

March 3, 2022

To: Vancouver's Large Multi-Family Building Owners and Property Managers:

**RE: Draft Carbon Pollution Regulations for Multi-Family Buildings**

Reducing carbon pollution is a key priority for the City of Vancouver under the Climate Emergency Action Plan (CEAP) that was approved by Council in November 2020. Nearly 60% of Vancouver's carbon pollution comes from burning natural gas for space and water heating in our buildings, which is why the CEAP contained the Zero Emission Buildings Retrofit (ZEB-R) Strategy, which described how building owners, the City, utilities, other levels of government and industry stakeholders could work together through a combination of early voluntary action and regulations to achieve a 50% reduction in buildings carbon pollution from the 2007 baseline year by 2030 and set these buildings on a path to zero emissions before 2050. Input from industry stakeholders was critical in shaping the direction of ZEB-R strategy, including building owners, mechanical consultants, skilled trades, and equipment manufacturers.

Following this direction from Council, City staff have drafted recommendations for initial carbon pollution regulations for existing commercial and multi-family buildings and roadmap that envisions a broader set of future regulatory actions that will allow the City to achieve the 2030 and 2050 carbon pollution reduction targets. Staff are also currently consulting stakeholders and the public on draft recommendations to require the detached homes to begin installing heat pumps at the time of equipment replacement and decarbonizing homes as a part of major renovations. If approved by Council, these proposed changes will also contribute to building a thriving local renovation economy, promote equity and improve indoor air quality and comfort in homes and workplaces.

A summary of the draft regulations is appended to this letter. We invite you to learn more about what is proposed and to provide your input to help shape the final recommendations that staff aim to bring to City Council on May 18, 2022.

**How can you get involved and learn more?**

Please RSVP for one of the two virtual consultation sessions hosted by City staff and Prism Engineering:

**Consultation Session #1:**

**Date:** March 23, 2022

**Time:** 1:30pm - 3:00pm

**Register for the event:** <https://www.eventbrite.ca/e/carbon-pollution-regulations-for-large-multi-family-buildings-session-1-registration-290974501567>

**Consultation Session #2:**

**Date:** March 31, 2022

**Time:** 10:30am - 12:00pm

**Register for the event:** <https://www.eventbrite.ca/e/carbon-pollution-regulations-for-large-multi-family-buildings-session-2-registration-290978724197>

To ask a question or share a comment about these regulations, please email [greencommercialbuildings@vancouver.ca](mailto:greencommercialbuildings@vancouver.ca).

Best Regards,

Green Commercial Buildings Team,  
Micah Lang - Sr. Green Building Planner  
Gurmeet Ghera - Sr. Green Building Planner  
Brenda Scott Castro - Green Building Engineer  
Winnie Lee - Planning Analyst  
Sean Pander - Green Building Manager

# Draft Carbon Pollution Regulations for Multi-Family Buildings

## Overview

City staff are consulting on five draft recommendations. The **second recommendation** only pertains to large commercial office and retail buildings and does not impact multi-family buildings

1. Annual Energy and Carbon Reporting for commercial and multi-family buildings larger than 4,645 m<sup>2</sup> (50,000 ft<sup>2</sup>.)
2. Greenhouse Gas-Intensity Limits (2026 and 2040) and Heat Energy Limits (2040) for Office and Retail Buildings larger than 9,290 m<sup>2</sup> (100,000 ft<sup>2</sup>)
  - a. **Green House Gas Intensity limits** under the regulation will be calculated using emission factors for the amount of fossil-fuel based natural gas or district energy used for space heat and domestic hot water, divided by the gross floor area of a building. It can be reduced by any combination of operational changes, building retrofits to reduce energy use, or purchasing renewable energy and/or renewable district energy.
  - b. **Heat Energy Use limits** are a measure of the total amount of gas used in a buildings operations plus the district heat that is consumed by the building (regardless of the carbon intensity), measured in kilowatt hours of energy equivalent per square meter of gross floor area per year (kWh/m<sup>2</sup>/year). The purpose of this limit is to ensure buildings are investing in significant efficiency and conservation measures that will increase resilience, and to ensure there is adequate supply of renewable natural gas and renewable district energy for highest priority uses and all customers who need it.
3. Removing the current energy upgrade requirements for existing buildings that are triggered when undertaking renovations - Effective September 1, 2022.
4. A Regulatory Roadmap that outlines additional measures envisioned to close the gap on meeting the 2030 target.
5. Funding for Owner Supports that will facilitate early action and compliance with regulations.

PHASE	DETAILS
2022	<ul style="list-style-type: none"> <li>• Removal of current energy upgrade requirements when undertaking tenant improvement or other building renovations</li> </ul>
2023-2025	<ul style="list-style-type: none"> <li>• Owner Supports introduced for Energy and Carbon Reporting, GHG Intensity and Heat Energy Use Limits</li> </ul>
2024	<ul style="list-style-type: none"> <li>• Recommendation for additional regulations as introduced in the <i>Regulatory Roadmap</i> brought to Council</li> </ul>
2024 - 2026	<ul style="list-style-type: none"> <li>• Phased Annual Energy and Carbon Reporting effective dates for large commercial and multi-family buildings</li> </ul>

PHASE	DETAILS
2026	<ul style="list-style-type: none"> <li>GHG Intensity Limits* come into effect for office and retail buildings larger than 9,290 m<sup>2</sup> (100,000 ft<sup>2</sup>) <ul style="list-style-type: none"> <li>Office = 25 kg CO<sub>2</sub>e/m<sup>2</sup>/year</li> <li>Retail = 14 kg CO<sub>2</sub>e/m<sup>2</sup>/year</li> <li>Report on Compliance (Q2 2027)</li> </ul> </li> </ul>
2040	<ul style="list-style-type: none"> <li>GHG Intensity Limits* for Office and Retail &gt; 9,290 m<sup>2</sup> = <b>0 kg/m<sup>2</sup>/year</b></li> <li>Heat Energy Use Limits** for Office and Retail &gt; 9,290 m<sup>2</sup> <ul style="list-style-type: none"> <li>Office= 25 KWh/m<sup>2</sup>/year</li> <li>Retail= 25 KWh/m<sup>2</sup>/year</li> </ul> </li> </ul>

\* GHGi limits based on natural gas and district energy used for space and water heating

\*\*Heat Energy Use limits based on natural gas used plus district energy for space and water heating (regardless of the carbon intensity)

## Recommendation 1: Annual Energy and Carbon Reporting for Commercial and Multi-Family Buildings Larger than 4,645 m<sup>2</sup> (50,000 ft<sup>2</sup>)

The following proposals are applicable to Commercial and Multi-Family Existing Buildings ≥ 4,645 sq. meters (50,000 sq. feet).

### 1.1 Create an Energy Star Portfolio Account and Report Performance to the City of Vancouver.

Item	Description	Proposal
1.1.1	Create Energy Star Portfolio Account	<ul style="list-style-type: none"> <li>Create a free online account with Energy Star Portfolio Manager (ESPM)</li> <li>Sign-up to auto-upload utility data from BC Hydro and FortisBC</li> <li>Compile and enter any additional energy use data, including district energy.</li> </ul>
1.1.2	Report Annually to the City	<ul style="list-style-type: none"> <li>Share ESPM accounts with the City of Vancouver.</li> <li>See table 1 for reporting requirement start dates for building type and size.</li> </ul>

Table 1 Reporting Year by Building Type and Size

Building Type	Covered Building Floor Area	1 <sup>st</sup> Reporting Deadline
Commercial	≥ 9,290 sq. meters (100,000 sq. ft.)	May 31, 2024
	≥ 4,645 sq. meters (50,000 sq. ft.)	May 31, 2025
Multi-Family	≥ 9,290 sq. meters (100,000 sq. ft.)	May 31, 2025
	≥ 4,645 sq. meters (50,000 sq. ft.)	May 31, 2026

## Recommendation 2: Greenhouse Gas-Intensity Limits and Heat Energy Use Limits for Office and Retail Buildings

The current draft carbon pollution limits are only applicable to Existing Large Office and Retail Buildings  $\geq 9,290 \text{ m}^2$  (100,000 sq. ft.) and are therefore not included in this consultation letter.

## Recommendation 3: Remove current energy upgrade requirements when undertaking building renovations

The following proposals are applicable to all existing commercial, institutional and multi-family buildings.

3.1 Removal of current energy upgrade requirements in part 11 of the Vancouver Building Bylaw.		
Item	Description	Proposal
3.1.1	Energy Upgrade Requirements	<ul style="list-style-type: none"> <li>The City of Vancouver will simplify the permitting process by removing the energy upgrades required under part 11 of the Vancouver Building Bylaw for existing commercial, institutional and multi-family buildings.</li> </ul>

## Recommendation 4: A Regulatory Roadmap that outlines additional measures envisioned to close the gap on meeting the 2030 target

The regulations proposed in this consultation letter will not reduce carbon emissions in multi-family and commercial buildings by 50% (versus 2007). The roadmap will signal additional research and consultation with multi-family and commercial building owners and managers to inform additional regulations (and voluntary programs) envisioned to meet the 50% reduction target. The following proposals are applicable to Commercial and Multi-Family Buildings.

PHASE	DETAILS
2022 - 2024	<ul style="list-style-type: none"> <li>Analysis and stakeholder consultation on performance and prescriptive regulations</li> <li>Recommendations for 2026 - 2040 brought to Council</li> </ul>
2026	<ul style="list-style-type: none"> <li>Time-of-Replacement Requirements come into effect:               <ul style="list-style-type: none"> <li>Pools</li> <li>Fireplaces and decorative gas appliances</li> <li>Rooftop heating units</li> <li>Make-up-air units</li> </ul> </li> </ul>
2030	<ul style="list-style-type: none"> <li>Updated GHG Intensity * and Heat Energy** limits for Office and Retail &gt; 9,290 m<sup>2</sup></li> </ul>

PHASE	DETAILS
2030	<ul style="list-style-type: none"> <li>GHG Intensity Limits effective for: <ul style="list-style-type: none"> <li>Office &amp; Retail &gt; 4,645 m<sup>2</sup></li> <li>Hotels &gt; 4,645 m<sup>2</sup></li> <li>Other Commercial building types &gt; 4,645 m<sup>2</sup> (<i>to-be-determined</i>)</li> <li>Multi-family buildings &gt; 9,290 m<sup>2</sup></li> </ul> </li> </ul>
2030-2032	<ul style="list-style-type: none"> <li>Potential Phased Deadlines for Equipment Replacement: <ul style="list-style-type: none"> <li>Rooftop heating units</li> <li>Make-up-air units</li> <li>Pools</li> <li>Fireplaces and decorative gas appliances</li> </ul> </li> </ul>
2040-2050	<ul style="list-style-type: none"> <li>GHG Intensity limits for Commercial and Multi-Family Buildings &gt; 4,645 m<sup>2</sup> (all uses): 0 kg CO<sub>2</sub>e/m<sup>2</sup>/yr</li> </ul>

\* **Green house gas emission intensity (GHGi)** limits will be calculated in kilograms of carbon-dioxide-equivalent of natural gas and district heat energy used per square meter of gross floor area (kg CO<sub>2</sub>e/m<sup>2</sup>/year).

\*\* **Heat energy use limits** are a measure of the total amount of gas used in a building’s operations plus the district heat that is consumed by the building (regardless of the carbon intensity).

## Recommendation 5: Funding for Owner Supports that will facilitate early action and compliance with regulations

The following proposals are applicable to Multi-Family Existing Buildings ≥ 4,645 sq. m.

### 5.1 The City of Vancouver will leverage partnerships to support Commercial and Multi-Family Building Owners and Property Managers

Item	Description	Proposal
5.1.1	Energy and Carbon Reporting Support Services	<ul style="list-style-type: none"> <li>Funding for help desk, workshops and set-up support. Funding support for Condos and purpose built rental for early reporting.</li> </ul>