



Climate Emergency Annual Report

2022



Vancouver
Plan





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'qəmin'əm' and Sḵwxwú7mesh as the original languages of these lands.

A large crowd of people is gathered on a city street for a climate protest. Many individuals are holding up handmade signs and banners. Visible messages include "LOOKING FORWARD TO A BRIGHT WONDERFUL FUTURE", "CLIMATE ACTION NOW CHANGE", "THERE IS NO PLANET B", "RENOVATION", "FEEDS LOCAL", "REVOLUTION", "WASTE LESS", "CLIMATE CHANGE", "PEOPLE'S CLIMATE MOVEMENT", and "RIP". The crowd is diverse in age and appearance. In the background, there are city buildings, streetlights, and tram wires. The sky is overcast.

Every fraction of a degree matters.

CEAP 2022 Annual Report | 2023 02 15 | 3

Photo: Flickr Hailey Sani



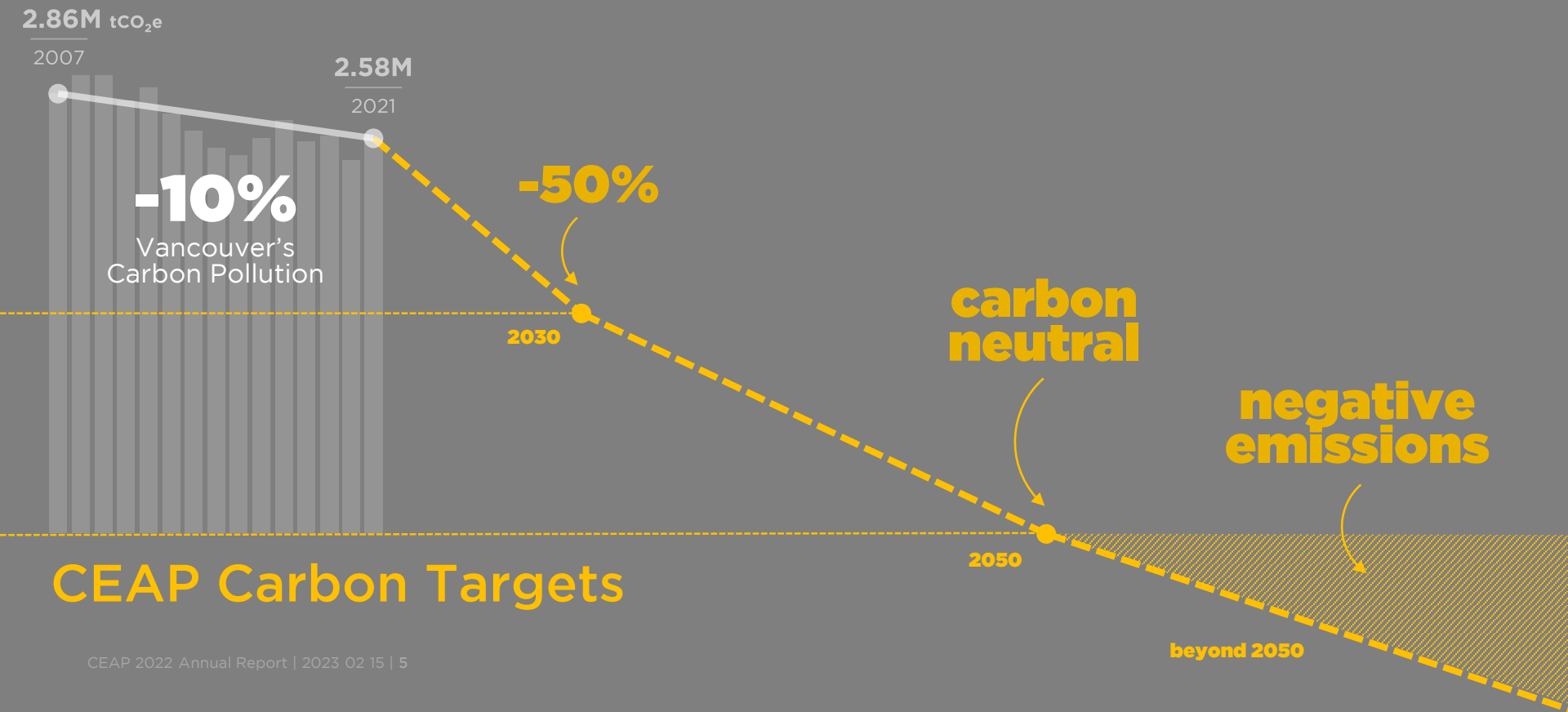
Agenda

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*

STATUS



A photograph of a residential street scene. In the foreground, a young boy wearing a blue jacket and a black helmet is riding a red scooter towards the camera. To his right, a family is walking away from the camera: a girl in a red shirt and floral skirt with a backpack, a man in a grey hoodie and brown pants, and a woman in a grey jacket and black leggings with a backpack. The street is lined with parked cars and trees with pink blossoms. The text "climate emergency × reconciliation equity access safety and health economy" is overlaid on the right side of the image.

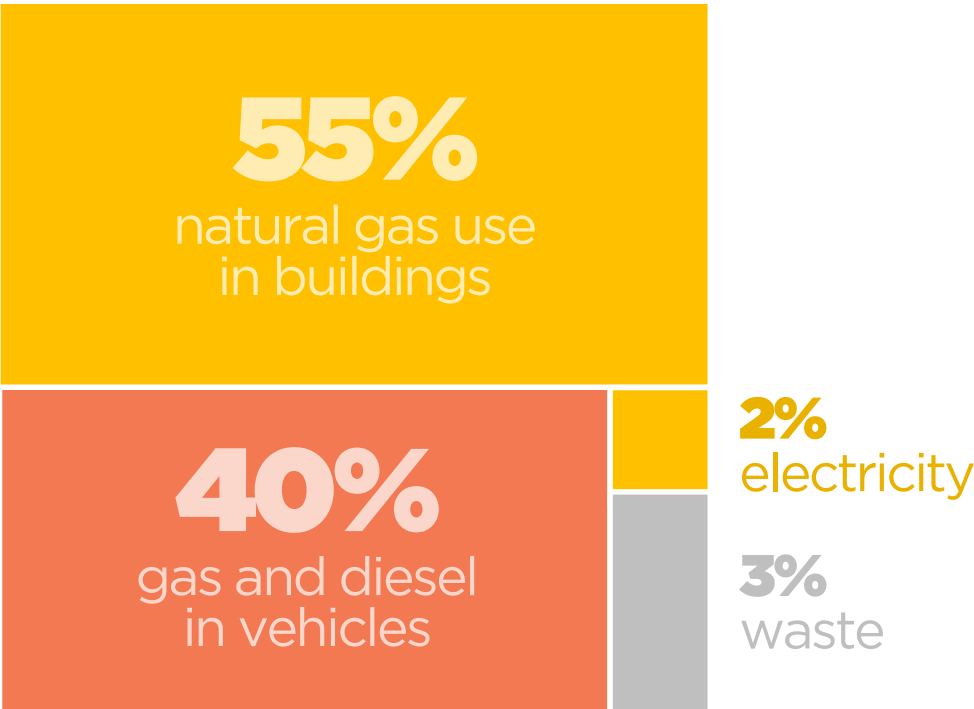
climate emergency × **reconciliation**
equity
access
safety and health
economy



\$850M

estimated annual savings for Vancouver households

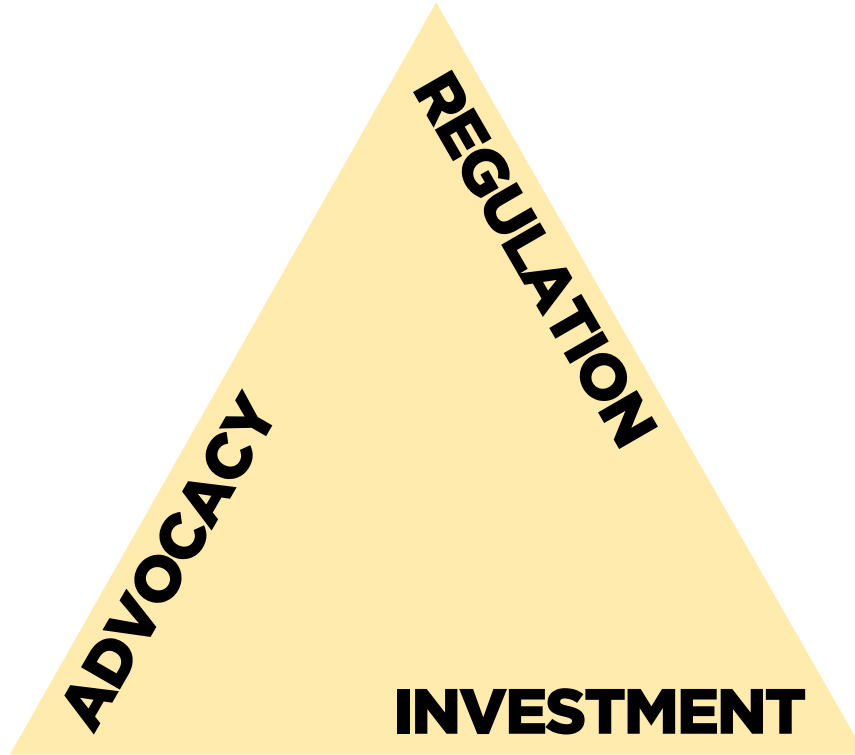
Vancouver's Carbon Pollution



*Community-wide
emissions, 2021*

(GPC Basic, Scopes 1 and 2)

City Tools



CEAP

6 Big Moves

1

COMPLETE, WALKABLE
NEIGHBOURHOODS

2

ACTIVE
TRANSPORTATION
& TRANSIT

3

ZERO EMISSIONS
VEHICLES

4

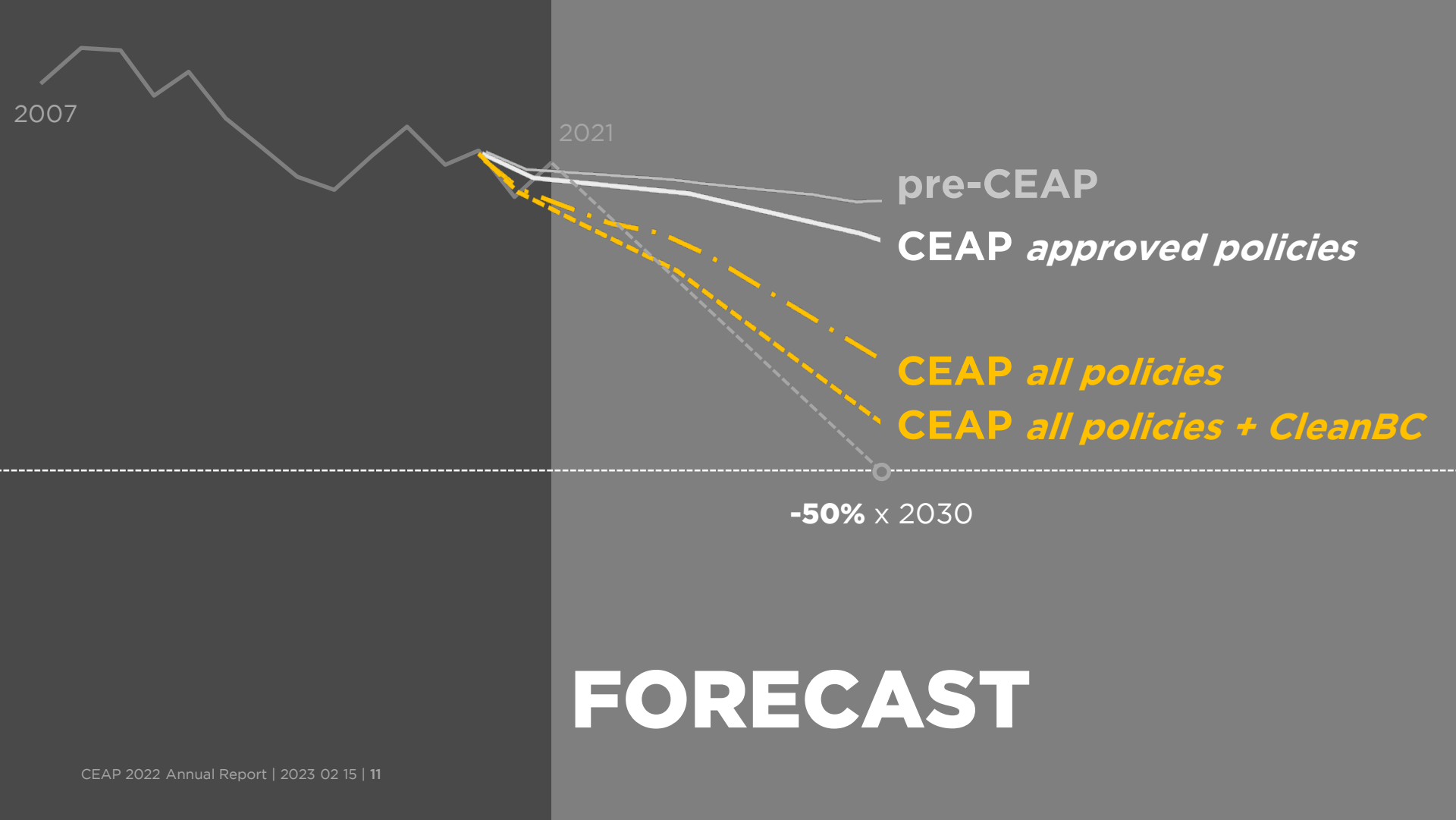
ZERO EMISSIONS
SPACE & WATER
HEATING

5

LOW CARBON
MATERIALS &
CONSTRUCTION
PRACTICES

6

RESTORED
COASTS &
FORESTS



Currently, we are unlikely to reach our targets.

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

		Likelihood of hitting 2030 target
1	COMPLETE, WALKABLE NEIGHBOURHOODS	UNLIKELY
2	ACTIVE TRANSPORTATION & TRANSIT	
3	ZERO EMISSIONS VEHICLES	
4	ZERO EMISSIONS SPACE & WATER HEATING	
5	LOW CARBON MATERIALS & CONSTRUCTION PRACTICES	LIKELY
6	RESTORED COASTS & FORESTS	

Pressures

External	Financial	Schedule
Staffing	Policy Decisions	

Big Move Updates

SUCCESSSES AND CHALLENGES

2022

KEY UPCOMING COUNCIL DECISIONS

and other influences
2023

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

1

COMPLETE WALKABLE NEIGHBOURHOODS

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

Challenges

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

*Over half of Vancouver residents live in neighbourhoods
without walkable access to daily needs such as food and services.*

1

**COMPLETE WALKABLE
NEIGHBOURHOODS**

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

Key Decisions

LOW LIKELIHOOD

Actual: TBD

2023 Q1

Broadway Plan Update

Q3

Adding Missing Middle and Simplifying Regulations Report

Q3

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Q4

Rupert/Renfrew Station Area Plan

Q1-4

various rental rezonings through Secured Rental Policy

2 ACTIVE TRANSPORTATION & TRANSIT

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

Successes

SAFE AND ACTIVE SCHOOL COMMUTES

Infrastructure improvements;
School Streets expansion;
Walking School Bus; universal
Grade 6/7 Cycling Education,
Walk Bike Roll Mini-Grants

FASTER, MORE RELIABLE TRANSIT

New bus bulbs; intersection
changes; improved capacity
on bus routes

MORE ACCESSIBLE STREETS & SIDEWALKS

New sidewalks, signals,
curb ramps, and crosswalks

PUBLIC E-BIKE SHARE

Added e-bikes to public bike
share (Mobi); new stations
expand service area

2 ACTIVE TRANSPORTATION & TRANSIT

*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

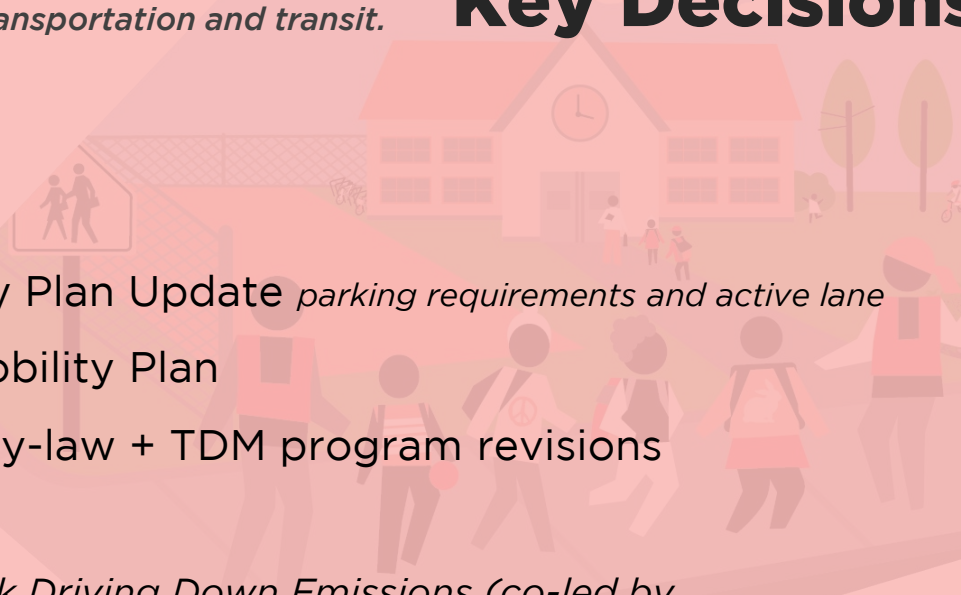
2 ACTIVE TRANSPORTATION & TRANSIT

LOW LIKELIHOOD

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

2020: 44%

Key Decisions

- 
- 2023 Q1** Broadway Plan Update *parking requirements and active lane*
- Q2** Active Mobility Plan
- Q4** Parking By-law + TDM program revisions

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*

3 ZERO EMISSION VEHICLES

By 2030, 50% of the kilometres driven on Vancouver's roads will be by zero emissions vehicles.

Successes

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.***

3 ZERO EMISSION VEHICLES

By 2030, 50% of the kilometres driven on Vancouver's roads will be by zero emissions vehicles.

Challenges

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

3 ZERO EMISSION VEHICLES

MEDIUM LIKELIHOOD

By 2030, 50% of the kilometres driven on Vancouver's roads will be by zero emissions vehicles.

% ZEVS registered in Vancouver **PROXY**

2016: 0.3%

2021: 2.9%

Key Decisions

2023 Q4 EV charging rate update (energy-based)

2023 Q4 Residential curbside charging licence

Influences

- *Provincial Zero-Emission Vehicle Mandate for Medium- and Heavy-Duty Vehicles*
- *Provincial "Right-To-Charge" Mandate*

4 ZERO EMISSION SPACE AND HOT WATER HEATING

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

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

*Over 60% of the buildings standing today
will still be around in 2050.*

5 LOW CARBON MATERIALS & CONSTRUCTION PRACTICES

By 2030, the embodied emissions from new buildings and construction projects will be reduced by 40% compared to a 2018 baseline.

Successes

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**.*

4 ZERO EMISSION SPACE AND HOT WATER HEATING

5 LOW CARBON MATERIALS & CONSTRUCTION PRACTICES

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

4 ZERO EMISSION SPACE AND HOT WATER HEATING

LOW LIKELIHOOD

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

2021: -9%

Key Decisions

- 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)*

5 LOW CARBON MATERIALS & CONSTRUCTION PRACTICES

Key Decisions

By 2030, the embodied emissions from new buildings and construction projects will be reduced by 40% compared to a 2018 baseline.

Actual: TBD

HIGH LIKELIHOOD

2023 Q4

By-law changes for mass timber

Influences

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



6

RESTORED FORESTS & COASTS

*By 2050, sequester 21,000 tCO₂e per
year within city boundaries.*

Successes

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

*Urban trees **capture more than 80%** of the
carbon sequestered within Vancouver.*

6

RESTORED FORESTS & COASTS

*By 2050, sequester 21,000 tCO₂e per
year within city boundaries.*

Challenges

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

6

**RESTORED FORESTS
& COASTS**

MEDIUM LIKELIHOOD

By 2050, sequester 21,000 tCO₂e per year within city boundaries.

2021: 16,000 tCO₂e

Key Decisions

- 2023 Q1** Urban Forest Strategy
- Q3** Adding Missing Middle and Simplifying Regulations Report
- Q4** Tree By-Law Update
- tbd** Environmental Land Use Strategy

Influences

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



GREEN OPERATIONS PLAN

Successes

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

Challenges

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: ZEETAP LAUNCHES

25 key actions building on CEAP

Challenges

WORKFORCE AVAILABILITY + SKILLS GAPS

Limited workforce with
green economy skillsets

CEAP FINANCIALS

An aerial night photograph of the BC Parliament Building in Victoria, British Columbia. The building is illuminated, showing its distinctive Art Deco architecture with two clock faces on the upper levels. The surrounding city is lit up, and the mountains in the background are visible under a dark sky. Two flags are visible in the lower left foreground.

Investment Projections

~\$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

Funding gap

**External funding
uncertainty**

**Enhanced
accountability
and reporting**

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.

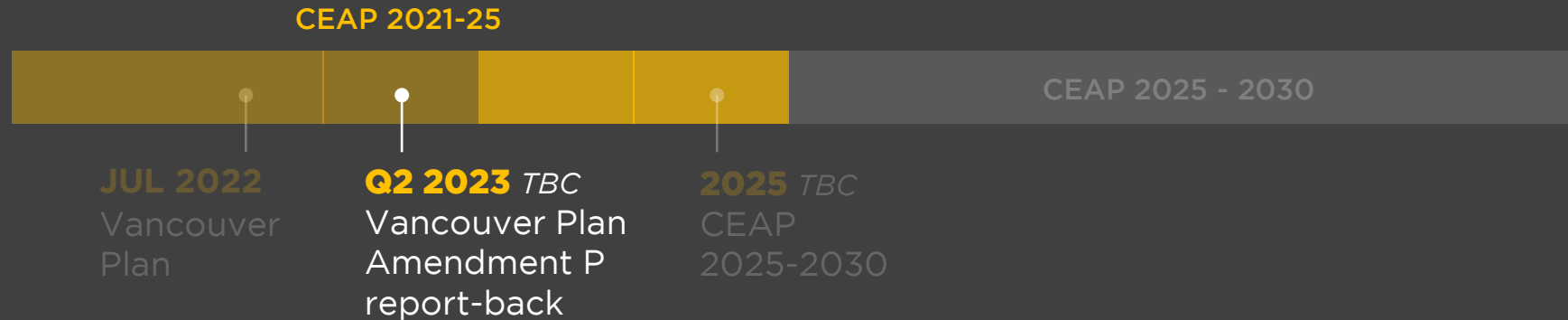
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Pressures

External	Financial	Schedule
Staffing	Policy Decisions	

Vancouver Plan – Amendment P

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...



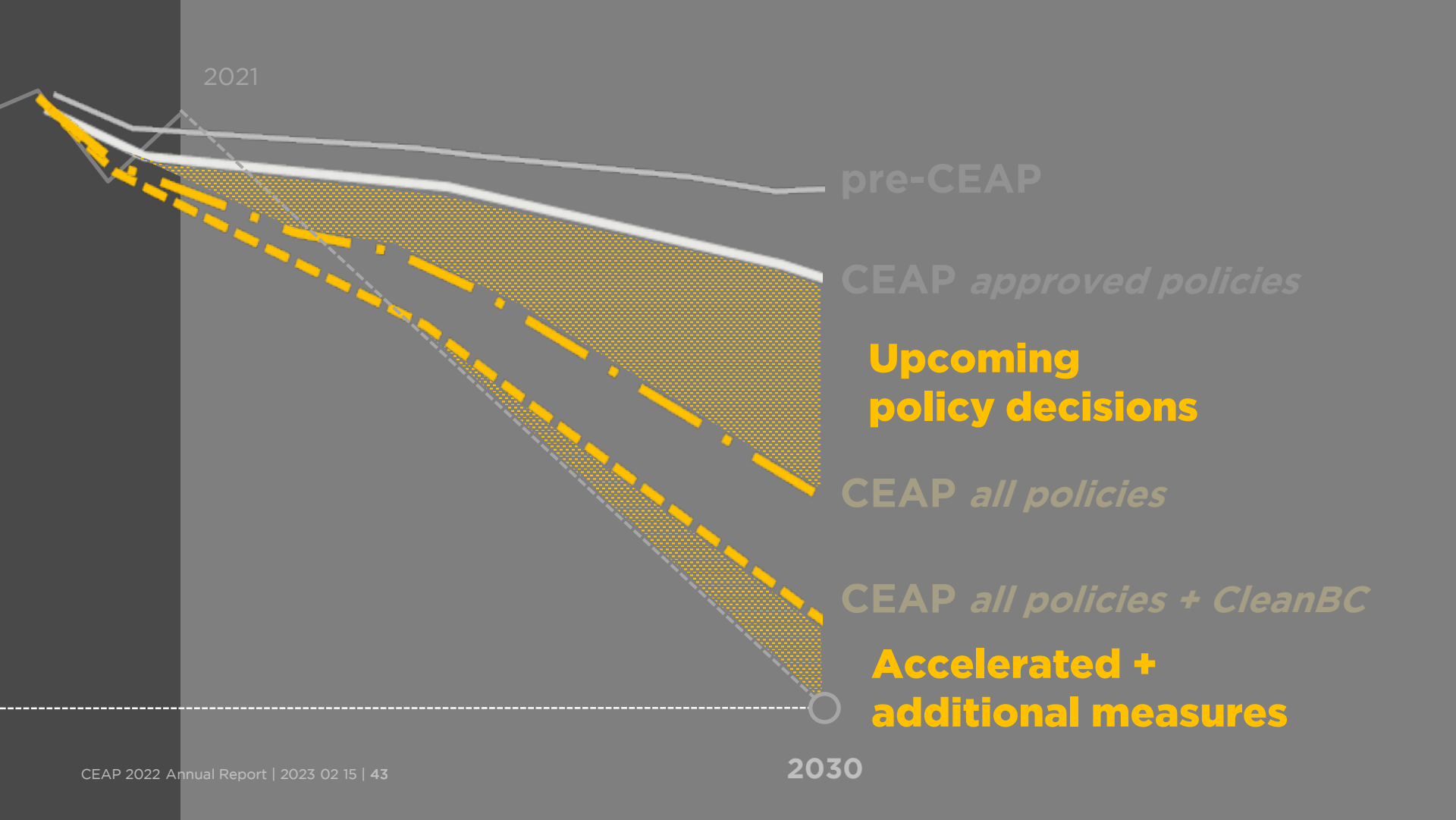




Photo: Unsplash | Colby Winfield

CLIMATE ADAPTATION ANNUAL REPORT 2022

 CITY OF
VANCOUVER

Vancouver
Plan

 CLIMATE
EMERGENCY



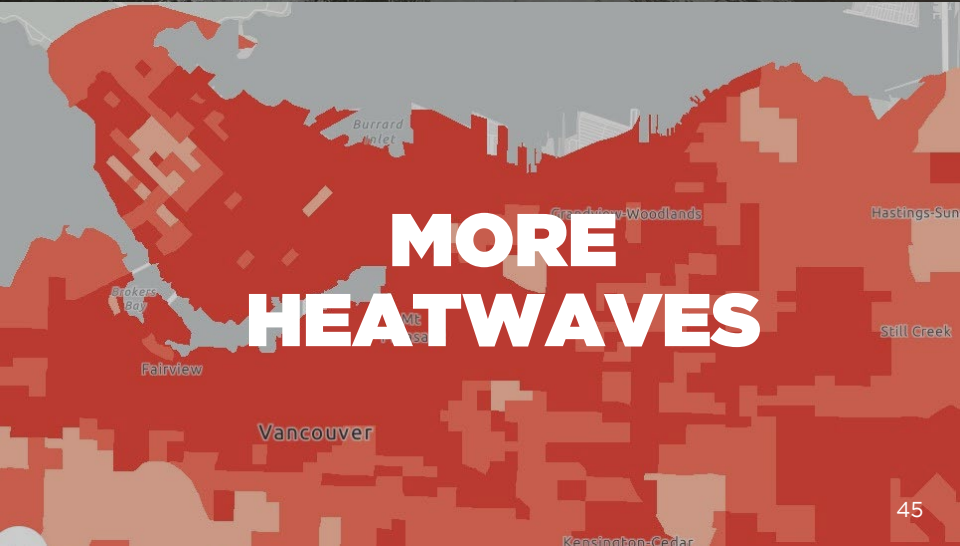
SEA LEVEL RISE



MORE EXTREME RAINFALL



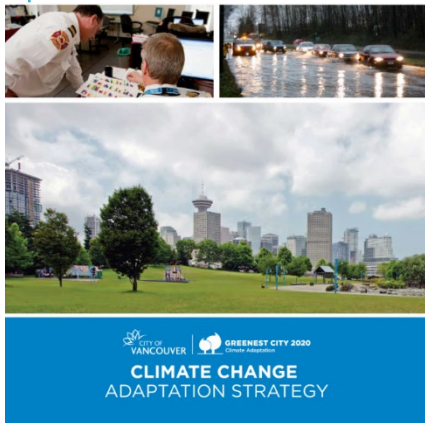
POOR AIR QUALITY



MORE HEATWAVES

Climate Adaptation Policy in Vancouver

2012



2018



The Cost-Benefit of Adaptation

**\$1 spent
in preparation**

saves \$13-15

National Adaptation Strategy for Canada





**FASTER THAN
PREDICTED**



INEQUITY



**DIFFERENT
APPROACHES**



**SENIOR GOV
FUNDING**

Look Ahead

2012



2018



LATE-2023

STRATEGY REFRESH

2-year, to bring into alignment with CEAP

- updated, priority actions
- emphasis on equity
- financial framework



QUESTIONS