



City of Port Moody

Report/Recommendation to Council

Date: March 2, 2023
Submitted by: Community Development Department – Policy Planning Division
Subject: Energy Step Code and Zero Carbon Step Code Stakeholder Engagement

Purpose

To provide Council information on communicating with the local building industry on accelerated Energy Step Code requirements and implementation of Zero Carbon Step Code requirements in Port Moody.

Recommended Resolution(s)

THAT the report dated March 2, 2023 from the Community Development Department – Policy Planning Division regarding Energy Step Code and Zero Carbon Step Code Stakeholder Engagement be received for information.

Background

Through the following motions at the July 9, 2019, Regular Council meeting, Council endorsed an early adoption strategy for implementation of the BC Energy Step Code:

RC19/329

THAT the proposed early adoption strategy for the Energy Step Code be endorsed as recommended in the report dated June 12, 2019 from the Planning and Development Department - Policy Planning Division regarding Energy Step Code Early Adoption Strategy;

AND THAT Corporate Policy - 13-6870-2019-03 - BC Energy Step Code Rezoning Requirements be endorsed;

AND THAT staff be directed to report back with Building Bylaw amendments to support the proposed BC Energy Step Code early adoption strategy.

Discussion

In September of 2022 Council adopted the [Climate Ready Homes and Buildings Plan](#)¹, a comprehensive strategy outlining specific actions the municipality, residents, and business owners can take to make homes and buildings in Port Moody climate ready. Through the Plan, Port Moody has committed to the following target for new buildings to reduce operational GHG emissions:

- by 2025 (latest 2030), all new and replacement heating and hot water systems are zero emissions.

The Climate Ready Homes and Buildings Plan includes an action to accelerate adoption of the BC Energy Step Code (ESC), which was supported by stakeholders during the Plan's stakeholder engagement, including representatives from the building community. On February 14, 2023 Council endorsed the Phase Two Climate Action Implementation Strategy, outlining 45 actions for staff to implement in 2023 and 2024. One of the 2023 Phase Two actions is the forementioned action to accelerate ESC requirements.

Overview of the Energy Step Code and Zero Carbon Step Code

Enacted by the Province in April 2017, the ESC is a compliance path in the BC Building Code (BCBC) for energy efficiency standards rooted in a performance-based approach. This approach establishes a set of metrics that must be demonstrated through energy modelling and airtightness testing to prove compliance. Various metrics define the steps of the ESC, progressing from enhanced base code compliance at Step 1 to zero-energy ready at the highest step. Different building types have different numbers of steps. The steps are categorized into Lower and Upper Steps according to building types. Local governments can reference the ESC to require and/or incentivize more energy efficient buildings locally in advance of Provincial-wide regulation in 2023. More details on the ESC can be found on the [Energy Step Code webpage](#)².

Since the ESC focuses on energy efficiency and does not directly result in greenhouse gas (GHG) reductions, the Province has developed the Zero Carbon Step Code (ZCSC). Using a similar Step Code approach, the [ZCSC is a voluntary opt-in stepped performance standard](#)³ for new buildings that limits GHG emissions from new construction. Buildings complying with the ZCSC must demonstrate to local building officials that the design and the constructed building meets the committed Zero Carbon Step Code metrics, measured in kg CO_{2e}. The ZCSC has four levels:

- EL-1 (Measure-only): requires measurement of a building's emissions without reductions, and is intended to build knowledge and capacity;
- EL-2 (Medium carbon): in most cases, will require decarbonization of either space heating or domestic hot water systems;

¹ Port Moody Climate Ready Homes and Buildings Plan: <https://www.portmoody.ca/en/city-hall/climate-action-plan.aspx#Climate-Ready-Homes-and-Buildings-Plan>

² BC Energy Step Code: <https://energystepcode.ca/>

³ Zero Carbon Step Code (Revision 5 Convenience Copy): https://energystepcode.ca/app/uploads/sites/257/2023/02/BCBC-2018-Revision-5-Convenience-Copy.pdf?mc_cid=ac626dfe4a&mc_eid=151d34db87

- EL-3 (Low carbon): in most cases, will require decarbonization of both space heating and domestic hot water systems; and
- EL-4 (Zero-carbon): in most cases, will require the full decarbonization of a building.

Port Moody staff actively participate in the Local Government Step Code Peer Network, where Port Moody and many other local governments have worked alongside the Province to provide input into the development of the ZCSC. Several local governments have expressed interest in consulting on and implementing the ZCSC including the [City of Victoria](#)⁴ and [District of Saanich](#)⁵ who have already moved ahead.

Current Port Moody ESC Requirements

Between February 2019 and May 2019, staff engaged with the local building industry on developing a draft adoption strategy of ESC requirements in Port Moody. A [summary of engagement](#)⁶ was presented to Council alongside the recommended ESC early adoption strategy. A staff Interdepartmental Energy Step Code Working Group, along with the Community Energy Association, developed a proposed early adoption strategy for the ESC that reflects building industry and staff input. This approach was endorsed by Council on July 9, 2019, and implemented on January 1, 2020. In summary, Port Moody's [current ESC requirements](#)⁷ and policies are enforced through the following processes:

Corporate Policy: Development applications with rezoning required are subject to the BC Energy Step Code Corporate Policy. The policy asks for a commitment to build to an ESC level above Port Moody Building Bylaw ESC requirements in addition to installation of a low carbon energy system that meets a GHG intensity of 6kgCO_{2e}/m²/year (approximately equivalent to ZCSC EL-2).

Building Bylaw: Buildings with applicable occupancy types seeking a building permit are subject to ESC requirements. New Part 9 buildings must meet Step 3 of the ESC and Part 3 buildings must meet Step 3 or Step 2 with installation of a low carbon energy system as defined above, depending on the occupancy type.

Upcoming Provincial ESC and Carbon Regulations

[BC Building Code changes](#)⁸ to enable energy efficiency Energy Step Code requirements across the Province and provide an opt-in Zero Carbon Step Code were signed by the Minister of Housing in February 2023. These Code changes will take effect on May 1, 2023, meaning that starting May 2023:

- most new construction in BC will be 20% more energy efficient than base 2018 BC Building Code (similar to Step 3 for Part 9 buildings and Step 2 for Part 3 buildings); and
- all BC local governments have the option to enforce the Zero Carbon Step Code.

⁴ City of Victoria Step Code commitments: <https://www.victoria.ca/EN/main/residents/planning-development/development-services/green-buildings.html>

⁵ District of Saanich Step Code commitments:

<https://www.saanich.ca/assets/Community/Documents/Planning/sustainability/Step-Code-FAQ.pdf>

⁶ Summary of ESC Engagement 2019: <https://www.portmoody.ca/en/city-hall/public-consultations.aspx#BC-Energy-Step-Code>

⁷ Port Moody ESC Requirements: <https://www.portmoody.ca/en/city-hall/bc-energy-step-code.aspx>

⁸ BCBC 2018 Revision 5 changes:

https://energystepcode.ca/requirements/?mc_cid=ac626dfe4a&mc_eid=151d34db87#bcbc-2018-rev-4

To prepare for these upcoming building code changes staff recommend consulting with stakeholders.

Stakeholder Consultation Approach

The purpose of engaging with stakeholders is to:

- ensure the building community is aware of upcoming BCBC changes;
- discuss and provide feedback on accelerating ESC requirements and implementing ZCSC requirements; and
- understand what supports the building community will need to meet accelerated and new requirements.

Based on modelling completed by consultants to understand measures required to meet GHG reduction targets in the Climate Ready Homes and Buildings Plan, the following Step Code requirements are recommended:

- adopt the highest steps of the BC Energy Step Code:
 - Step 5 for Part 9 buildings by 2025; and
 - Step 4 for Part 3 buildings by 2025.
- adopt Zero Carbon Step Code requirements for Part 3 and Part 9 buildings in 2023 and increase stringency in 2025:
 - 2023: 2.5 – 4 kg CO_{2e}/m²/ year (equivalent to ZCSC EL-3); and
 - 2025: 1.5 – 2 kg CO_{2e}/m²/ year (equivalent to ZCSC EL-4).

These modelled recommendations will form the basis for engagement with the building community to garner feedback, understand compliance challenges, and determine solutions. Through cross-jurisdictional collaboration, there may be opportunities to partner with other local governments on stakeholder consultation activities as many communities are beginning engagement and policy adjustments in advance of May 1, 2023. Staff will explore and collaborate on stakeholder engagement activities as opportunities become available.

Current and Previous Port Moody Building Community Support

Since adoption of the Energy Step Code in Port Moody in 2019, the City has implemented multiple initiatives to support the building community in transitioning to high performance, low carbon building practices including:

StepWin Pilot: In 2019 the City partnered with Lambda Science to offer home builders free access to an Energy Step Code modelling tool called [Properate](https://properate.io/)⁹ (formerly StepWin) that allowed builders to input their home design and find multiple cost-effective ways of designing their project to be ESC compliant. This pilot ended in 2021, however, builders can still access the tool.

Airtightness Workshop: Staff in partnership with the Community Energy Association scheduled a free in person airtightness workshop in 2019 designed to provide hands-on training for building airtight homes. Unfortunately, the event was cancelled due to low registration.

⁹ Properate (formerly StepWin): <https://properate.io/>

Airtightness Testing Rebate: Since 2021 Port Moody has offered an incentive program, funded by BC Hydro, for mid-construction airtightness tests for Part 9 buildings. The purpose of this rebate program is to help local Part 9 building teams gain the knowledge and skills necessary to build airtight homes that will meet current and future requirements of the BC Energy Step Code.

Through the engagement process staff will seek to understand any additional support measures required for builders to achieve proposed requirements. Should Council endorse staff to proceed with stakeholder engagement, staff will report back in 2023 with results of engagement and recommended ESC and ZCSC requirements for Council consideration.

Other Option(s)

THAT staff be given direction on alternative stakeholder consultation methods or processes for acceleration of BC Energy Step Code and implementation of Zero Carbon Building requirements.

Financial Implications

Through the 2023 Capital Plan and the Phase Two Climate Action Implementation Strategy, Council approved \$8,500 to support Step Code stakeholder engagement. This funding will be used to support in person and virtual engagement events and surveys.

Communications and Civic Engagement Initiatives

Consultation with builders, developers, and other stakeholder groups will inform the development of draft accelerated Step Code requirements. Staff will present results of stakeholder engagement alongside recommendations for changes to local Step Code requirements for Council consideration.

Council Strategic Plan Objectives

Accelerating adoption of the Energy Step Code and implementing the Zero Carbon Step Code is consistent with the strategic outcomes in the area of Environmental Leadership identified in the 2019-2022 Council Strategic Plan. With the current Council Strategic Plan reaching maturity at the end of 2022, several phase two climate actions will be recommended to be integrated with the new Council Strategic Plan, including the acceleration of Energy Step Code requirements action.

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Report Approval Details

Document Title:	Energy Step Code and Zero Carbon Step Code Stakeholder Engagement.docx
Attachments:	
Final Approval Date:	Mar 6, 2023

This report and all of its attachments were approved and signed as outlined below:

Mary De Paoli, Manager of Policy Planning - Mar 2, 2023 - 11:28 AM

Kate Zanon, General Manager of Community Development - Mar 3, 2023 - 1:13 PM

Lindsay Todd, Manager of Communications and Engagement - Mar 3, 2023 - 4:13 PM

Paul Rockwood, General Manager of Finance and Technology - Mar 3, 2023 - 4:43 PM

Tim Savoie, City Manager - Mar 6, 2023 - 9:45 AM