

About the **BC Energy Step Code**

The BC ESC (or “Step Code”) is a province-wide performance standard requiring new buildings to attain higher energy performance by meeting set targets for the building envelope, mechanical system efficiency and airtightness. Energy modelling software and on-site air tightness testing is used to demonstrate Step Code compliance, indicating that the building meets the required performance level at the pre-construction stage as well as project completion.

The Step Code establishes progressive performance steps in energy efficiency for new buildings from the current BC Building Code level to net zero energy-ready buildings by 2032. In future, new homes will need to be built better than the current BC Building Code:

20 per cent more energy efficient by 2022 (current requirement)

40 per cent more energy efficient by 2027

80 per cent more energy efficient by 2032 which is the net-zero energy ready standard



About the Zero Carbon Step Code

The Zero Carbon Step Code is a regulation that sets a maximum annual amount of greenhouse gas (GHG) emissions that new buildings are allowed to emit. The details of the standards can be found on the [BC Energy Step Code website](#) in the [BC Building Code Update](#).

Relationship between the **Zero Carbon Step Code** and the **BC Energy Step Code**

The BC Energy Step Code regulates energy efficiency for new buildings, whereas the Zero Carbon Step Code regulates greenhouse gas (GHG) emissions. Compliance for the BC Energy Step Code and the Zero Carbon Step Code are now reported through the same compliance checklist, similar to the previous BC Energy Step Code compliance forms.

The following BC Energy Step Code requirements currently remain in effect for the District of Oak Bay:

Step 3 for **Part 9 buildings** (single-family homes, duplexes, townhomes and small homes/garden suites)

Step 2 for **Part 3 mid-rise/wood-frame** residential buildings (six storeys or fewer)

Step 2 for **Part 3 high-rise/concrete** residential buildings and commercial buildings

Current Energy Step Code and Zero Carbon Step Code requirements in Oak Bay

As of September 1, 2024, all new construction projects of the building types listed below will be required to report their modelled GHG intensity.

The District of Oak Bay will implement Emissions Level 4 (EL-4), Zero Carbon Performance, for all new buildings of the following types with building permit applications required after the following dates.

BUILDING CODE - BUILDING TYPE	2024
PART 9 BUILDINGS - HOUSES, DUPLEXES, MULTIPLEXES, AND TOWNHOUSES	ESC: Step 3 ZCSC: EL-4 (Sept 1, 2024)
PART 3 BUILDINGS- RESIDENTIAL BUILDINGS OF SIX-STOREYS OR LESS	ESC: Step 3 ZCSC: EL-4 (Sept 1, 2024)
ALL PART 3 BUILDINGS - RESIDENTIAL AND COMMERCIAL BUILDINGS	ESC: Step 2 ZCSC: EL-4 (Nov 1, 2024)

Table 1: The BC Building Code in Table 9.37.1.3 outlines the specific compliance metrics and requirements for Part 9 buildings and Table 10.3.1.3. for Part 3 buildings. These tables can be seen in the convenience copy of the **BC Building Code.**

What's included and what's excluded in the Zero Carbon Step Code?

Zero Carbon Step Code applies to **new construction** of the following building types:

- Part 9 Residential Buildings
- Part 3 mid-rise/wood-frame residential buildings (six-storeys or fewer)
- Part 3 high-rise/concrete residential buildings and commercial buildings

Existing buildings are not impacted by the Zero Carbon Step Code.

Generally, primary and supplemental heating systems for space and water heating are included in GHG emissions calculations.

- Redundant and backup heating systems are not included if they have specific controls and are not designed to meet the heating load of the building.
- Gas appliances are not included for Part 9 but are included for Part 3 buildings.
- The Province has provided an information bulletin providing additional clarification.

How does this affect my project?

If your project falls within the included categories of buildings listed in the blue box on page two and your building permit application was submitted on or after the dates listed above, your project must comply with Emissions Level 4, Zero Carbon Performance, of the Zero Carbon Step Code. This likely means that the primary space and water heating systems will use electricity rather than fossil fuels like natural gas.

How do I demonstrate compliance with the Energy Step Code and Zero Carbon Step Code?

Compliance is demonstrated through the Step Code Compliance Checklists available from the Province of British Columbia for [Part 3](#) and [Part 9](#) projects. There are updated compliance forms that include space to report the Zero Carbon Step Code metrics, but the format and method of completion of the forms will be familiar to Energy Advisors and Energy Modelling professionals who have completed BC Energy Step Code compliance forms in the past. The output of these checklists must be submitted to the District of Oak Bay to demonstrate compliance:

At the **Building Permit stage** —————→ showing the ‘**As Designed**’ results
At the **Occupancy Permit stage** —————→ showing the ‘**As Built**’ results

Diagrams outlining the general process of approval are available at the end of this document.



Are existing buildings and retrofits impacted by the **Energy Step Code** and **Zero Carbon Step Code**?

Existing buildings and retrofits are **not** impacted by the Energy Step Code and Zero Carbon Step Code.

How will this impact project costs?

The new regulations will likely result in design changes that will have cost impacts, but the exact change in cost will be project-specific. As part of the development of the Zero Carbon Step Code, the Province of British Columbia completed a technical and cost analysis of common building archetypes that examined the incremental cost increase resulting from the Zero Carbon Performance requirements.

For Part 9 buildings, it was estimated that the incremental increase in capital cost to meet Zero Carbon Performance was one percent or less for all archetypes in Oak Bay’s climate zone. [See Part 9 Data Tables](#).

For Part 3 buildings, it was estimated that the incremental increase in capital cost to meet Zero Carbon Performance was 2.2 percent or less for all archetypes in Oak Bay’s climate zone. [See Part 3 Data Tables](#).

How is the use of cooktops, BBQs and other gas appliances impacted by the Zero Carbon Step Code in terms of compliance?

Gas appliances such as cooktops and BBQs are not included in Part 9 compliance. Gas appliances are included for Part 3 building compliance as outlined in the [Vancouver Energy Modeling Guidelines](#). The Province of British Columbia has provided an [information bulletin](#) providing additional clarification.

How are electrical capacity and distribution concerns being addressed?

Projections from BC Hydro and the Province indicate that electricity demand is expected to increase by 15 percent by 2030. According to the 2023 update of its [Integrated Resource Plan](#), BC Hydro intends to meet this demand through a variety of means including actions on energy efficiency, demand response, industrial load curtailment, electricity purchase agreement renewals, utility-scale batteries and acquiring approximately 3,000-gigawatt hours (GWh) of new clean or renewable energy by 2030.

To address infrastructure costs to customers, BC Hydro is investigating the best strategy to update its Distribution Extension Policy so that the costs of upgrading distribution infrastructure can be shared more evenly by all end users, rather than the first to require the upgrade. This will require approval by the BC Utilities Commission. More info available here: [BC Hydro's Distribution Extension Policy Workshop \(May 26, 2023\)](#). Electrical peak demand and electrical infrastructure size can be minimized through detailed system design and controls.

How is renewable natural gas being considered?

Renewable natural gas is not currently a means of compliance for the Zero Carbon Step Code.

Useful Links

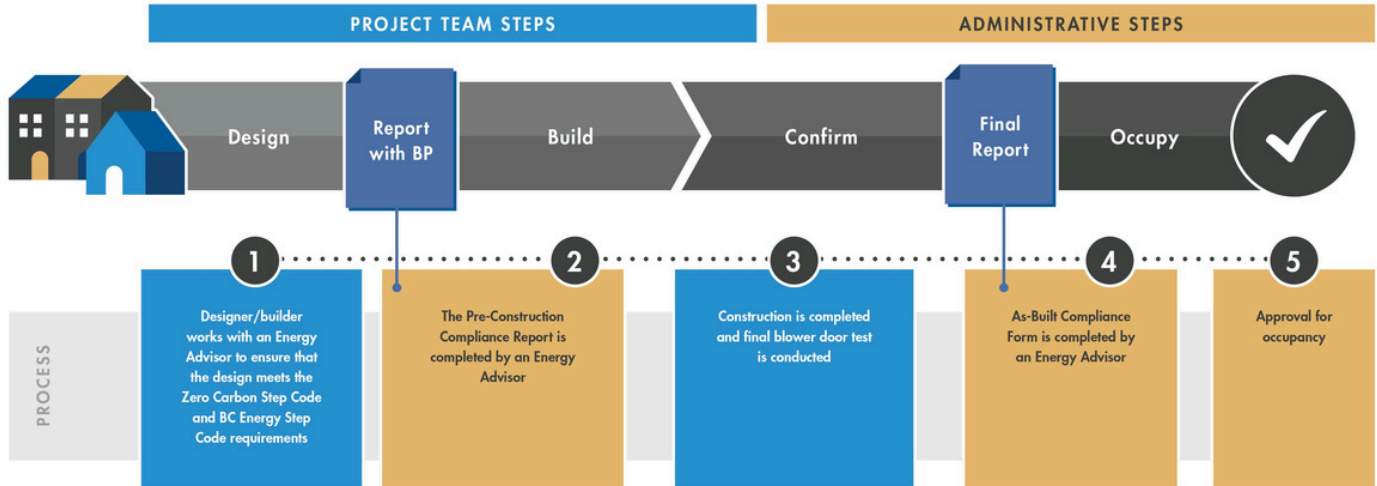
- [BC Energy Step Code website](#)
- [Compliance Checklists for Part 3 and Part 9 buildings](#)
- [BC Building Code Updates - Convenience Copy](#)
- [Province of British Columbia Zero Carbon Step Code Information Bulletin](#)
- [Subscribe to receive the BC Energy Step Code Newsletter](#)
- [BC Energy Step Code Metric Report Update](#), including technical and costing analysis with [Part 3](#) and [Part 9](#) data tables



Application Process and Touch Points

for Energy Step Code and Zero Carbon Step Code

Performance Pathway Process for Part 9 Projects (e.g. single family, duplexes)



Process for Part 3 Projects (e.g. multi-unit residential, large commercial office)

