

# Decarb Lunch Series

zebox

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## Introducing Energize Vancouver

Fri Apr 26, 2024,  
from 12- 1pm PST  
Free Webinar | [zebx.org](https://zebx.org)



ZERO EMISSIONS INNOVATION CENTRE

## Building Decarbonization Team



**B2E**



NearZero

**BC Retrofit**  
**ACCELERATOR**

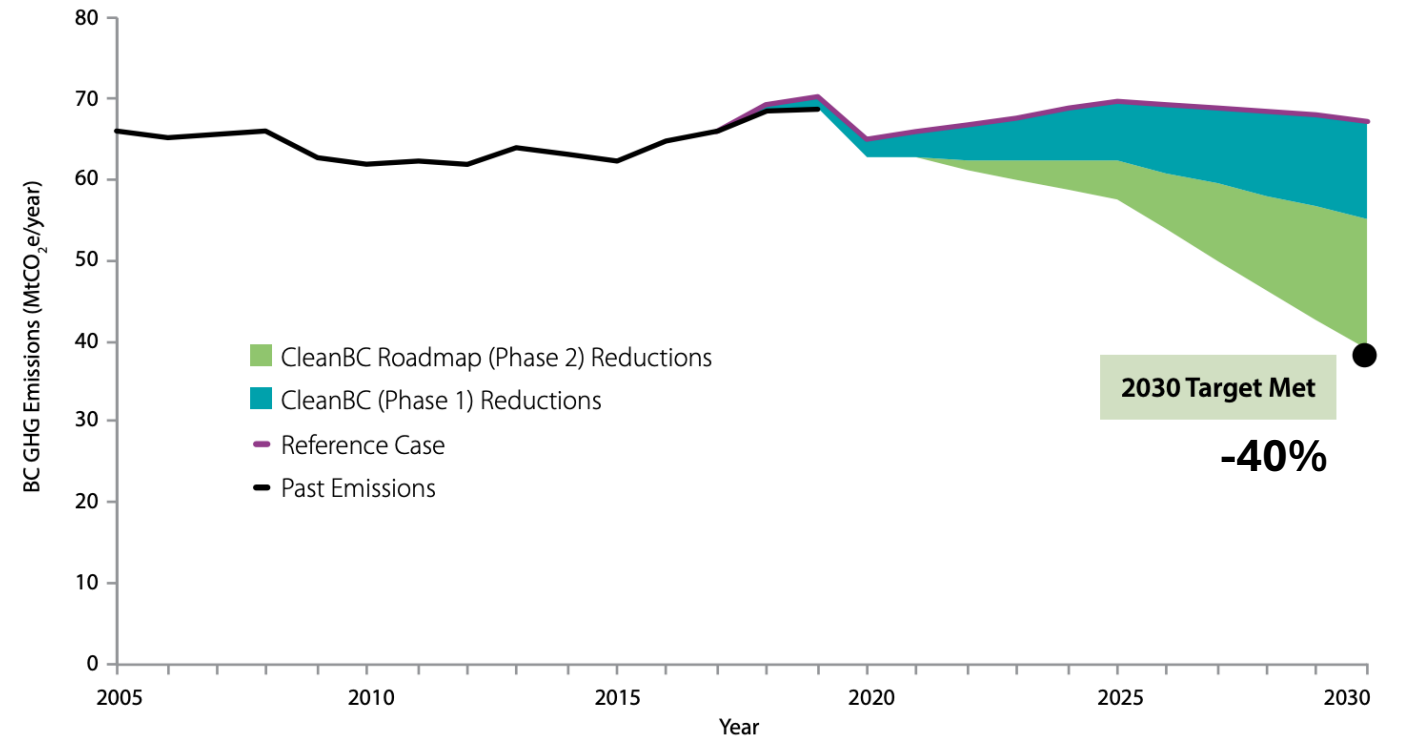


Carbon  
Leadership  
Forum  
**British  
Columbia**

**zeb**x



CleanBC Emissions Reductions





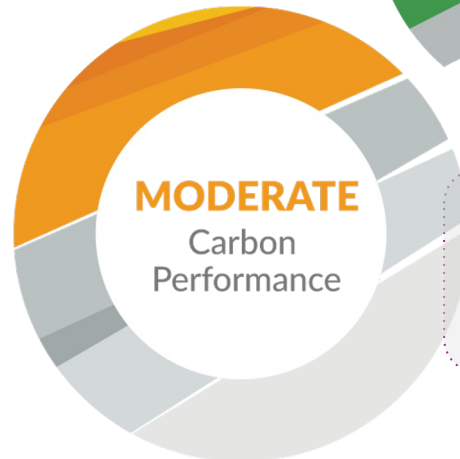
ZERO CARBON  
**STEP**CODE



- **Larger residential buildings:** <1.8 kg CO<sub>2</sub>e / m<sup>2</sup> per year
- **Offices:** <1.5 kg CO<sub>2</sub>e / m<sup>2</sup> per year



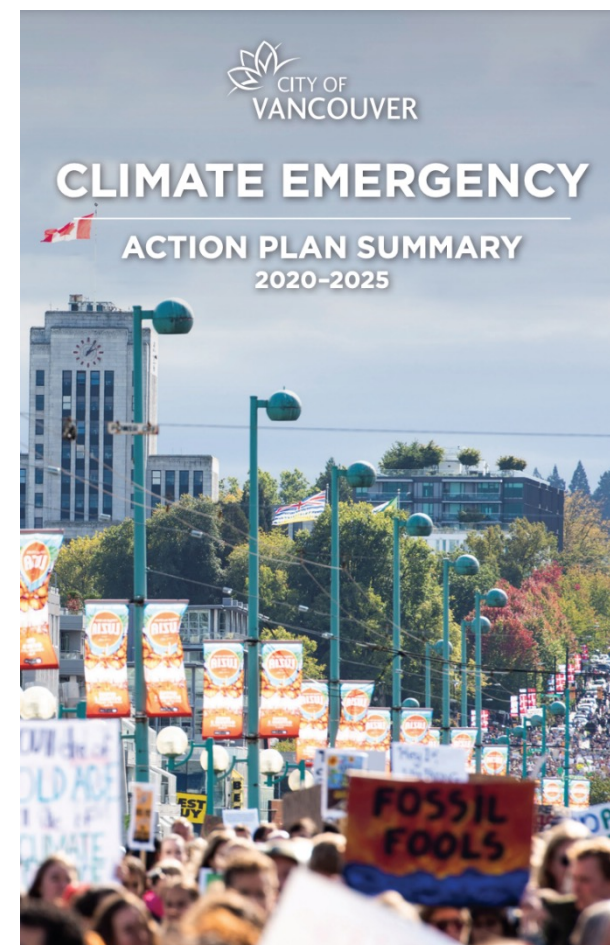
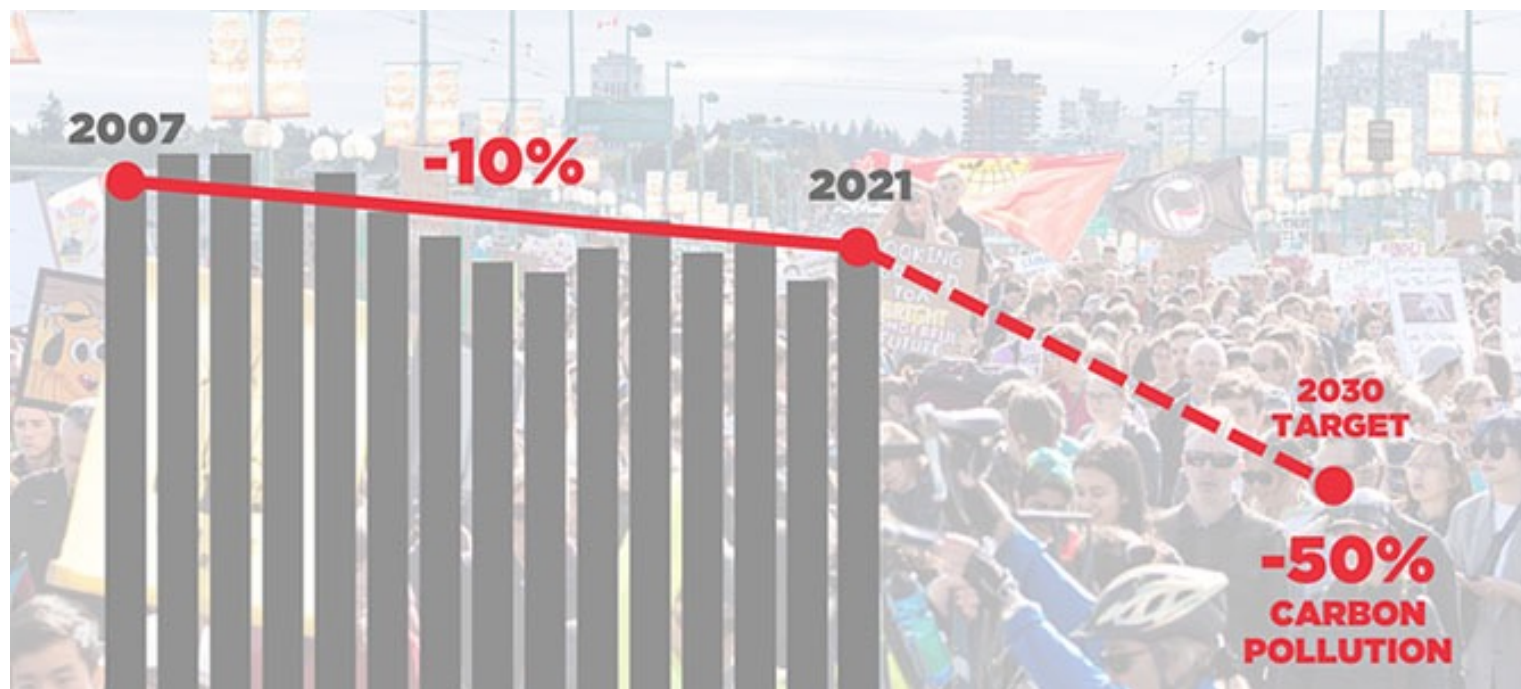
- **Larger residential buildings:** <3 kg CO<sub>2</sub>e / m<sup>2</sup> per year
- **Offices:** <3 kg CO<sub>2</sub>e / m<sup>2</sup> per year



- **Larger residential buildings:** <7 kg CO<sub>2</sub>e / m<sup>2</sup> per year
- **Offices:** <5 kg CO<sub>2</sub>e / m<sup>2</sup> per year









POLL 1


**Tell us about yourself!**

Three-part anonymous poll

# Land Acknowledgement





A nighttime photograph of a city skyline, likely Vancouver, with numerous illuminated high-rise buildings. In the background, large mountains are visible, some with snow on their peaks. A bridge with light trails is in the foreground. The scene is reflected in the water in the lower right.

# Annual Greenhouse Gas and Energy Limits By-Law



# Vancouver's Climate Commitments

**Climate Emergency Action Plan - 2020**



```
graph TD; A[Climate Emergency Action Plan - 2020] --> B[Zero Emissions Building Retrofit Strategy - 2020]; B --> C[GHG Emissions Regulations];
```

The diagram consists of three vertically stacked rectangular boxes with rounded corners. The top box is yellow and contains the text 'Climate Emergency Action Plan - 2020'. A grey arrow points from the bottom right of this box to the top right of the middle box. The middle box is orange and contains the text 'Zero Emissions Building Retrofit Strategy - 2020'. Another grey arrow points from the bottom right of this box to the top right of the bottom box. The bottom box is purple and contains the text 'GHG Emissions Regulations'.

**Zero Emissions Building Retrofit  
Strategy - 2020**

**GHG Emissions Regulations**

# Energize Vancouver

- One stop shop for existing commercial and multi-family buildings
- Regulation details
- Compliance steps
- Resources and support available



# Two requirements for owners:

1. Energy & Carbon Reporting (ECR)
2. Green House Gas Intensity (GHGI)  
& Heat Energy Intensity (HEI) Limits



# What is energy and carbon reporting?



- Monitor building energy performance
- Compare to self and peers
- Free web-based tool for reporting via ENERGY STAR Portfolio Manager

*"You can't manage what you don't measure"*



# Energy and carbon reporting benefits



- Tracking data raises owner/operator awareness of building energy use
- Helps set baseline and diagnose performance
- Provides data to inform effective policy and show compliance with regulation

# GHGI and HEI Limits

- Starting in 2026, Office and Retail buildings of 100,000 ft<sup>2</sup> or larger will need to keep GHG emissions **from natural gas and district energy** below a set limit.

GHGI Limit by Year	Office	Retail
2026	25 kg CO <sub>2</sub> e/m <sup>2</sup> /year	14 kg CO <sub>2</sub> e/m <sup>2</sup> /year
2040	Zero Emissions	

- Heat Energy measure of the total amount of gas used plus the district heat that is consumed by the building.
- Limit of **0.09GJ/m<sup>2</sup>** for both office and retail.

# Existing Policies in Canada

## Canadian Policies for Existing Buildings: Benchmarking, Transparency, and Beyond



Annual report to government using ESPM standardized tool for operational energy at building scale

**4 JURISDICTIONS**

have mandatory reporting requirements

**~1,000 BUILDINGS**

currently use ENERGY STAR Portfolio Manager in Vancouver

# Annual Requirements

Buildings will need to comply with the following GHG By-Law requirements by June 1, 2024 and annually thereafter:

## Energy & Carbon Reporting (ECR)

Annual requirement for all covered buildings

- Buildings are phased in over the next 3 years
- First phase begins in 2024
- By 2026, all commercial and multi-family buildings 50k ft<sup>2</sup> and larger will be required to comply annually



# Annual Requirements

Buildings will need to comply with the following GHG By-Law requirements by June 1, 2027 and annually thereafter:

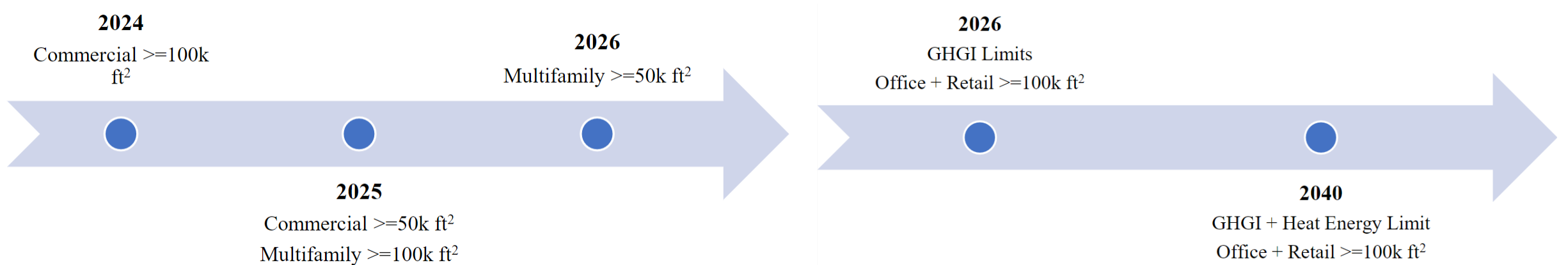
## Green House Gas Intensity (GHGI) & Heat Energy Intensity (HEI) Limits

Annual requirement for Office and Retail only

- Buildings aim to meet a GHGI Limit in 2026
- Buildings must continue to reduce GHGI to zero and meet an upcoming HEI Limit in 2040
- Beginning in 2027, buildings obtain an annual Carbon Emissions Operating Permit to comply

# Compliance Timeline

**Compliance Timeline** by building use type and square footage.



Energy & Carbon Reporting (ECR)	Green House Gas Intensity (GHGI)
Annual Compliance Deadline: June 1 (2024+)	Annual Compliance Deadline: August 1 (2027+)
<ul style="list-style-type: none"><li>Submit an error free report through ESPM</li></ul>	<ul style="list-style-type: none"><li>Obtain a Carbon Emissions Operating Permit</li></ul>

# Two Tools to Help you Comply:

1. ENERGY STAR Portfolio Manager
2. BPRS Owner Dashboard



# ENERGY STAR Portfolio Manager

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- Free tool
- Created by the U.S. EPA
- Used to measure the energy performance of a building by comparing it to a large dataset of similar buildings
- Enter building use details and energy use
- Submit Energy & Carbon data
- Create custom reports or set building performance targets to help meet your goals



# Building Performance Reporting System

- The BPRS Owner Dashboard
  - With your ESPM account created you can create your portal account to complete the required verification steps to submit your ECR along with any additional documentation
  - Access the Exemption and Extension forms



## Welcome

[Claim your properties in vancouver](#)

[Update your contact information](#)

[File your benchmarking report](#)

[Submit extension, waiver, or exemption forms](#)

Email Address \*

Password ([forgot?](#)) \*

Sign In

Need an Account?

Sign Up

# Quick Guide for ECR through ESPM

- Create an account with ESPM
- Add your Properties
- Create Energy Meters
- Enter Energy Data from the previous year
  - Utility auto-upload
  - Spreadsheet
  - Manual
- Share property with City of Vancouver



# Quick Guide for ECR through BPRS Dashboard

- Create an BPRS Account
- Claim your Property
- Confirm building is shared with the City of Vancouver
- Complete Data Quality Sections
- Claim adjustments, e.g. restaurant gas use
- Submit ECR

# Support services

## WE'RE HERE TO HELP

- Online hub to access resources [Vancouver.ca/energize-vancouver](https://vancouver.ca/energize-vancouver)
- Compliance video series
- ECR Helpdesk: [energycarbonreport@vancouver.ca](mailto:energycarbonreport@vancouver.ca)
- Monthly Webinar
- Performance Scorecards

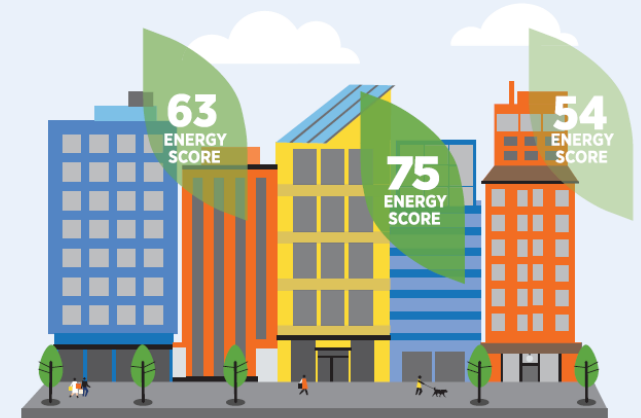
## Annual Energy and Carbon Reporting Requirement

### ATTENTION: Building Owner and Property Managers

#### Reports are due June 1, 2024

If you own or manage an existing large commercial building with a gross floor area of 9,290 m<sup>2</sup> (100,000 ft<sup>2</sup>) and above, you will need to use ENERGY STAR Portfolio Manager (ESPM) to benchmark your building's annual energy and carbon use and submit a report via the City's Building Performance Reporting System (BPRS).

This is a requirement under the Annual Greenhouse Gas and Energy Limits By-law.

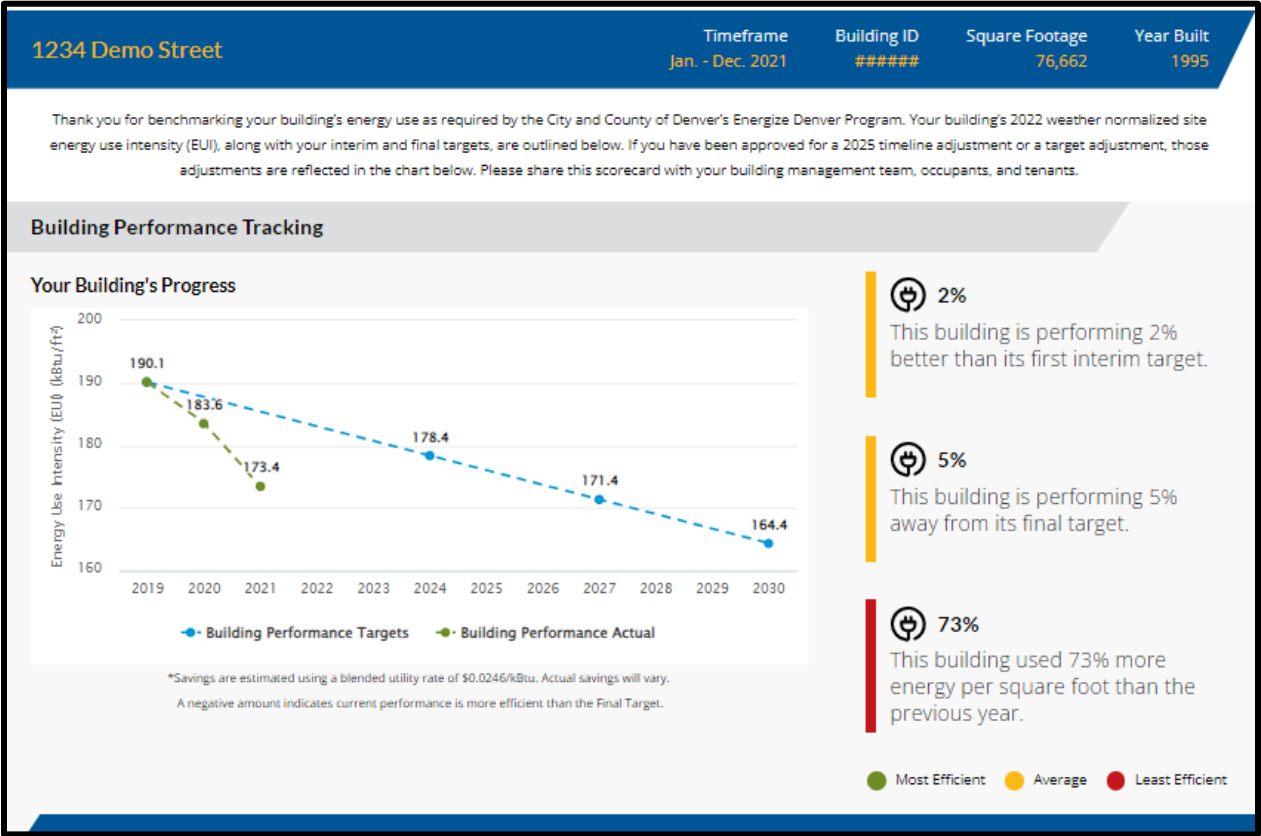


**SUBMIT** your annual report now at:  
[vancouver.ca/energize-vancouver](https://vancouver.ca/energize-vancouver)

 CITY OF  
VANCOUVER

**ENERGIZE**  
VANCOUVER

# Performance Scorecard



# How-to Guide

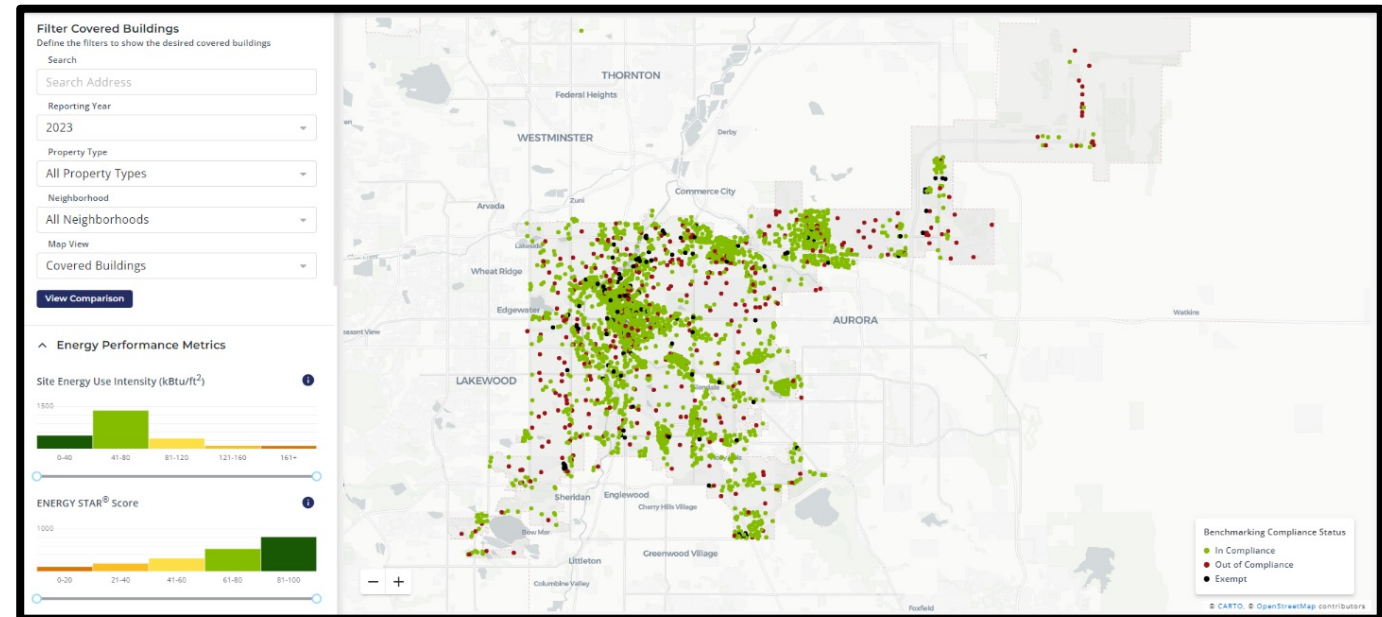
## How-to Guide

This guide is for building owners with buildings subject to energy and carbon reporting requirements under the City of Vancouver By-law No. 13472. Step-by-step guidance is provided for compliance.

February 2024



# Disclosure Map





# Thank you!

- Stay up-to-date with Energize Vancouver mailing list at <https://vancouver.ca/green-vancouver>
- **ECR Help Centre:** [energycarbonreport@vancouver.ca](mailto:energycarbonreport@vancouver.ca) (604) 330-3797



# Decarb Lunch Series

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**DISCUSSION EDITION**

**Resilient Code Updates:  
Cooling for Part 9 Homes**

Wed May 15, 2024,  
from 12- 1pm PST  
Free Webinar | [zebx.org](https://zebx.org)





# Decarb Lunch

Series

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## The Cost of Zero Carbon Development

Mon May 27, 2024,  
from 12- 1pm PST  
Free Webinar | [zebx.org](https://zebx.org)





NearZero

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## Embodied Emissions

 **Stream 2**

**An applied research project for low-rise homes that minimize embodied emissions.**

## Utility Data

**Stream 4**

**A ZEBx utility data collection initiative to determine the real emissions and energy profiles of BC homes.**

**nearzero.ca**



RESOURCES

**ZEBx TV**

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### NearZero: Reaching the Top Step

How are homeowners, builders and designers already reaching the highest step of emission reduction requirements? We found some of them from ZEBx's NearZero program, listen to them here.

Overview

Playbooks & Winners

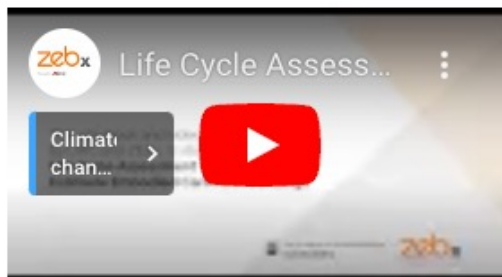


### Is BC Ready for Electrification? B2E w BC Hydro, Sep 2023

B2E, a program alongside ZEBx and part of the ZEIC family, collaborated with BC Hydro in Sep 2023 to help answer the question 'Is BC Ready for Electrification?'

Overview

B2E Resources



### Life Cycle Assessment Process to Estimate Embodied Carbon in Buildings

From ZEBx's Net-Zero Energy-Ready Playbook Series

Overview

Read This Playbook



### Planning Airtight Buildings

From ZEBx's Net-Zero Energy-Ready Playbook Series

Overview

Read This Playbook





ZERO EMISSIONS BUILDING EXCHANGE

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Working to rapidly accelerate the knowledge, capacity and passion for zero-emissions buildings in Vancouver and British Columbia

Industry  
Resources

Events &  
Demonstrations

Specialized  
Programming

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