

Climate Emergency  
**EV Charging at  
Gas Stations  
+ Parking Lots**

2022 04 12



# agenda

The background image is a faded, light-colored photograph. It shows an outdoor setting with a charging station in the foreground. A person is standing near the station, and a car is parked nearby. In the background, there is a building with the words 'HASTINGS PARK' visible on its facade. The overall tone is soft and muted.

**Part 1:** Background

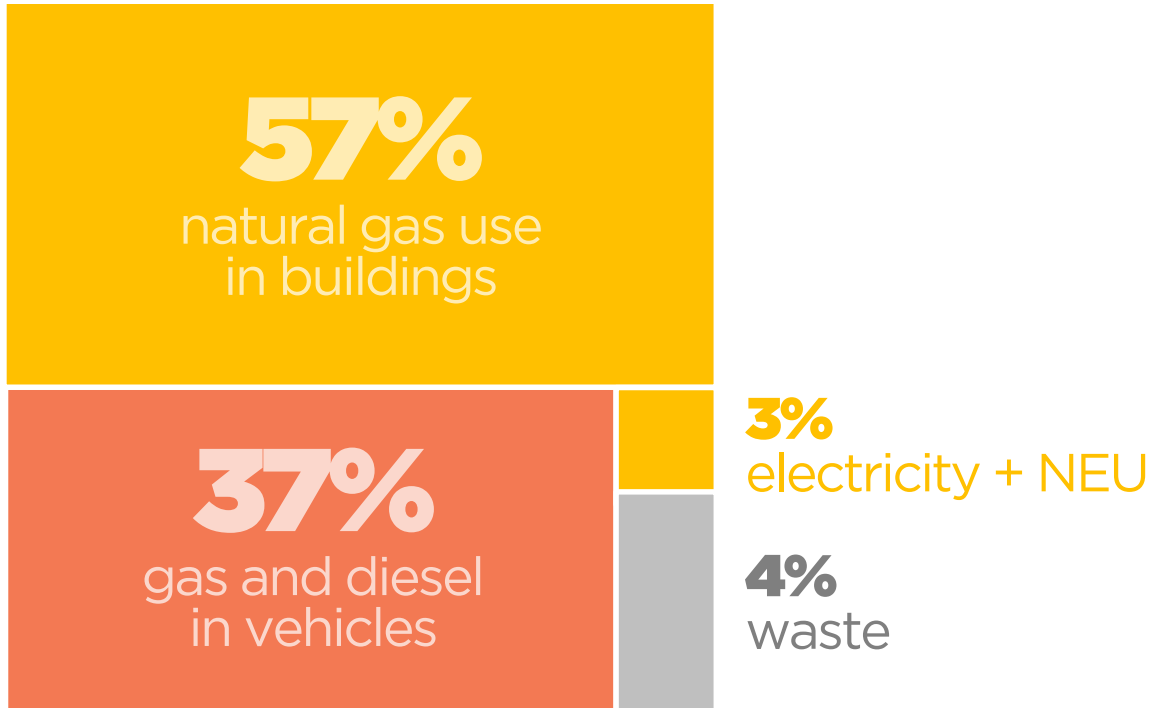
**Part 2:** Engagement

**Part 3:** Policy design

**Part 4:** Q+A

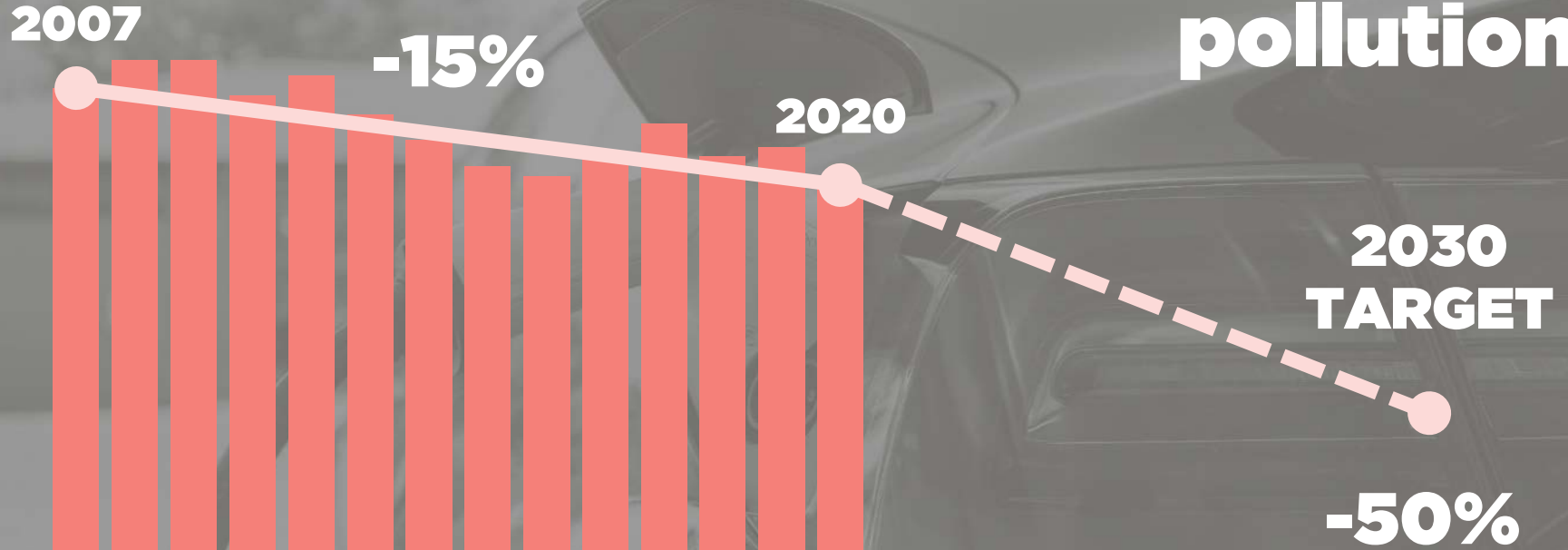
# **PART 1: BACKGROUND**

# Vancouver's carbon pollution

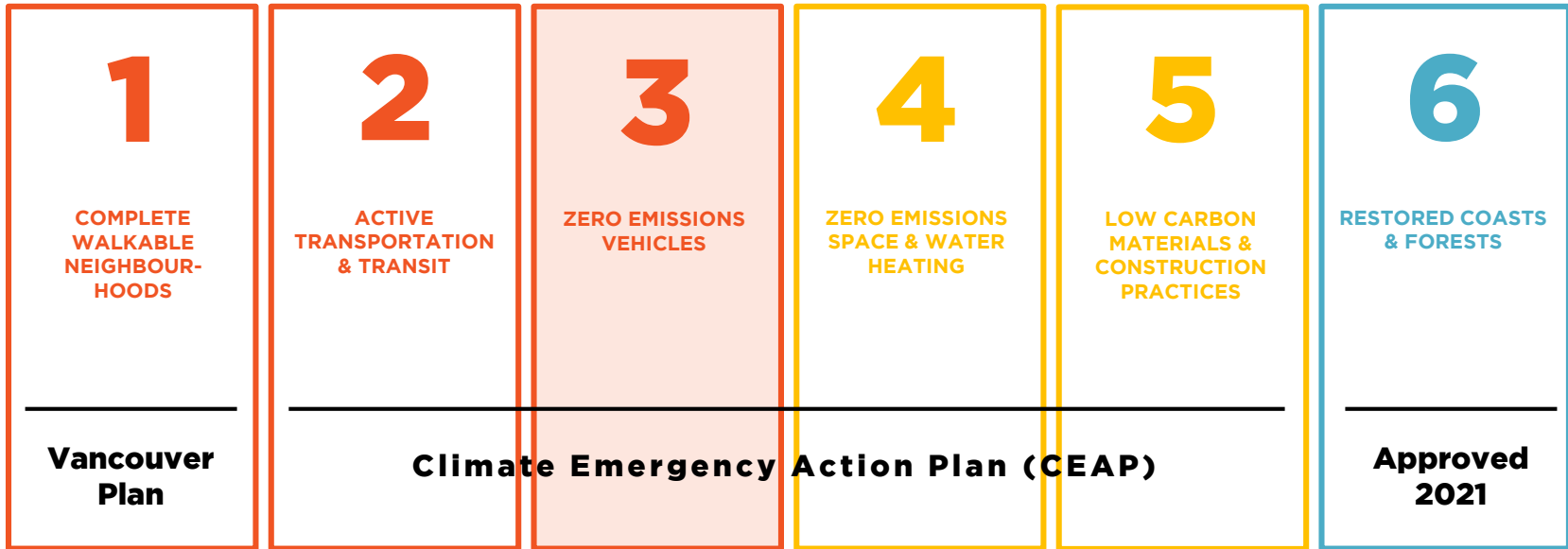


*City of Vancouver 2020  
emissions inventory  
Due to rounding, numbers presented  
may not add up to exactly 100%*

# Vancouver's carbon pollution



# climate emergency 6 big moves



3

ZERO EMISSIONS  
VEHICLES

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

Implement  
cycling consultation  
support residential  
parking permits

Expand the  
public charging  
network

Increase EV  
charging on  
private property

Support EV  
charging for  
passenger  
fleets

# CEAP recommendation L

THAT Council direct staff to bring forward recommendations in 2021 to **change the business licence fees for gas stations and parking lots** to encourage the installation of EV charging.





# recommended approach

**Different business licence fees** based on the amount of EV charging provided.



## CATEGORY 1

Businesses that **provide** a specified amount of charging.



**FEE SIMILAR TO TODAY**

## CATEGORY 2

Businesses that **do not** provide the specified amount of charging.



**HIGHER FEE**

A map of Vancouver, British Columbia, showing the distribution of business licenses. The map is overlaid with numerous location pins, each accompanied by a number representing the count of licenses at that specific location. The numbers vary significantly, with some areas having as many as 77 licenses and others having only 1 or 2. The map includes labels for major streets such as West 10th Avenue, West Broadway, Main Street, Fraser Street, and East 49th Avenue, as well as parks like Pacific Spirit Regional Park, Queen Elizabeth Park, and Musqueam Park. The background is a light beige color with a grid pattern.

**In 2021, Vancouver issued**

**66 gas stations and**  
**393 parking lots**

# rationale

The background is a colorful, stylized illustration of a city. It features a suspension bridge crossing a body of water, with mountains in the distance. The city is filled with various buildings, including a grocery store, a pizza shop, and a bike shop. There are also cars, buses, and bicycles on the roads. The overall style is modern and illustrative.

Increased access to charging **REDUCES BARRIERS** to EV adoption

Gas stations can provide charging at locations where **PEOPLE ARE USED TO** fueling up

Parking lots can provide charging at locations where people will **ALREADY BE PARKING**

# project timeline



## NOV 2020 – AUG 2021

### DIRECTION + RESEARCH

- Council approval of CEAP
- Project scoping + research

## JUL – OCT 2021

### DRAFT PROGRAM DESIGN

- Drafted program design based on input + analysis

## APRIL 12, 2022

### RECOMMENDATIONS TO COUNCIL

## MAY – JUN 2021

### PHASE 1 ENGAGEMENT

- Initial outreach

## JAN – FEB 2022

### PHASE 2 ENGAGEMENT

- Draft program design + results of economic analysis

# **PART 2: ENGAGEMENT**

# engagement summary

	ENGAGEMENT	REACH	MAIN TAKE AWAYS
PHASE 1	WORKSHOP	33 stakeholders	<b>Barriers + challenges:</b> Concerns about demand for chargers + space or electrical capacity
	SURVEY	8 responses	<b>Barriers + challenges:</b> cost, utilities, logistics, utilization <b>Opportunity:</b> a good market opportunity in 3-10 years <b>Desired supports:</b> BC Hydro improvements, incentives
PHASE 2	WORKSHOP	38 stakeholders	<b>Opportunities:</b> interest in policy + questions around logistics
	SURVEY	17 responses	<b>Barriers + challenges:</b> cost, space, access to power, demand for charging, supply chain constraints <b>Opportunities:</b> most licence holders are somewhat or very likely to install EV charging

# **PART 3: POLICY DESIGN**

# policy objectives

- **GROW** the charging network
- **REDUCE BARRIERS** to EV adoption
- **CATALYZE** the shift to EVs





# program design

## GAS STATIONS

## PARKING LOTS

### EV CHARGING

at least 50 kW (~1 DCFC)

at least 26.6 kW (~4 Level 2s)

### LICENCE FEE

*meets specifications: ~\$243\**  
*does not meet specifications: \$10,000*

*meets specifications: ~\$163\**  
*does not meet specifications: \$10,000*

### EXEMPTIONS

marine service stations

lots with <60 stalls

### TIMING

2025 implementation

2025 implementation

\* These are 2022 fees. The fee at the time of implementation would reflect any fee increases that apply to all business licence fees, which account for things like inflation.

# consultant research

**Dunsky Energy and  
Climate Advisors**  
produced a study for  
this project.

## **EV CHARGING PROJECTIONS**

Anticipated deployment of home, workplace, and public charging.

## **ECONOMIC ANALYSIS**

Costs and revenues associated with installing EV charging at gas stations and parking lots.

# economic analysis

**2030 FINANCIAL SCENARIOS** are based on the scenario close to today's conditions with two conservative assumptions about policy + utilization improving.

	<b>GAS STATIONS</b>	<b>PARKING LOTS</b>
<b>COST TO INSTALL CHARGING</b>	\$136,000	\$100,000*
<b>ANNUAL PROFIT IN 2030**</b>	\$6,000	\$5,000
<b>ANNUAL LICENCE FEE AVOIDANCE</b>	\$10,000	\$10,000
<b>PAYBACK PERIOD</b>	8 years	7 years
<b>DEPLOYMENT</b> (# that install charging)	21 (out of 66)	80 (out of ~200 lots in scope)

\* This estimate is conservative and accounts for extensive upgrades.

\*\* Gas station revenue accounts for new customers that purchase items from the convenience stores.  
Parking lot revenue does not account for additional customers.

# EasyPark implications

**Proposed regulation would apply to 60 EP facilities.**

**7** already comply (4+ charging spaces)

**21** nearly comply (2-3 EV chargers)

EasyPark 停車場  
**ENGAGEMENT**

EP participated in both phases of engagement. Continued meetings with staff.

**PARTNERSHIP OPPORTUNITY**  
EP can work with a third party, like the City, to install and/or operate charging.

# staff recommendations

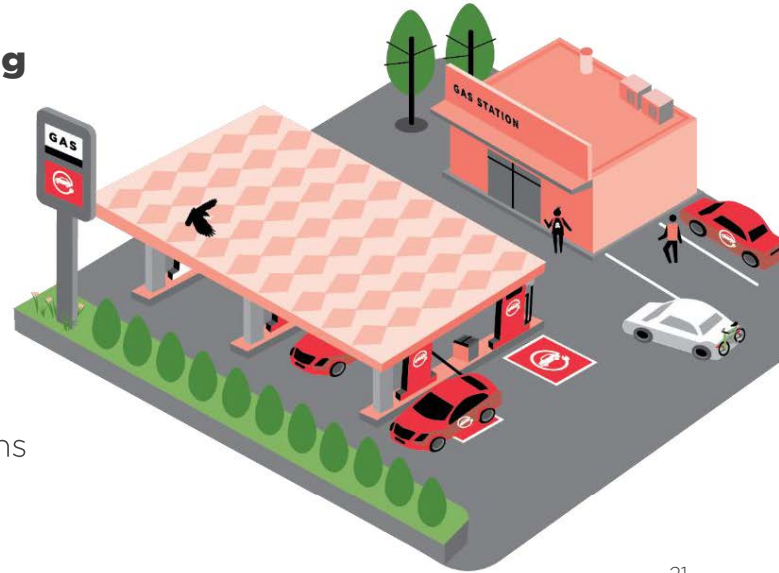
THAT the report + application be  
**REFERRED TO PUBLIC HEARING**

## PROPOSED ZONING + DEVELOPMENT BY-LAW AMENDMENT

- Change the definitions for gas stations, cardlock fuel stations+ parking lots to **permit the use of EV charging**

## PROPOSED LICENSE BY-LAW AMENDMENTS

- Change the definitions for gas stations + parking lots to **permit the use of EV charging**
- **Create new business licence categories** for gas stations + commercial parking lots that provide enough EV charging
- **Increase annual business licence fees** for gas stations + parking lots that do not provide enough EV charging



# PART 4: Q+A