CITY OF VANCOUVER

PLANNING, URBAN DESIGN AND SUSTAINABILITY
Sustainability Division
Green Building

December 19, 2017

Dear Member of Vancouver's Building Industry:

RE: Proposed Energy Efficiency Updates to the Vancouver Building By-law and Rezoning Policy

Reducing greenhouse gas emissions and promoting energy efficiency are key priorities of the City of Vancouver under the Greenest City 2020 Action Plan and Renewable City Strategy. In pursuing these priorities the City seeks changes that also enhance affordability, indoor air quality, and comfort in homes and workplaces.

The proposed amendments, summarized on the following pages, will be presented to City Council in April 2018. We would appreciate your written feedback on these proposals, sent to **green.buildings@vancouver.ca**, by **Friday, February 9, 2018**. For more information, please join us for information sessions hosted by City staff, scheduled for the following times:

Townhall Meeting #1
Tuesday, January 23, 2018
1pm – 3pm
City Hall, First Floor Town Hall
453 W 12th Ave

Townhall Meeting #2
Tuesday, January 30, 2018
9am – 11am
VEC Presentation Centre
#1500 - 401 W Georgia St

Yours truly,

Patrick Enright, P.Eng, CPHC, LEED AP BD+C | Green Building Engineer
Sustainability Group | City of Vancouver
City Hall, 7th Floor | 453 West 12th Ave | V5Y 1V4

cc: Sean Pander, Green Buildings Program Manager
Pat Ryan, Chief Building Official
Sara Couper, Communications Manager

2017 BC's Top Employers

Section 1: The following proposals are applicable to new construction, through the Vancouver Building By-law:

Item	Description	Proposal
1.1 Align with Step 2 of the provincial Energy Step Code for Office, Retail, and Hotel buildings, and 7+ storey MURBs Effective January 1, 2019		
1.1.1	Energy Performance Requirements	• Adopt greenhouse gas, heat loss, and energy limits matching the outcomes historically achieved in rezonings since 2011 (Refer to Table 1 below). • Align with the heat loss and energy limits of Step 2 of the provincial Energy Step Code, with no prescriptive path. • Ensure the greenhouse gas target maintains fuel choice for natural gas in space heating and hot water, or other uses. • In addition to the limits in the table below, additional compliance paths will be provided that align with a higher step of the Energy Step Code, without a GHGI limit. • Apply these limits to Part-9 non-residential as well.
1.1.2	Direct Ventilation	• Similar to requirement for all buildings following the Energy Step Code, all buildings must have a ventilation system that provides outdoor air directly to all occupiable spaces, in the quantities defined by code. • This includes bedrooms, living rooms, and dens in residential units.
1.1.3	Whole-Building and Suite Airtightness Testing	• Similar to the requirement for all buildings following the Energy Step Code, all buildings and major occupancies must be tested for airtightness. • All buildings must meet an airtightness target of 2.0 L/s/m² @ 75Pa • Residential suites must meet an airtightness target of 1.2 L/s/m² @50 Pa

TABLE 1: VBBL - Proposed Energy Use, Heat Loss, and Greenhouse Gas Limits

	Energy Use (TEUI) [kWh/m²a]	Heat Loss (TEDI) [kWh/m²a]	Greenhouse Gas Intensity (GHGI) [$kgCO_{2e}/m^2a$]
7+ Storey MURB	130	45	14
Office	170	30	7
Retail	170	30	5
Hotel	170	30	14

Item	Description	Proposal
1.2 Align with 2018 BC Building Code energy efficiency requirements for all building types Effective date TBD		
1.2.1	Energy Performance Requirements	• Align with any energy efficiency requirements that may be upcoming in the next version of the BC Building Code
1.3 Apply the energy efficiency requirements of 1-6 storey MURBs (approved by Council in February 2017) to mixed-use MURBs <7 stories Effective January 1, 2019		
1.3.1	Energy Performance Requirements	• Apply the energy efficiency requirements for 4-6 storey residential buildings (approved by Council in February 2017), to the residential portions of mixed-use buildings <7 stories as well (the limits of the performance path are in Table 2 below). • Maintain the prescriptive option, applying the prescriptive requirements to all portions of mixed-use buildings <7 stories, with an adjusted performance requirement for storefront glazing. Note: All mixed-use buildings use an area-weighted average of the limits for each building type. For example, a building with 9 stories of residential over 1 storey of retail would need to meet an area-weighted average of the residential portion (i.e. 45 TEDI), and the retail portion (i.e. 30 TEDI). Item 1.3.1 proposes that for mixed-use buildings <7 stories, the targets of the residential portion are as per Table 2 (i.e. 25 TEDI).

TABLE 2: VBBL - Proposed Energy Use, Heat Loss, and Greenhouse Gas Limits

	Energy Use (TEUI) [kWh/m²a]	Heat Loss (TEDI) [kWh/m²a]	Greenhouse Gas Intensity (GHGI) [$kgCO_{2e}/m^2a$]
Residential Portion of Mixed-Use Buildings <7 Stories	110	25	5.5

Section 2: The following proposals are applicable to all rezoning applications received since May 1st, 2017, through the Green Buildings Policy for Rezonings:

Item	Description	Proposal
2.1 Changes to Pathway A – Near Zero Emissions Buildings (i.e. Passive House Certified) Effective immediately upon Council approval		
2.1.1	Energy Metering and Reporting	• Add requirements for energy metering and reporting to match those in Pathway B
2.1.2	Low VOC Materials	• Add requirements for low VOC materials to match those in Pathway B
2.2 Changes to Pathway B – Low Emissions Green Buildings Effective immediately upon Council approval		
2.2.1	Heat Loss Limit	• Align the heat loss limit (TEDI) for 7+ storey MURBs with Step 3 of provincial Energy Step Code, with the limit changing to 30 from 32.
2.2.2	Alternate Performance Limits	• In addition to the limits in the policy currently, additional compliance paths will be provided that align with a higher step of the Energy Step Code, without a GHGI limit.

Section 3: The following proposals are applicable to new construction subject to the General Policy for Higher Buildings:

Item	Description	Proposal
3.1 Changes to Energy Efficiency and Leadership Effective date TBD		
3.1.1	Energy Efficiency and Leadership	• Update the energy efficiency and leadership in sustainable design requirements of the policy to align with the objectives and strategies of the Zero Emissions Building Plan