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Energy Step Code: Part 9 Buildings Overview

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This bulletin is to provide Owners, Applicants, Contractors, and Builders with an overview of the requirements and future targets of the BC Energy Step Code.

Summary

- Most new buildings are to be designed and constructed to the energy efficiency targets set out in the BC Energy Step Code.
- As of Dec 15, 2020, the requirement for Part 9 residential buildings has been upgraded to Step 3 or Step 2 with the use of a low-carbon energy system.
- As of Oct 31, 2023, the requirement for Part 9 residential buildings is changed to new Step described in following sections.

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. The BC Energy Step Code is organized into a series of progressively more stringent “Steps”. These targets have been set to encourage the construction of energy efficient and airtight buildings, making all new buildings net zero energy ready by 2032. Energy modelling and on-site airtightness testing are used to demonstrate that both the building design and the constructed building meet the Energy Step Code standards.

The City of Richmond adopted the Energy Step Code in 2018. Over time, the City will incrementally increase its building energy efficiency requirements to the highest levels of the BC Energy Step Code. The Province also plans to increase the stringency of the base BC Building Code requirements over time with all new construction required to achieve a “net-zero energy ready” performance level by 2032.

What is “net-zero ready”?

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

Energy Advisors or Registered Professionals are required to take part in all new project developments to:

- Develop energy models for new building projects.
- Provide guidance on meeting airtightness and energy performance requirements.
- Verify installation of energy efficiency upgrades.
- Conduct required blower door tests to measure building airtightness.

See over →

Energy Step Code Requirements for Part 9 Buildings

The table below outlines Richmond's BC Energy Step Code requirements for Part 9 buildings.

Building Type	Jul 1, 2022 to Oct 30, 2023	After Oct 31, 2023
Single family dwellings and duplexes	Step 5 ^(a) or Step 4 ^(b)	Step 5 ^(a) + EL-2 or Step 4 ^(b) + EL-3
Townhomes and apartments	or Step 3 ^(b) and LCES	or Step 3 ^(b) + EL-4

(a) Building envelope performance requirements can be achieved using all compliance pathways defined in BCBC.

(b) Building envelope performance requirements must be achieved using adjusted TEDI compliance pathways.

EL-2: Annual limit of ≤ 1050 kg CO₂e per housing unit, or ≤ 6 kg CO₂e/m² of conditioned floor area and ≤ 2400 kg CO₂e per housing unit

EL-3: Annual limit of ≤ 440 kg CO₂e per housing unit, or ≤ 2.5 kg CO₂e/m² of conditioned floor area and ≤ 800 kg CO₂e per housing unit

EL-4: Annual limit of ≤ 265 kg CO₂e per housing unit, or ≤ 1.5 kg CO₂e/m² of conditioned floor area and ≤ 500 kg CO₂e per housing unit

Note: Except for Step Code 5, natural gas fueled systems are not allowed to be backup heating system after Oct 31, 2023.

Exemptions

For Part 9 buildings currently required to build to energy requirements before Oct 31, 2023 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 requirements before Oct 31, 2023; or
- If an acceptable Development Permit application has been submitted to the City prior to Oct 31, 2023, 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 requirements before Oct 31, 2023.

Future Requirements

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 Richmond.

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
Single family dwellings and duplexes	Step 5 ^(a) + EL-3 or Step 4 ^(b) + EL-4	Step 5 ^(a) + EL-4
Townhomes and apartments		

References

- BC Energy Step Code <https://energystepcode.ca/>
- Bulletin Building-38: Energy Step Code: Part 9 Single Family Dwellings and Duplexes
- Bulletin Building-39: Energy Step Code: Part 9 Townhouses and Apartments
- Bulletin Building-40: Energy Step Code: Part 3 Buildings
- City of Richmond Official Community Plan

Should you have any questions or comments concerning this bulletin, please reference the Bulletin number and email building@richmond.ca or call the Building Approvals General Inquires line at 604-276-4118.