

**TO:** MAYOR & COUNCIL

**FROM:** GENERAL MANAGER PLANNING AND DEVELOPMENT

**SUBJECT:** ZERO CARBON STEP CODE IMPLEMENTATION

**PURPOSE:** To recommend amendments to City policies and bylaws for Zero Carbon Step Code implementation.

### RECOMMENDATION

**THAT** staff be authorized to amend the Part 3 Green Building Policy and Low Carbon Energy System (LCES) Policy to align with ‘Zero Carbon Performance’ for Part 3 buildings by January 1, 2024, as outlined in Section 3.4 of the report titled “Zero Carbon Step Code Implementation” dated December 11, 2023; and

**THAT** the policy for Part 9 residential buildings, as outlined in Section 3.3 of the report titled “Zero Carbon Step Code Implementation” dated December 11, 2023, be adopted, and staff be authorized to bring forward the Building Bylaw amendments necessary to adopt Zero Carbon Step Code and new carbon pollution standards for Part 9 buildings, beginning with Strong Carbon Performance by January 1, 2024 and Zero Carbon Performance by January 1, 2025.

### EXECUTIVE SUMMARY

This report presents the results of engagement with parties interested in Energy Step Code and Zero Carbon Step Code implementation and makes recommendations to bring forth amendments to the City’s Part 3 Green Building Policy, Low Carbon Energy System Policy, and Building Bylaw to meet Council directions and Climate Action goals.

#### 1.0 POLICY SECTION

Requiring new buildings to meet standards for lower carbon emissions aligns with the following Council-adopted plans and strategies:

- *Climate Action Framework (2020)*;
- *Corporate Strategic Plan (2022)*;
- *Environmental Sustainability Strategy (2016)*;
- *Community Energy and Emissions Plan (2016)*;
- *Zero Emissions Building Retrofit Strategy (2023)*;
- *Social Sustainability Strategy (2011)*; and
- *Economic Development Strategy (2007)*.

The creation of a new Zero Carbon Step Code (Zero Carbon SC) is enacted by the Province (Ministry of Housing, Building and Safety Standards Branch), by amending the Building Act General Regulation (Ministerial Order No. M40) and the BCBC (Ministerial Order No. BA2023 8). For Part 3 Buildings, Energy Step Code and Zero Carbon Step Code

are implemented by Sections 10.2 (Energy Efficiency) and 10.3 (Greenhouse Gas Emissions) of the BC Building Code (BCBC). The relevant sections of the BCBC for Part 9 buildings are Sections 9.36.6 and 9.37.

## **2.0 BACKGROUND**

The Council Report entitled New Energy Efficiency and Carbon Pollution Standards in the BC Building Code (May 8, 2023) informed Council of regulatory amendments to the BC Building Code (BCBC) for energy efficiency and carbon pollution. Arising from this report, Council directed staff to:

- Engage with interested parties on an implementation strategy for aligning Burnaby's Part 3 Green Building Rezoning policy and Building Bylaw with the Energy and Zero Carbon Step Codes to require 'Zero Carbon Performance' for Part 3 buildings by January 1, 2024, and
- Engage with interested parties on an implementation strategy for adopting Zero Carbon Step Code and new carbon pollution standards for Part 9 buildings, beginning with 'Strong Carbon Performance' by January 1, 2024 and 'Zero Carbon Performance' by January 1, 2025.

## **3.0 GENERAL INFORMATION**

### **3.1 Draft Implementation Strategy for Engagement**

In response to the direction from Council, staff drafted an implementation strategy, including technical requirements, schedules and timelines for both Zero Carbon Step and Energy Step Code, prepared communication materials, including information presented on the City of Burnaby website, and undertook engagement with the building community by way of a presentation at a Builder Breakfast on September 26, 2023, an online survey, and correspondence with representatives of the Urban Development Institute.

The draft approach for implementation is summarized in 'City of Burnaby: proposed Zero Carbon Step Code and Energy Step Code implementation' (Attachment 1).

### **3.2 Public Survey**

Results of the public survey are presented in Attachment 2.

Highlights are as follows:

- 20 surveys were completed.
- Most respondents reported as being moderately to very well informed about Energy Step Code and Zero Carbon Step Code.
- For Part 9 buildings, respondents identified a number of challenges with building to the highest steps of the Energy Step Code (beyond Step 3), including the time it takes to master construction details, availability of required expertise, and ensuring performance at completion.
- For Part 9 buildings, most respondents reported that there are no barriers to implementing Zero Carbon Ready electric space and hot water systems.
- For Part 3 buildings, respondents identified several challenges to building to higher steps of the Energy Step Code, including design impacts to building form, incremental cost increases, and availability of required expertise.

- For Part 3 buildings, the majority of respondents reported that there are no barriers to implementing zero carbon ready electric space heating systems, but some challenges were still noted, including electrical service and availability of appropriate equipment.

The survey also contained open ended questions. Notable responses are synthesized as follows:

- Several respondents identified that the period of notice is too short and that projects already in the design phase under the current Green Building policy, but not able to achieve 2<sup>nd</sup> Reading by the end of the year would require significant redesign.
- Several respondents identified advancing to Step 3 of the Energy Step Code by January 1, 2024 would be challenging for high rises >6 stories and that this policy change would effect buildings already under design to meet the current low carbon energy system compliance pathway.
- The potential for additional electrical connection fees and infrastructure if projected electric load could not be met was noted.

### **3.3 Implementation for Part 9 Buildings**

To meet Council direction for Part 9 residential buildings, the following is recommended for adoption as a Council policy with amendments to the Building Bylaw to follow:

All new Part 9 residential buildings applying for a building permit must meet the following minimum requirements laid out in Sections 9.36.6 (Energy Step Code) and 9.37 (Greenhouse Gas Emissions) of the BC Building Code:

Beginning January 1, 2024:

- Energy Step Code, Step 3
- Zero Carbon Step Code, EL-3 (Strong Carbon Performance)

Beginning January 1, 2025:

- Energy Step Code, Step 3
- Zero Carbon Step Code EL-4 (Zero Carbon Performance)

These would be mandatory requirements upon amendment to the Building Bylaw. The Building Bylaw amendments would be brought forward in January 2024. Upon the adoption of this reports recommendations, the bylaw amendments would be in process, and permits received after can be held until the bylaw amendment is complete.

### **3.4 Implementation for Part 3 Buildings**

The Part 3 Green Building Policy and Low Carbon Energy System (LCES) Policy will be amended to one compliance pathway in accordance with Sections 10.2 and 10.3 of the BC Building Code:

- Energy Step Code, Step 2
- Zero Carbon Step Code, EL-4 (Zero Carbon)

In-stream rezoning applications that have progressed to 2<sup>nd</sup> Reading by December 31, 2023 would not be subject to the new requirements. These projects would proceed through the development approval and building permit process according to the current requirements for building energy efficiency and carbon performance established by the existing Green Building Rezoning Policy. Therefore, any rezoning applications that have not Received Second Reading by December 31, 2023 will be subject to the new policy on January 01, 2024.

A second phase of policy work scheduled for 2024 will consider transitioning from a rezoning policy to containing new Energy Step Code and Zero Carbon Step Code requirements as amendments to the Building Bylaw and a schedule for advancing to higher steps of the Energy Step Code as outlined in the draft implementation strategy.

Also recommended is that the Part 3 Green Building Policy and LCES Policy will be amended to exempt new buildings connecting to the existing Burnaby Mountain District Energy System. The second phase of policy work will consider how an existing DEU such as this one aligns with Zero Carbon Step Code.

**3.5 Issues for Consideration**

Zero Carbon Step Code requires electrification of space heating and domestic hot water systems. New developments will be required to demonstrate load requirements and are responsible for distribution system upgrades if there is not adequate power to meet the additional load on their site. BC Hydro is currently reviewing its extension policies and ways to reduce timelines for system upgrades. Builders and property owners may incur some additional costs as part of their overall project as a result.

**4.0 COMMUNICATION AND COMMUNITY ENGAGEMENT**

Not applicable

**5.0 FINANCIAL CONSIDERATIONS**

Not applicable

Respectfully submitted,

E. W. Kozak, General Manager Planning and Development

**ATTACHMENTS**

Attachment 1 – City of Burnaby Proposed Zero Carbon Step Code & Energy Step Implementation

Attachment 2 – BC Energy Step Code & Zero Carbon Step Code Proposed Implementation Timeline Survey

**REPORT CONTRIBUTORS**

This report was prepared by Mark Sloat, Planner 3 and reviewed by Erica Lay, Manager Climate Action and Energy and Lee-Ann Garnett, Deputy General Manager, Planning and Development