric or renewable natural gas buses
- Support a transition to zero-emissions school buses
- Explore introducing a fee for commercial loading/parking that is discounted for zero-emissions vehicles

## How does it rank?

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## Community Climate Action Plan

# Big Move: Zero-Carbon Homes & Buildings



### Target

By **2030**, all new and replacement heating and hot water systems to be zero emissions.

## Why is it important?

- After transportation, buildings are the second highest source of GHG emissions in the city.
- Switching to electric heating and cooking improves indoor air quality in buildings.
- Heat pumps are super efficient, work in cold climates, and can provide cooling in summer.
- BC has a clean electricity grid, so going electric is a big win for the climate.
- Kamloops is also well suited to solar energy.

## What can be done now?

- **Implement** low-carbon pathway along with Energy Step Code
- **Develop** residential heat pump incentive program
- **Support and contribute** to a regional or provincial retrofit program
- **Review** opportunities for low-carbon retrofit tax incentives

## Co-Benefits

- Good health and well-being
- Affordable and clean energy
- Decent work and economic growth
- Sustainable cities and communities

UN Sustainable Development Goals, "Climate Action" is not shown

## Who else is doing it?

- **Boulder, USA** - successful building electrification and heat pump campaign
- **Burnaby, Port Moody, New Westminster, Surrey, Richmond, West Vancouver, BC** - relaxation on Energy Step Code to incentive low-carbon energy systems
- **Regional District of Central Kootenay, BC** - program that offers on-bill financing for energy retrofits

## Policy Options

### 4A New Buildings - Community-Wide

- Set targets for zero-carbon new buildings and encourage low-carbon new buildings with existing tools (e.g. Step Code)
- Advocate to the Province for stronger zero-carbon building regulations
- Incentives for energy efficiency and low-carbon buildings (e.g. municipal top-up towards provincial/utility incentives)
- Explore incentives for energy efficient building materials and embodied carbon requirements

### 4B Existing Buildings - Community-Wide

- Support an ambitious program to retrofit existing buildings, focusing on health, climate resilience, and greenhouse gas emissions reduction
- Explore incentives, financing, and marketing opportunities to encourage retrofits of existing buildings; leverage available grant funding whenever possible

### 4C Thompson Rivers University Electrification

- Learn from TRU's aggressive carbon reduction program for buildings (i.e. all new buildings to use clean energy for space and water heating; convert existing buildings by 2030)
- Explore opportunity to leverage for local industry capacity-building

## How does it rank?

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# Community Climate Action Plan Big Move: Zero-Waste/Circular Economy



Kamloops to be a **zero-waste community by 2040.**

## Why is it important?

- Capturing emissions from green and wood waste reduces methane emissions, a potent GHG.
- Repurposing materials and upcycling can keep more value in the local economy.
- A zero-waste system supports personal action to reduce consumption-based emissions.

## What can be done now?

- **Undertake** feasibility study for biogas capture from organics collection
- Policy/bylaw **review** to require or encourage building construction and materials reuse

## Co-Benefits

- Affordable and clean energy
- Decent work and economic growth
- Industry, innovation, and infrastructure
- Sustainable cities and communities
- Responsible consumption and production

UN Sustainable Development Goals, "Climate Action" is not shown

## Who else is doing it?

- **Surrey, BC** - successful biogas facility
- **Uppsala, Sweden** - program that focuses on circular economy and integrated energy systems
- **Vancouver, BC** - private sector construction and building materials reuse

## Policy Options

### 5A Zero-Waste Research and Innovation Centre

- Create a zero-waste research and innovation centre
- Support businesses for materials reuse, products as a service, upcycling, and more

### 5B Local Organics Collection and Processing

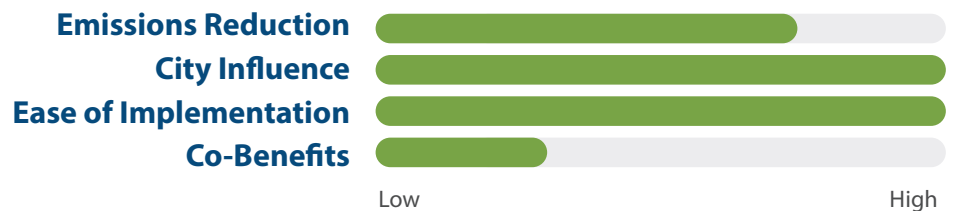
- Capture all organic waste for beneficial end use
- Investigate producing biofuel from local organics for city uses (e.g. for fleet vehicles or heating civic facilities)
- Explore the feasibility of increasing landfill gas capture rates for beneficial end use (e.g. for fleet vehicles or generating electricity)

### 5C Waste Diversion

- Reduce and/or divert 90% of paper, yard and wood waste from entering the landfill by 2032
- Explore strategies and opportunities to reduce single-use items and plastics
- Implement requirements for waste diversion and materials reuse from construction and demolition sites
- Integrate waste systems with local energy production

## How does it rank?

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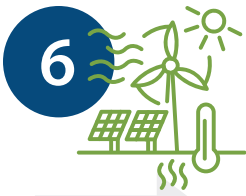


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**Co-Benefits** - benefits the action could achieve, other than emissions reductions (e.g. improve air quality).



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# Community Climate Action Plan Big Move: Renewable Energy



## Target

This Big Move is ongoing and does not have a specific target.

### Why is it important?

- Producing energy locally makes a household or neighbourhood less vulnerable to grid disruptions.
- With higher demand for electricity (e.g. from EVs and heat pumps), the grid needs to be more efficient and flexible.
- Everyone is going to need more green energy expertise and products—Kamloops can lead.
- Green jobs of the future require partnerships and innovation.

### What can be done now?

- **Explore** renewable energy opportunities with key local partners
- **Investigate** opportunity for a renewable energy utility, linked with the City's existing sewer and water utility, along with governance and financial models

### Co-Benefits

- Quality education
- Affordable and clean energy
- Decent work and economic growth
- Industry, innovation, and infrastructure
- Sustainable cities and communities
- Partnerships for the goals

UN Sustainable Development Goals, "Climate Action" is not shown

### Who else is doing it?

- **New Westminster and Nelson, BC** - community solar gardens
- **Barcelona, Spain** - private sector providing 100% renewable home energy systems
- **Uppsala, Sweden** - energy program integrates multiple energy sources with roadmap to net negative GHGs by 2050

### Policy Options

#### 6A Neighbourhood Scale Energy

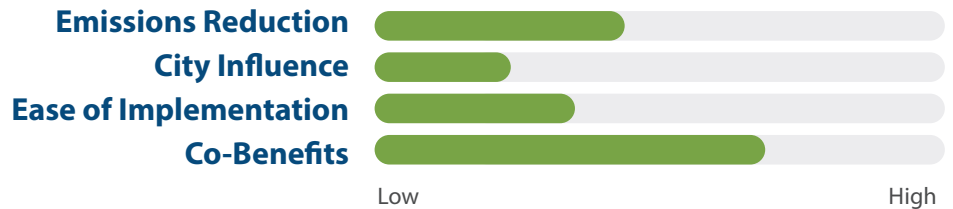
- Explore community and neighbourhood-scale renewable energy systems and storage for long-term energy security and flexibility
- Support research and development opportunities with academia, energy companies, business, institutions, and the community

#### 6B Green Industrial Park 2.0

- Position Kamloops as a research, technology, and manufacturing hub for BC's low-carbon transition
- Explore flexible grid options for resilient and efficient systems that can cost-effectively handle increased loads from electric vehicles and building electrification (e.g. heat pumps)

### How does it rank?

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## Community Climate Action Plan

# Big Move: Zero-Carbon Civic Operations



The City of Kamloops to strive to reduce carbon emissions from municipal operations by **40% by 2030 and 100% by 2050.**

### Why is it important?

- Demonstrating the City’s commitment through action builds community support and buy-in.
- Staff can become more familiar with new practices (e.g. higher building standards) expected of builders.
- Stimulates the local green building and energy economy.

### What can be done now?

- **Initiate** a corporate energy review
- **Adopt** an internal carbon price for decision making
- **Commit** all new City buildings to be zero-carbon
- **Commit** to transitioning buildings and fleets to electric/zero-carbon
- **Incentives** for staff (e.g. E-bikes, transit passes)

### Co-Benefits

- Affordable and clean energy
- Decent work and economic growth
- Industry, innovation, and infrastructure
- Sustainable cities and communities
- Partnerships for the goals

UN Sustainable Development Goals, “Climate Action” is not shown

### Who else is doing it?

- **New Westminster, BC** - committed to a “climate lens” across all city department work plans in capital and operating budgets
- **Edmonton, AB** - carbon budget and accounting report
- **Los Angeles, USA** - created a Climate Emergency Mobilization Department
- **Metro Vancouver, Vancouver and New West, BC** - adopted an internal carbon price of \$150/tCO<sub>2</sub>e
- All of **Vancouver’s** new buildings build to net zero emissions

### Policy Options

#### 7A Zero-Carbon Civic Operations

- Conduct corporate energy and emissions assessment to strategically phase out fossil fuels use in buildings and fleet
- Support employee climate actions (e.g., green commuting, workplace EV charging)

#### 7B Finance and Implementation

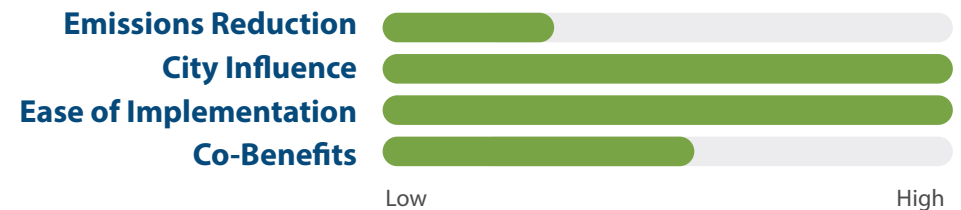
- Incorporate “climate lens” in all City department work plans and in capital and operating budgets
- Establish internal carbon price
- Track and report progress
- Staff resources for coordination and new programs
- Measure, monitor, and publicly report progress

#### 7C Communication and Engagement

- Communications and marketing plan
- Creative community engagement

### How does it rank?

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## Community Climate Action Plan

# Big Move: Healthy Urban Ecosystem



### Target

Increase Kamloops' **urban forest canopy cover to 20% by 2030** and **30% by 2050** to enhance our forests' carbon storage capacity and support biodiversity.

## Why is it important?

- Healthy ecosystems provide us with clean air to breathe and filter the water we drink.
- Trees help keep the city cool and can reduce energy use in buildings.
- Rain gardens can filter out road pollution before it gets into fish streams.
- Being surrounded by nature is good for our health and well-being.
- Healthy grasslands and forests can store carbon.
- Plants and animals depend on healthy ecosystems.

## What can be done now?

- **Initiate** an urban forest/grassland and biodiversity strategy
- **Develop** green infrastructure street standards and pilots
- **Review and update** tree bylaw and policies

## Co-Benefits

- Good health and well-being
- Clean water and sanitation
- Affordable and clean energy
- Sustainable cities and communities
- Life below water
- Life on land

UN Sustainable Development Goals, "Climate Action" is not shown

## Who else is doing it?

- **Boulder, USA, and Saanich, BC** - climate plans contain robust ecosystem and agriculture strategies
- **Burnaby, BC** - green street standards; tree bylaw
- **Surrey, BC** - biodiversity strategy; tree bylaw
- **Montana, USA** - grasslands restoration and carbon offsetting program
- **Edmonton, AB** - building resilient urban ecosystems discussion paper

## Policy Options

### 8A Urban Forests for Climate Cooling

- Monitor tree protection regulations on private and public lands
- Expand urban tree canopy targets to include private land
- Develop native plant standards for public and private land
- Ensure access to public green space with trees and shade

### 8B Protect and Heal Nature

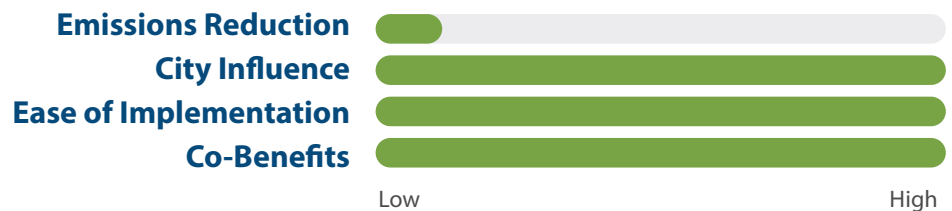
- Develop local carbon-offsetting program linked with biodiversity and conservation
- Develop City and regional biodiversity corridors and ecosystem strategy

### 8C Green Infrastructure

- Integrate green technologies and natural vegetation (e.g. rain gardens) with infrastructure upgrades on public land

## How does it rank?

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