



This information is provided for clarification purposes only and is not in substitution of any applicable City Bylaws or Provincial or Federal Codes or laws. In the case of any contradictions, legislative Codes, laws or Bylaws take precedence. You must satisfy yourself that any existing or proposed construction or other works complies with such Bylaws, Codes or other laws.

Energy Step Code: Part 3 Buildings

No.: BUILDING-40

Date: 2018-11-14

Rev.: 2023-12-08

This bulletin is to provide Owners, Applicants, Contractors, and Builders with the requirements and future targets of the BC Energy Step Code for new Part 3 buildings.

Summary

- New buildings are to be designed and constructed to the energy efficiency targets set out in the BC Energy Step Code.
- Most permit applications for new Part 3 buildings are subject to the Energy Step Code.

What is the BC Energy Step Code?

The BC Energy Step Code is an energy efficiency compliance path in the BC Building Code that sets out energy and airtightness performance targets for new developments to meet. The Energy Step Code requires new buildings to meet performance targets, rather than setting out detailed specifications for construction details. These standards have been set to encourage the construction of energy efficient and airtight buildings, making all new buildings net zero ready by 2032. Energy software modelling and on-site testing is used to demonstrate that both the building design and the constructed building meet the Energy Step Code standards.

The BC Energy Step Code is organized into a series of progressively more stringent “Steps”. Over time, the City of Richmond plans to incrementally enhance building requirements to the highest levels of the BC Energy Step Code. The Province is also expected to increase the stringency of base BC Building Code requirements over time so that all new construction is required to achieve a “net-zero energy ready” performance level by 2032.

What is “net-zero energy ready”?

Net-zero energy ready is a term used to describe buildings that have been designed and built to a level of energy efficiency performance such that it could, with the addition of solar panels or other renewable energy sources, achieve net-zero energy performance.

For more information on the City of Richmond’s Energy Step Code requirements for Part 9 buildings, please refer to bulletin Building-37.

See over →

Current Requirements

The table below outlines Richmond's BC Energy Step Code requirements for Part 3 buildings.

Building Type	Jul 1, 2022 to Oct 30, 2023	After Oct 31, 2023
Residential greater than 6 stories or non-combustible construction	Step 3 or Step 2 and LCES	Step 3 w/ EL-1 or Step 2 w/ EL-2
Residential 6 stories or less with combustible construction	Step 4 or Step 3 and LCES	Step 4 w/ EL-1 or Step 3 w/ EL-2
Office and Retail buildings	Step 3 or Step 2 and LCES	Step 3 w/ EL-1 or Step 2 w/ EL-2
Hotels and Motels	Step 3 or Step 2 and LCES	Step 4 w/ EL-1 or Step 3 w/ EL-2

LCES: low carbon building energy system” means a building’s space heating, cooling, and domestic hot water heating mechanical system is supplied with energy through either:

- A connection to a city owned district energy utility system; or
- An on-site energy supply equipment designed to meet a minimum 70% of the building’s annual heating, cooling, and domestic hot water energy demand from a renewable energy source such as air/ground-source heat pump, solar collectors, waste heat recovery systems etc., as approved by the City’s Director of Engineering. The building’s energy system must be designed and constructed such that it is ready to connect to a future City owned district energy utility system.
- Refer to BC Building Code Section 10.3 for Emission Level (EL) information.

Exemptions

For Part 3 buildings currently required to build to current Energy Step Code (ESC) and requiring a Development Permit:

- If a Development Permit has been issued prior to Oct 31, 2023, the owner may, while their Development Permit remains valid, apply for a Building Permit in compliance with ESC before Oct 31, 2023; or
- If an acceptable Development Permit application has been submitted to the City prior to adoption of Bylaw 10467, and is considered and endorsed by the Development Permit Panel prior to Oct 31, 2024, and has a complete Building Permit application acceptable to the City submitted prior to Oct 31, 2024, the owner may apply for a Building Permit in compliance with ESC before Oct 31, 2023.

Potential Future Requirements

The City of Richmond's Official Community Plan features the following table, including an estimated timetable for future consideration of higher Steps of the BC Energy Step Code as requirements in the City. Builders, Developers, and Designers are encouraged to consider these potential future requirements.

Building Type	Timetable for Future Consideration	
	Jan 1, 2025 to Dec 31, 2026	After Jan 1, 2027
Residential Concrete Towers	Step 4 + BC GHGI [TBD] or Step 3 + BC GHGI [TBD]	Step 4 + BC GHGI [TBD]
Residential Low/Mid-Rise	Step 4 + BC GHGI [TBD]	Step 4 + BC GHGI [TBD]
Office & Retail Buildings	Step 3 + BC GHGI [TBD]	Step 3 + BC GHGI [TBD]
Hotels and Motels	Step 4 + BC GHGI [TBD] or Step 3 + BC GHGI [TBD]	Step 4 + BC GHGI [TBD]

See attached →

Rezoning Application and Development Approvals

As part of both Rezoning and Development applications, applicants are expected to conduct energy modelling and provide a statement to the City that their proposed design is able to meet the requirements of BC Energy Step Code that will be in place at the time of their Building Permit application. This statement must be submitted prior to City Council's consideration of the project's rezoning, and prior to consideration of the project by the Development Permit Panel.

Building Approvals

Applicants must submit the proper Letters of Assurance as part of the Building Permit application, and prior to occupancy, assuring that the project substantially complies with the City's Energy Step Code requirements. In addition, the following documents must be completed and submitted to energyreports@richmond.ca at the Building Permit application stage:

1. Part 3 Energy Design Report, completed by a Registered Professional who is either a Qualified Modeller (QM) or overseeing a QM in the role of Energy Modelling Supervisor (EMS), as per the Joint Professional Practice Guidelines for Whole Building Energy Modelling Services. The Registered Professional must include their Registration/License number after their name on both tabs.
2. The energy modelling report for each building, signed by the Registered Professional acting as the QM or EMS on the project. The City may contact the Registered Professional to submit the associated model files for auditing purposes.
3. Plan drawings clearly showing all energy efficiency upgrades (e.g. wall assemblies including the type of air barrier).

The Registered Professionals of Record (RPRs) for the architectural, mechanical, plumbing, and electrical disciplines each have specific responsibilities to energy efficiency requirements under the BC Energy Step Code. The City will not accept Letters of Assurances (Schedule B) if the BC Energy Step Code section has been crossed out.

Prior to occupancy, the applicant must create an Energy Star Portfolio Manager profile of the building(s) (see: bchydro.com/powersmart/business/resources/energy-efficiency-benchmarking.html). To support implementation of future benchmarking reporting requirements, applicants may share the property profile with the City of Richmond as a "Read Only" permission level.

All Energy Step Code reports along with any supporting documents specified in this bulletin must be submitted to energyreports@richmond.ca with the site address and report title in the email subject (e.g. "6911 No 3 Rd – Pre-construction Report")

References

- AIBC and EGBC's Joint Professional Practice Guidelines for Whole Building Energy Modelling Services
- BC Energy Compliance Report: Pre-Construction energystepcode.ca/compliance-tools-part3/
- BC Energy Step Code energystepcode.ca/
- [Bulletin Building-37: Energy Step Code: Part 9 Buildings Overview](#)
- [Bulletin Building-38: Energy Step Code: Part 9 Single Family Dwellings and Duplexes](#)
- [Bulletin Building-39: Energy Step Code: Part 9 Townhouses and Apartments](#)
- City of Richmond [Official Community Plan](#)

Should you have any questions or comments concerning this bulletin, please contact the City of Richmond's Building Approvals Department at building@richmond.ca or 604-276-4118.