

Zero Carbon Step Code

Frequently Asked Questions

What is 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](#).

How does the Zero Carbon Step Code relate to the BC Energy Step Code?

For new buildings, the BC Energy Step Code regulates energy efficiency, whereas the Zero Carbon Step Code regulates GHG emissions. Compliance for both 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 remain in effect for the City of Victoria:

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

What is required in Victoria?

As of May 1, 2023, all new construction projects of the included building types will be required to report their modeled GHG intensity. The City of Victoria will implement Emissions Level 4, Zero Carbon Performance, for all new buildings of the following types with building permit applications required after the following dates:



Part 9 residential buildings

November 1, 2023



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

July 1, 2024



Part 3 high-rise/concrete residential buildings and commercial buildings

November 1, 2024

The specific compliance metrics and requirements are outlined in the BC Building Code in Table 9.37.1.3. 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?

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



Part 9 homes (single-family homes, duplexes, townhomes and small homes/garden suites)



Part 3 mid-rise/wood-frame residential buildings



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 back-up 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 above and your building permit application was submitted on or after the dates listed above, then 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?

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 City of Victoria 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

What about existing buildings and retrofits?

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

How will this affect project costs?

The new regulations are likely to 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 costing 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 per cent or less for all archetypes in Victoria'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 per cent or less for all archetypes in Victoria's climate zone.

See [Part 3 Data Tables](#).

What about cooktops, BBQs and other gas appliances?

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 per cent 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 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.

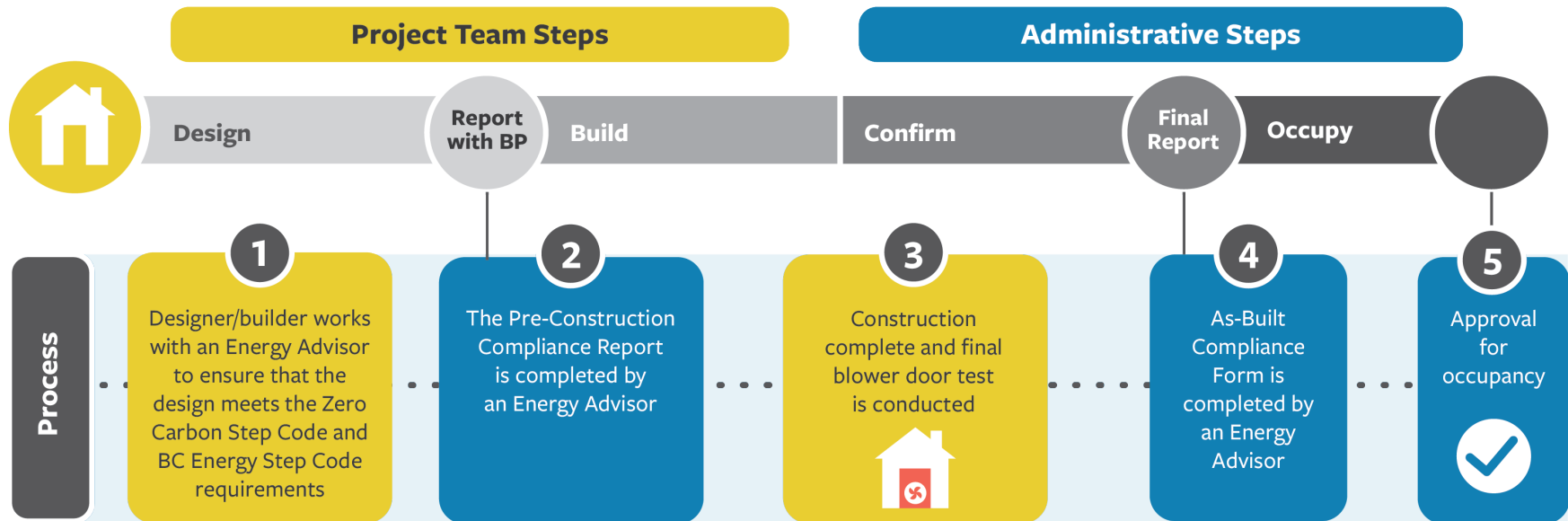
How is renewable natural gas being considered?

Renewable natural gas is not currently a means of compliance.

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

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



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

