



THE CORPORATION OF THE CITY OF VERNON

MEMORANDUM

TO: Patti Bridal, Chief Administrative Officer **FILE:** 3760-08
PC: Terry Barton, Director, Planning and Community Services **DATE:** October 15, 2024
FROM: Shawn Knuhtsen, Manager, Building and Licensing
Kevin McCarty, Specialist, Climate Action
SUBJECT: BC BUILDING STEP CODE AND BC ZERO CARBON STEP CODE

On September 23, 2024, Council received a delegation on the Zero Carbon Step Code and passed the following resolution:

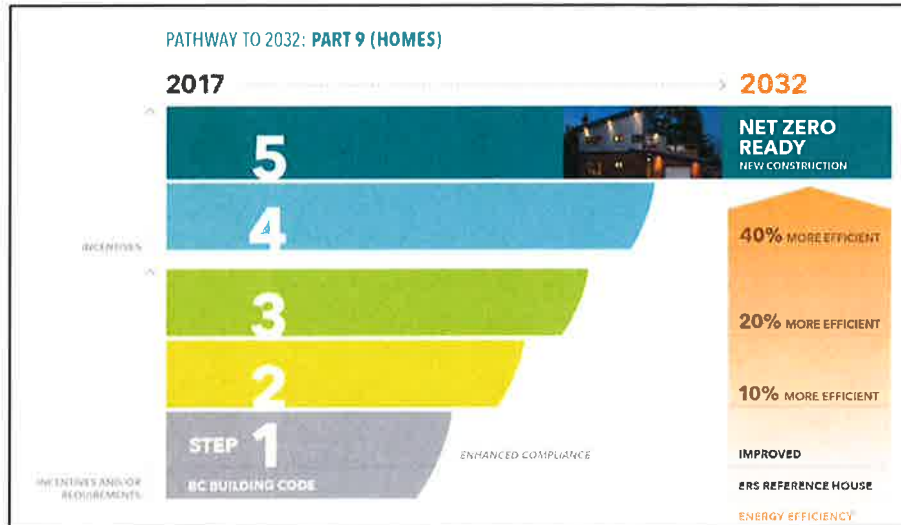
THAT Council receive the September 23, 2024 presentation from Janet Parkins and Jane Weixl regarding the Zero Carbon Step Code for information and refer to Administration for a report back to Council.

At its Regular Meeting of February 26, 2024, Council passed the following resolution:

THAT Council receive for information the memorandum titled "BC Building Step Code and BC Zero Carbon Step Code" dated October 15, 2024 and respectfully submitted by the Manager, Building and Licensing;

AND FURTHER, that Council support the proposed amendments to Part 15 of Building Bylaw 5000 to require buildings regulated by Part 9 of the BC Building Code to be designed and constructed to meet or exceed the performance requirements specified in the GHG Emission Level 1 (measure only) of the Zero Carbon Step Code.

The BC Energy Step Code (Step Code) was introduced in 2017 and is a provincial building compliance path that focuses on energy efficiency in new construction for both Part 9 buildings (homes and small buildings) and Part 3 buildings (large, complex buildings). Since May 1, 2023, the minimum energy performance in the BC Building Code is Step 3 for Part 9 and Step 2 for Part 3 buildings. As illustrated in the figure below, Step 4 and 5 are considerably more efficient than current requirements, with Step 5 being net zero ready. The Province has targeted 2032 for Step 5 for Part 9 buildings.



Accelerating implementation of the Step Code to Step 4 or 5 can pose challenges such as increased construction costs, resistance from stakeholders and development community, and potential economic impacts. Balancing the benefits of enhanced energy efficiency with the potential challenges, especially related to costs and industry adaptation, is crucial when considering the acceleration of the Step Code. The City has not yet undertaken a review of the development industry's experience of implementing current Step Code requirements under current market and supply chain conditions.

The BC Zero Carbon Step Code was introduced as part of the BC Building Code updates that limits greenhouse gas (GHG) emissions from new construction. It forms part of the BC Building Code update that came into effect on May 1, 2023.

Similar to the Step Code, the Zero Carbon Step Code is available for municipalities to opt into and adopt implementation.

The Zero Carbon Step Code has four levels:

- **Measure-only** (GHG Emission Level 1) – requires measurement of a building's emissions without reductions, and is intended to build knowledge and capacity
- **Moderate Carbon** Performance (GHG Emission Level 2) – in most cases, will require electrification of either space heating or domestic hot water systems
- **Strong Carbon** Performance (GHG Emission Level 3) – in most cases, will require electrification of both space heating and domestic hot water systems
- **Zero Carbon** Performance (GHG Emission Level 4) – in most cases, will require the full electrification of the building

The Province has shared the implementation timeline for both the BC Energy Step Code and the Zero Carbon Step Code as follows:

	Building Type	May-01-2023	2024	2027	2030	2032
BC Energy Step Code	Part 9 Part 3	Step 3 Step 2		Step 4 Step 3		Step 5 Step 4
Zero Carbon Step Code		Optional Compliance Path	TBD*	TBD*	Zero Carbon Performance Level (EL-4)	

**The Province has indicated they plan to enact amendments to the BC Building Code in 2024 and 2027, but have not yet identified what level will be required.*

At its Regular Meeting of April 22, 2024, Council adopted amendments to Part 15 of Building Bylaw 5000 to require buildings regulated by Part 9 of the BC Building Code to be designed and constructed to meet or exceed the performance requirements specified in the GHG Emission Level 1 (measure only) of the Zero Carbon Step Code.

At its Regular Meeting of March 11, 2024, Council passed the following resolution:

THAT Council authorize the allocation of funding from the Local Government Climate Action Program fund to proceed with initiatives described in the memorandum titled "Climate Action Plan Implementation" dated February 28, 2024, respectfully submitted by the Specialist, Climate Action as follows:

Initiative #6. Model the GHG emissions of future housing development with the 2024 Housing Needs Assessment. Funding amount: \$40,000.

Attachment 1 provides the full resolution. \$40,000 from the Local Government Climate Action Program has been allocated for the GHG emissions study. The City has partnered with the UBC Okanagan Lifecycle Management Lab to conduct this study and they have applied to Mitacs for funding to double the research budget. We are awaiting the decision from Mitacs.

This study will model and analyze the GHG emission impacts of new housing development scenarios identified in upcoming Housing Action Plan to understand if simply following the Province's incremental Step Code requirements will achieve the Climate Action Plan emission reduction targets, or if there is a need to advance the Step Code commitments at a faster rate. The study will also assess potential building energy labelling programs to facilitate a transition to low-emission housing design. Housing affordability is a major competing issue that must be balanced with the advancement of low-carbon housing design and therefore the financial impacts of advancing the Step Code commitments will be analyzed to understand how affordability can be balanced with the advancement of the Step Code commitments.

RECOMMENDATION:

THAT Council receive for information the memorandum titled "BC Building Step Code and BC Zero Carbon Step Code" dated October 15, 2024 and respectfully submitted by the Manager, Building and Licensing, and the Specialist, Climate Action.

Respectfully submitted:

X 
Shawn Knuhtsen
Manager, Building and Licensing

X 
Kevin McCarty
Specialist, Climate Action

Attachment 1 – Council Resolution - Climate Action Plan Implementation

Approved for the Agenda by the CAO

