The City of Vancouver is on the unceded traditional territory of the Musqueam, Squamish and Tsleil-Waututh First Nations.

These lands are the foundation of thousands of years of living culture of the Musqueam, Squamish and Tsleil-Waututh peoples.

We acknowledge hən’q̓əmin̓əm’ and Skwxwú7mesh as the original languages of these lands.
Every fraction of a degree matters.
Agenda

Progress update on the Climate Emergency Action Plan in 2022

for information only; no Council decision needed

- Overview
- Status and Forecast
- Big Moves successes, challenges, decisions
- Financials overview, update
- Look Ahead
- Climate Adaptation overview, update
CEAP Carbon Targets

-50% 2030

-10% Vancouver’s Carbon Pollution

2.86M tCO₂e
2007

2.58M 2021

carbon neutral

negative emissions

beyond 2050
climate emergency × reconciliation equity access safety and health economy
$850M estimated annual savings for Vancouver households
Vancouver’s Carbon Pollution

55% natural gas use in buildings

40% gas and diesel in vehicles

2% electricity

3% waste

Community-wide emissions, 2021

(GPC Basic, Scopes 1 and 2)
CEAP

6 Big Moves

1 COMPLETE, WALKABLE NEIGHBOURHOODS

2 ACTIVE TRANSPORTATION & TRANSIT

3 ZERO EMISSIONS VEHICLES

4 ZERO EMISSIONS SPACE & WATER HEATING

5 LOW CARBON MATERIALS & CONSTRUCTION PRACTICES

6 RESTORED COASTS & FORESTS
FORECAST

-50% x 2030

CEAP approved policies
CEAP all policies
CEAP all policies + CleanBC
pre-CEAP

2007 2021
Currently, we are unlikely to reach our targets.

Key decisions by Council and external factors will influence these ratings.

<table>
<thead>
<tr>
<th>Likelihood of hitting 2030 target</th>
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<td>RESTORED COASTS &amp; FORESTS</td>
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</tbody>
</table>

**Pressures**

- External
- Financial
- Schedule
- Staffing
- Policy Decisions
## Big Move Updates

<table>
<thead>
<tr>
<th>Successes and Challenges</th>
<th>Key Upcoming Council Decisions and other influences</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022</td>
<td>2023</td>
</tr>
</tbody>
</table>

**Indicators and Milestones**

Dashboard PDF
1 COMPLETE WALKABLE NEIGHBOURHOODS

90% of people live within an easy walk/roll of their daily needs.

Successes

VANCOUVER PLAN LAYS THE FOUNDATION FOR ACTION

Complete, walkable neighbourhoods; improved transit; transition to climate-friendly buildings

Ecological connectivity; climate resilience; access to green space

BROADWAY PLAN

Complete, affordable, transit-oriented neighbourhoods

SECURED RENTAL POLICY

Rentals in walkable areas; encourages greener buildings
Over half of Vancouver residents live in neighbourhoods without walkable access to daily needs such as food and services.

**COMPLETE WALKABLE NEIGHBOURHOODS**

90% of people live within an easy walk/roll of their daily needs.

**NEIGHBOURHOOD CONCERN**

Resistance to potential changes in neighbourhood character and increased housing density; misunderstanding about climate benefits of denser new buildings

**SLOW RATE OF CHANGE**

Unlike rapid change that can take place in single family neighbourhoods, large scale projects take time
90% of people live within an easy walk/roll of their daily needs.

**Key Decisions**

<table>
<thead>
<tr>
<th>Year</th>
<th>Quarter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2023</td>
<td>Q1</td>
<td>Broadway Plan Update</td>
</tr>
<tr>
<td></td>
<td>Q3</td>
<td>Adding Missing Middle and Simplifying Regulations Report</td>
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<tr>
<td></td>
<td>Q3</td>
<td>?əyəlmezw/Ɂyəlmezw/Jericho Lands Planning Program</td>
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<tr>
<td></td>
<td>Q4</td>
<td>Rupert/Renfrew Station Area Plan</td>
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<tr>
<td>Q1-4</td>
<td></td>
<td>various rental rezonings through Secured Rental Policy</td>
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</tbody>
</table>

*Actual: TBD*
### 2 Active Transportation & Transit

**By 2030, two thirds of trips in Vancouver will be by active transportation and transit.**

<table>
<thead>
<tr>
<th>Safe and Active School Commutes</th>
<th>Faster, More Reliable Transit</th>
<th>More Accessible Streets &amp; Sidewalks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructure improvements; School Streets expansion; Walking School Bus; universal Grade 6/7 Cycling Education, Walk Bike Roll Mini-Grants</td>
<td>New bus bulbs; intersection changes; improved capacity on bus routes</td>
<td>New sidewalks, signals, curb ramps, and crosswalks</td>
</tr>
</tbody>
</table>

**Public E-Bike Share**

Added e-bikes to public bike share (Mobi); new stations expand service area
By 2030, two thirds of trips in Vancouver will be by active transportation and transit.

Challenges

**GETTING MORE OUT OF OUR ROAD SPACE**
Competing demands on limited road space; pace of reallocation

**JURISDICTIONAL COMPLEXITY**
Provincial or regional action needed for certain projects

**LACK OF FUNDING**
Limited funding/resources for active transportation and transit projects
By 2030, two thirds of trips in Vancouver will be by active transportation and transit.

2020: 44%

**Influences**
- TransLink Driving Down Emissions (co-led by Metro Vancouver)
- Translink 10-Year Investment Plan
- Millennium Line UBC Extension (UBCx) decisions
- CleanBC - Clean Transportation Action Plan

**Key Decisions**

- **2023 Q1** Broadway Plan Update *parking requirements and active lane*
- **Q2** Active Mobility Plan
- **Q4** Parking By-law + TDM program revisions
By 2030, 50% of the kilometres driven on Vancouver’s roads will be by zero emissions vehicles.

**3 ZERO EMISSION VEHICLES**

**CITY-WIDE CURBSIDE ELECTRIFICATION**
Fast chargers are accessible within 10min for EVs; kiosks advancing at four sites for film industry (offsetting diesel generators)

**EV CHARGING IN RENTAL BUILDINGS**
Financial support for charging in older MURBs

**CHARGING AT GAS STATIONS AND PARKING LOTS**
Expanded access to chargers; supports renters and MURB residents

In Q3 2022, 24% of the new light duty vehicle registrations in Vancouver were EVs.
By 2030, 50% of the kilometres driven on Vancouver's roads will be by zero emissions vehicles.

**Supply Chain Issues**
Long procurement lead times; utility timelines slow charger deployment

**Limited Charging Options for MURBS**
Rental and older housing stock have less access; strata rules are a barrier

**Accessibility Barriers**
Charger locations, surroundings, designs do not prioritize accessibility
By 2030, 50% of the kilometres driven on Vancouver’s roads will be by zero emissions vehicles.

% ZEVS registered in Vancouver
2016: 0.3%
2021: 2.9%

Key Decisions

2023 Q4
- EV charging rate update (energy-based)
- Residential curbside charging licence

Influences
- Provincial Zero-Emission Vehicle Mandate for Medium- and Heavy-Duty Vehicles
- Provincial “Right-To-Charge” Mandate
**BOLD NEW REQUIREMENTS FOR BUILDINGS**

Zero emissions heating and hot water in new buildings; mandatory cooling and improved air filtration for new multi-unit residential buildings; first carbon regulations for existing buildings in Canada.

**EXPANDED HOMEOWNERS SUPPORTS**

Heat pump incentives, permit streamlining, and owner retrofit coaching for detached houses; grants to retrofit rental and non-market housing; launched Zero Emissions Innovation Centre.

**LOW CARBON NEIGHBOURHOOD ENERGY**

NEU sewage heat recovery system expansion; major renewable energy investments approved for Creative Energy and River District Utility.

---

By 2030, the carbon pollution from buildings will be cut in half from 2007 levels.

Over 60% of the buildings standing today will still be around in 2050.
By 2030, the embodied emissions from new buildings and construction projects will be reduced by 40% compared to a 2018 baseline.

MASS TIMBER LEADERSHIP CONTINUES

Eight projects (7+ storeys) in progress

BY-LAW UPDATE FOR NEW BUILDINGS

First whole-building embodied carbon building code requirements in North America

NEAR-ZERO EMBODIED CARBON HOMES PROGRAM

Incentives for low carbon low-rise construction case studies

Up to 80% of embodied carbon in new buildings is from concrete and steel.
Challenges

LACK OF STANDARDS

Vancouver must pioneer carbon regulations for embodied carbon and existing buildings in Canada.

ACCESS TO TRADES AND MATERIALS

Limited qualified heat pump contractors; supply chain challenges with low-carbon construction materials.

SUPPORTS FOR MULTIFAMILY BUILDINGS

Lack of retrofit supports and incentives for condominium buildings.

LOW CARBON MATERIALS & CONSTRUCTION PRACTICES

ZER0 EMISSION SPACE AND HOT WATER HEATING
By 2030, the carbon pollution from buildings will be cut in half from 2007 levels.

**Key Decisions**

2021: -9%

**LOW LIKELIHOOD**

2023 Q2
- Heritage Energy Retrofit Grant Refresh

Q2
- Hot Water System Replacement Requirements
  *in existing detached homes*

Q4
- Space Heating System Replacement Requirements
  *in existing detached homes*

Q4
- Residential Natural Gas Usage Options

Q4
- NEU Decarbonization Roadmap

**Influences**

- CleanBC Roadmap to 2030 implementation
- Canada Green Buildings Strategy (in development)
By 2030, the embodied emissions from new buildings and construction projects will be reduced by 40% compared to a 2018 baseline.

Key Decisions

**HIGH LIKELIHOOD**

- CleanBC Low Carbon Building Materials Strategy
- Federal Buy Clean Strategy
- National Green Building Strategy

Actual: TBD

**2023 Q4**

By-law changes for mass timber

**Influences**

- CleanBC Low Carbon Building Materials Strategy
- Federal Buy Clean Strategy
- National Green Building Strategy
EQUITABLY EXPANDING OUR URBAN FOREST

Tree planting in the Downtown Eastside: high-need, tree deficit area

STILL CREEK WATERSHED ENHANCEMENTS

Sequestration; green rainwater infrastructure; improved habitat

GREEN RAINWATER INFRASTRUCTURE FOR A RESILIENT CITY

Woodland and 2nd; Richards St, Haro St (completed in 2021); progress on St George Rainway and Tatlow Creek projects

By 2050, sequester 21,000 tCO$_2$e per year within city boundaries.

Urban trees capture more than 80% of the carbon sequestered within Vancouver.
By 2050, sequester 21,000 tCO$_2$e per year within city boundaries.

**PHYSICAL:**
**SPACE AT A PREMIUM**
Urban areas are densifying; fewer trees may fit per parcel

**FINANCIAL:**
**RESOURCES AND BARRIERS**
High cost in hardscaped areas; limited crew capacity

**RESTORED FORESTS & COASTS**

Challenges
By 2050, sequester 21,000 tCO$_2$e per year within city boundaries.

2021: 16,000 tCO$_2$e

**Influences**
- Provincial + Federal Funding for Natural Climate Solutions
- Provincial Adaptation Strategy Implementation
- National Adaptation Strategy

**2023 Q1** Urban Forest Strategy

**Q3** Adding Missing Middle and Simplifying Regulations Report

**Q4** Tree By-Law Update

**tbd** Environmental Land Use Strategy
15 NEW EVS IN CITY FLEET
New light-duty cargo vans and pick ups

EV INFRASTRUCTURE IMPROVEMENTS
New charging stations; future-proofing infrastructure

GHG RETROFITS IN CITY BUILDINGS
Bloedel Conservatory; Kitsilano Pool; VPD Annex; community centres

-27% building GHGs
-57% fleet GHGs since 2008

ZERO CARBON INDICATORS
see Dashboard handout
SUPPLY CHAIN ISSUES
Slow procurement of vehicle, chargers and parts; zero emissions building materials

EV LEADERSHIP REQUIRES OPERATIONAL CHANGES
Charging considerations; vehicle weight; unique operating conditions
**Successes**

**FIRST OF ITS KIND:** ZEE TAP LAUNCHES

25 key actions building on CEAP

**Challenges**

**WORKFORCE AVAILABILITY + SKILLS GAPS**

Limited workforce with green economy skillsets
CEAP FINANCIALS
~$500M REQUIRED INVESTMENT over five years to meet targets

NOT INCLUDED IN THESE PROJECTIONS

- revised BM1 estimates (since VanPlan adoption)
- BM6 (roadmap not written in 2020)
Projected Investment

~$500M REQUIRED INVESTMENT over five years to meet targets

~$270M BAU INVESTMENT

- BAU: maintenance of funding levels from 2019-22 Capital Plan
- Values will be updated in 2023 to reflect 2023-26 Capital Plan, Council decisions, etc.
Projected Investment

~$500M REQUIRED INVESTMENT over five years to meet targets

~$270M BAU INVESTMENT

~$230M FUNDING GAP

COST-EFFECTIVE MEASURES

SENIOR GOVERNMENT/PARTNERS

NEW REVENUE

PRIORITY IN 2023-26 CAPITAL PLAN
2023-26 Capital Plan

-10% increase for CEAP projects
Challenges

Funding gap

External funding uncertainty

Enhanced accountability and reporting
Key Decisions

2023 Operating Budget

Fee modernization opportunities

UPDATE TO COME IN 2023
to inform Mid-Term Capital Plan Update
Currently, we are unlikely to reach our targets. Key decisions by Council and external factors will influence these ratings.

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<td><strong>LIKELY</strong></td>
<td>Policy Decisions</td>
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THAT, in order to achieve our Climate Emergency Action Plan goals, which are currently **not on track** ... Council direct staff to **explore and report back to Council** on accelerated and additional measures...
Upcoming policy decisions

Accelerated + additional measures

CEAP approved policies

CEAP all policies

CEAP all policies + CleanBC

pre-CEAP

2021

2030
POOR AIR QUALITY

SEA LEVEL RISE

MORE EXTREME RAINFALL

MORE HEATWAVES
Climate Adaptation Policy in Vancouver

2012

2018

CLIMATE CHANGE ADAPTATION STRATEGY

2018 UPDATE AND ACTION PLAN
CITY OF VANCOUVER | SUSTAINABILITY GROUP
The Cost-Benefit of Adaptation

$1 spent in preparation

saves $13-15

National Adaptation Strategy for Canada
FASTER THAN PREDICTED

DIFFERENT APPROACHES

INEQUITY

SENIOR GOV FUNDING
Look Ahead

STRATEGY REFRESH

2-year, to bring into alignment with CEAP
- updated, priority actions
- emphasis on equity
- financial framework
QUESTIONS