



Council Member Motion
For the Committee of the Whole Meeting of April 6, 2023

To: Committee of the Whole **Date:** April 6, 2023
From: Councillor Dave Thompson and Councillor Jeremy Caradonna
Subject: Accelerating decarbonization of new building energy systems

Background

The City of Victoria declared a climate emergency in 2019 and also established bold emissions reductions targets in its Climate Leadership Plan (2018). According to the IPCC, the climate emergency requires “immediate, rapid, and large-scale” reductions in GHG emissions, if we are to avoid the most catastrophic impacts of climate change. Emissions from buildings account for around 55% of Victoria’s total GHG emissions. Reducing these emissions has proven to be challenging, but new regulatory authorities, granted by the Province, will enable municipalities to take more substantive action in reducing building emissions.

High-performance buildings and construction are regulated through two components of the B.C. Building Code: the Energy Step Code and the Zero Carbon Step Code (ZCSC). The Energy Step Code, which has been in effect for several years, allows municipalities to expedite energy efficiency requirements. The ZCSC, by contrast, was just released by the Province, and allows municipalities, for the first time ever, to regulate directly emissions from new buildings.

The regulation allows for local governments to take immediate action on building emissions by requiring that all new buildings operate on low-carbon systems. The ZCSC has four emissions steps, with the fourth being the most ambitious (“zero carbon” or “carbon neutral ready.”)

Victoria has been participating in Energy Step Code for several years and has signalled its intention to participate in the ZCSC, which will enter into force on 1 May 2023. The current direction is to implement the ZCSC on the following schedule:

- Part 3 buildings: ZCSC level 3 by July, 2024 and level 4 by July, 2025
- Part 9 buildings: ZCSC level 3 by July, 2023 and level 4 by January, 2025

Despite previous Council direction, opportunities exist to implement the ZCSC on a more expedited schedule. Delaying this action would mean that more buildings would be built to operate on high-carbon systems, which would then be in place for decades to come. Therefore,



bolder climate action is required to rapidly decarbonize the built environment, and ensure that the City meets its climate targets.

Thanks to the ZCSC, the City has the clear ability and statutory right to regulate low-carbon requirements for new buildings. Moreover, the construction sector already has the means and capacity to be building low-emitting buildings, thanks to heat pumps and other technologies. According to the staff report to Council on 21 July 2022, extensive consultations demonstrate that “decarbonizing [buildings] is technically possible and achievable by industry today.”

Recommendation

That Council direct staff to expedite the adoption of the Zero Carbon Step Code for both Part 9 and Part 3 buildings at step 4 (“zero carbon performance”) for all new buildings on the following schedule:

- All part 9 residential buildings: November 1, 2023
- All part 3 buildings:
 - Multi-unit residential buildings 6 storeys or fewer, July 1, 2024
 - Multi-unit residential buildings 7 or more storeys, November 1, 2024
 - All other eligible part 3 buildings (commercial) November 1, 2024

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Coun. Dave Thompson

A handwritten signature in black ink, appearing to read "Jeremy L. Caradonna".

Coun. Jeremy Caradonna

Addendum to Background: Zero Carbon Step Code Table, Showing Maximum Emissions by Building Type and Ambition Level (1-4)

Table 9.37.1.3.
Greenhouse Gas Emissions
Forming part of Sentence 9.37.1.3.(1)

GHG Emission Level	GHG Emission Compliance Options			
	Maximum GHG Emissions by House, Expressed in kg CO _{2e} /year	Maximum GHG Emissions by House ¹		Reduction of GHG Emissions by Energy Source of Building Systems ²
		Maximum GHGI of the House, Expressed in kgCO _{2e} /m ² /year	Maximum GHG Emissions by House, Expressed in kgCO _{2e} /year	
EL-1	measure only	measure only		N/A
EL-2	1050	6.0	2400	Energy sources supplying heating systems have an emissions factor ≤ 0.011 kgCO _{2e} /kWh
EL-3	440	2.5	800	Energy sources supplying heating and service water heating systems have an emissions factor ≤ 0.011 kgCO _{2e} /kWh
EL-4	265	1.5	500	Energy sources supplying all building systems, including equipment and appliances, have an emissions factor ≤ 0.011 kgCO _{2e} /kWh

Notes to Table 9.37.1.3.:

⁽¹⁾ Compliance for this option is demonstrated by meeting both the GHGI and the GHG emission requirements for each house.

⁽²⁾ Redundant or back-up equipment for the systems and equipment listed in Sentence 9.36.5.4.(1), is permitted to be excluded, provided it is equipped with controls and is not required to meet the space-conditioning load of the house.

Table 10.3.1.3.
Greenhouse Gas Emissions
Forming Part of Sentence 10.3.1.3.(1)

GHG Emission Level	Maximum GHGI of the Building, Expressed in kgCO _{2e} /m ² /year			
	Residential Major Occupancy		Business and Personal Service and Mercantile Major Occupancies	
	Hotels and Motels	Other Residential Occupancies	Offices	Other Business and Personal Service and Mercantile Occupancies
EL-1	measure only			
EL-2	9.0	7.0	5.0	6.0
EL-3	4.0	3.0	3.0	3.0
EL-4	2.0	1.8	1.5	2.0