



Office of Housing and
Construction Standards



Provincial Policy: Local Government Implementation of the BC Energy Step Code

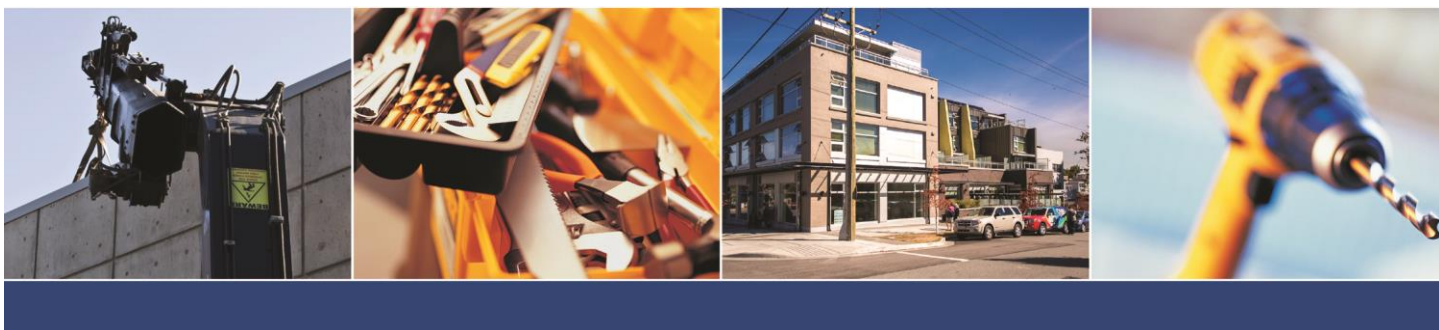
Section C2 of the *Building Act* Guide

April 2017



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1. About this Guide

In spring 2015, the Province passed the *Building Act*, the first Act dedicated solely to building and construction.

This guide is part of a series of informational materials prepared by the Province that forms the *Building Act* Guide. It explains the policy intent of the BC Energy Step Code and its use and application by local governments and other local authorities under the *Building Act*. If the *Building Act* information you are seeking is not in this guide, [check online](#) for more information, including other guides in this series. This guide may be revised in future. Please ensure you are reading the most current version which will always be available [online](#).

This guide is not a stand-alone document but is meant to complement additional educational materials about the BC Energy Step Code developed by the Building and Safety Standards Branch and the Energy Step Code Council, as explained later in this guide.

The information provided here is for guidance only and is not a substitute for provincial legislation. It is not legal advice and should not be relied upon for that purpose.

A Note about the *Building Act* Guide

The *Building Act* Guide provides information about the Act for local authorities, building officials, and those working in the building construction sector. Sections of the guide are released as the Act and the supporting regulations come into force. The following sections are available [online](#):

Part A – Introduction

- A1 - Understanding B.C.'s Building Regulatory System
- A2 - A Guide to the *Building Act*: Modernizing B.C.'s Building Regulatory System
- A3 - *Building Act* Brochure
- A4 - *Building Act* Introductory PowerPoint Presentation

Part B – Information for Specific Stakeholders

- B1 - What Local Governments Need to Know about the *Building Act*
- B1 Appendix - Changes for Local Governments Under Section 5 of the *Building Act*
- B2 Short - What Building and Plumbing Officials Need to Know about the *Building Act*
- B2 Full - What Building and Plumbing Officials Need to Know about the *Building Act*

Part C – New Procedures (How to...)

- C1 - A Guide to Requesting a Local Authority Variation
- C2 - Provincial Policy: Local Government Implementation of the BC Energy Step Code (this section)



2. Introduction: What is the BC Energy Step Code?

The BC Energy Step Code is a voluntary roadmap that establishes progressive performance targets (i.e., steps) that support market transformation from the current energy-efficiency requirements in the BC Building Code to net zero energy ready buildings. It establishes a set of incremental performance steps for new buildings that aims to communicate the future intent of the Building Code and improve consistency in building requirements across British Columbia (B.C.) to transition to net zero energy ready buildings by 2032. It is a voluntary tool local governments across B.C. can use to encourage—or require—the construction of more energy-efficient buildings in their communities, and do so in a consistent, predictable way.

The BC Energy Step Code takes a new, performance-based approach rather than the traditional prescriptive approach. This means the BC Energy Step Code does not specify *how* to construct a building, but identifies an energy-efficiency target that must be met and lets the designer/builder decide how to meet it. The BC Energy Step Code has four steps for large, complex buildings (referred to as Part 3 buildings in the BC Building Code), and five steps for houses and small buildings (referred to as Part 9 buildings in the Building Code).

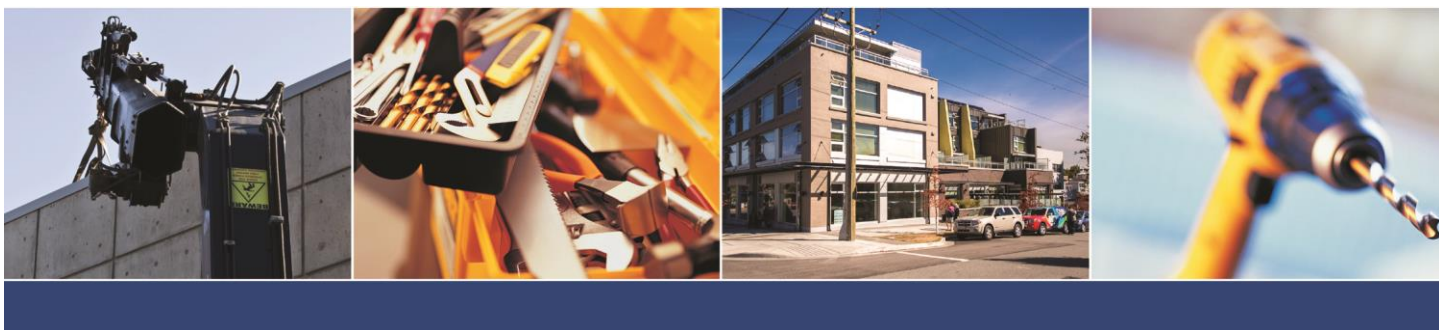
A key feature of the BC Energy Step Code is that every level of performance (or ‘step’) is evaluated using the same tests and metrics. This is intended to create a consistent way of measuring and understanding energy use in all buildings, regardless of their level of performance, and prepare industry for a province-wide performance-based building approach. Higher steps in the BC Energy Step Code represent higher performance targets (i.e., greater energy efficiency), but use the same measurement tools as the lower steps.

The first step in the BC Energy Step Code—called the ‘Enhanced Compliance Step’—means building to the current requirements in the BC Building Code and measuring the performance of the building using the modelling and measuring tools of the BC Energy Step Code. This allows the builder, owner, or designer to satisfy the current expectations of the BC Building Code using the tests and metrics required for all higher performance steps. It involves analyzing building performance using a computer energy modelling program, which is a common approach to all high-performance building, and testing the air leakage rate of the building during construction, which is an indicator of a building’s energy efficiency.

What is a net zero energy ready building?

For the purposes of this guide, a net zero energy ready building can be defined as a building built to high energy-efficiency standards such that it could (with additional measures) generate enough onsite energy to meet its own energy needs.

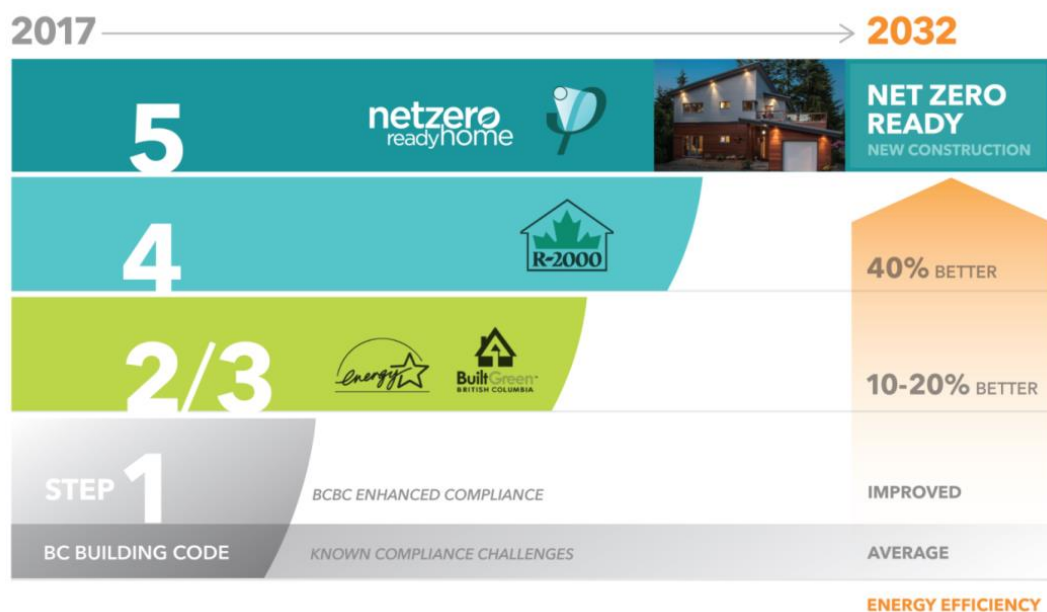
BC Energy Step Code: Lower and Higher Steps		
Building Type	Lower Steps	Higher Steps
Part 3 Residential	Steps 1 and 2	Steps 3 and 4
Part 9 Residential	Steps 1, 2 and 3	Steps 4 and 5



In addition to energy modelling and airtightness testing, all steps of the BC Energy Step Code use metrics to model the designed performance of the building envelope (insulation, air leakage, doors and windows, etc.), and the efficiency of the systems and equipment inside the building (heating, ventilation, etc.). To satisfy each step of the BC Energy Step Code, a builder needs to demonstrate that they have satisfied both the envelope target and the equipment and systems target—a different approach than has been used in the past.

The BC Energy Step Code is voluntary and is intended to apply to the construction of new buildings. Local governments and other local authorities may choose to require the steps in the BC Energy Step Code in their jurisdictions, but they are not obligated to do so; when they do, it is expected they will follow the policy guidance provided in this guide. Similarly, developers, builders, or owners may choose to build more energy-efficient buildings according to the requirements in the BC Energy Step Code, and may do so even if the jurisdiction in which they are building does not require it; however, they are not obligated to unless the jurisdiction in which they are building requires it.

The BC Energy Step Code: Steps for Part 9 Buildings



2.1 Principles of the BC Energy Step Code

The BC Energy Step Code represents a substantial consensus among a broad range of stakeholders who participated in a series of working groups and committees over the past two years. The following key principles guided this work:

- **Provincial Priorities:** Consider provincial priorities, including the 2016 Climate Leadership Plan and housing affordability, when developing the BC Energy Step Code.
- **Consistency:** Increase the consistency of technical building requirements and practices across the province.



- **Local Options:** Provide local governments with options to meet adopted targets, policies, and actions to reduce greenhouse gas emissions, as required under the *Local Government Act*, and meet voluntary commitments under the *Climate Action Charter*.
- **Industry Flexibility:** Provide industry with flexibility to adjust to new technologies and clear guidance on the long-term intent of the BC Building Code.
- **Market Transformation:** Transition the market towards increased accountability and measurable improvements in energy efficiency.

2.2 Multi-Partner Collaboration and the Energy Step Code Council

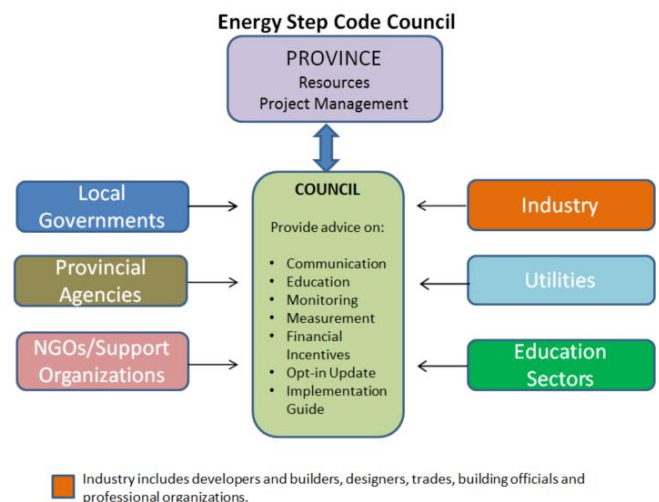
The Province, local governments, industry, and utilities are embarking on the BC Energy Step Code together. Success will require continued commitment from all involved during a transition period that will take place over at least the next three years (2017-2020). An Energy Step Code Council has been established to support local governments and industry towards smooth uptake of the BC Energy Step Code and help guide market transformation towards higher-performance buildings within B.C. The Energy Step Code Council will meet quarterly during the transition period with the following mandate:

- Support the creation and dissemination of training and capacity building opportunities for local governments, industry, and other stakeholders;
- Develop clear communications for various audiences on what the BC Energy Step Code is and how to implement it across the province;
- Provide advice and clarification on technical aspects of the BC Energy Step Code;
- Profile incentives and financing mechanisms; and
- Seek resolution of implementation issues as they arise.

A representative of the Building and Safety Standards Branch will chair the Energy Step Code Council and act as a liaison between the Council and the Province. The Energy Step Code Council comprises many stakeholders (see diagram).

In addition to leadership from the Energy Step Code Council, successful implementation will require:

- Leadership from the Province to support ongoing collaboration between stakeholders, resolve issues as they arise, conduct analysis to determine if the BC Energy Step Code is achieving intended results, continue analysis of technical issues related to high-performance buildings, and lead by example in public-sector buildings. Additionally, the Province will work to align the BC Energy Step Code with other provincial priorities.





- Local governments to represent the needs of their communities and engage within their region (as outlined in the BC Energy Step Code best practice implementation guide) to ensure uptake is as smooth as possible on both a local and regional basis. The best practice implementation guide is being developed to provide local governments with clarity on what stakeholders agree successful implementation will require, and is expected to be published in summer 2017.
- Industry to provide education on how to design, build and measure energy-efficient buildings, to prepare members for the BC Energy Step Code. Industry will be expected to provide feedback to the Province and local governments on impacts of the BC Energy Step Code implementation on building design and construction, and work with partners to align the pace of implementation with the growth of industry capacity.
- Utilities to support with training resources, capacity building and incentive programs that facilitate uptake of the BC Energy Step Code across the province. As implementation progresses, utilities can help evaluate the success of the program over time.



3. BC Energy Step Code Policy

Preamble

This BC Energy Step Code policy has been developed to support local governments and industry during a transition period from 2017 to at least 2020. The transition period may be extended depending on how the implementation of the BC Energy Step Code proceeds.

Until December 2017, the focus of the transition will be on helping shift local governments with existing energy-efficiency programs (for buildings) to appropriate targets in the BC Energy Step Code. From 2018 - 2020, the transition period will continue to support local governments using the BC Energy Step Code, and help other local governments that would like to explore doing so. Once local governments and industry are comfortable with the implementation of the BC Energy Step Code, the transition period will be formally closed, and the BC Building Code will be updated to require staged increases in energy performance, as per the BC Energy Step Code.

3.1 Monitoring Implementation of the BC Energy Step Code

- 3.1.1 The Energy Step Code Council, with the participation of the Province, will monitor implementation of the BC Energy Step Code. Tracking key data will inform the continued implementation of the BC Energy Step Code.

3.2 Legal Authority to Reference the BC Energy Step Code

- 3.2.1 The *Building Act* governs building and construction across B.C. except in the City of Vancouver, and on federal lands and reserves. Under the Act, the Province has sole authority to set technical building requirements (using the BC Building Code or other regulation).
- 3.2.2 The BC Energy Step Code is a provincial building regulation that is a voluntary compliance path within sections 9.36.6 and 10.2.3 of Division B of the BC Building Code.
- 3.2.3 By December 15, 2017, section 5 of the *Building Act* will render local government bylaws that establish technical building requirements of no legal force unless the bylaws concern what the Act calls ‘unrestricted matters.’
- 3.2.4 Two new matters (with two conditions) have been added to the unrestricted matters list in the Building Act General Regulation to enable local governments to require that new buildings constructed in their jurisdictions be constructed to one of the steps in the BC Energy Step Code. The two matters are:
- The conservation of energy, and
 - The reduction of greenhouse gas emissions.



These two matters are **unrestricted with two conditions:**

- Local governments may not require buildings to be constructed except in conformance with a step described in Article 9.36.6.3. or 10.2.3.3. of Division B of the BC Building Code; and
- Local governments may not modify a requirement of, or impose requirements in addition to those set out in, Subsection 9.36.6. or 10.2.3. of Division B of the BC Building Code.

3.2.5 The BC Energy Step Code is available for local governments to reference in bylaws, policies, and programs using the authorities in the *Local Government Act*, *Community Charter*, *Building Act*, or other sources of local government authority.

3.3 How to Implement the BC Energy Step Code

- 3.3.1 Local governments are advised to review the best practice implementation guide (when it becomes available) to understand recommended steps to successfully adopt and implement the BC Energy Step Code.
- 3.3.2 Local governments are advised to contact the Energy Step Code Council when beginning to consider adopting the BC Energy Step Code, to ensure access to the latest information, tools and support.
- 3.3.3 Local governments are advised to review readiness in their communities and region to reference and implement the BC Energy Step Code, prior to taking any action. This includes:
- Understanding industry readiness to meet the requirements of the BC Energy Step Code in the local government's region. The Energy Step Code Council is undertaking a review of industry capacity in different regions, and will make this material available on the BC Energy Step Code website. Local governments are advised to consider this analysis, alongside local analysis of capacity; costs; benefits; technical implications; and opportunities to provide training, information and education for industry on how to implement the BC Energy Step Code.
 - Reviewing organizational readiness to implement the BC Energy Step Code. This includes training needs for city councils, design panels, planners, and building officials, as well as reviewing inspection procedures, policy documents, community development processes, handouts, bulletins, and websites for necessary changes.
- 3.3.4 A local government should notify the Energy Step Code Council of its intent to consult with the development and building industry servicing its region, and other associated organizations, including neighboring municipalities. A timeline for notification is provided in section 3.4 of this guide.
- 3.3.5 A local government should notify the Energy Step Code Council when bylaws or policies that reference the BC Energy Step Code are ratified, and of the date of enactment.



3.3.6 Steps in the BC Energy Step Code are divided into higher and lower steps.

3.3.6.1 For Part 3 Buildings, higher steps are defined as steps 3 and 4 (step 4 being the highest).

3.3.6.2 For Part 9 Buildings, higher steps are defined as steps 4 and 5 (step 5 being the highest).

3.3.6.3 During the transition period (from now until at least 2020), local governments should not apply community-wide requirements to meet the higher steps of the BC Energy Step Code.

3.3.6.4 During the transition period, reference to higher steps should only be made in circumstances where there is significant value being added to the property where higher steps will apply. The value added should be equal or greater than the cost to build to the higher step.

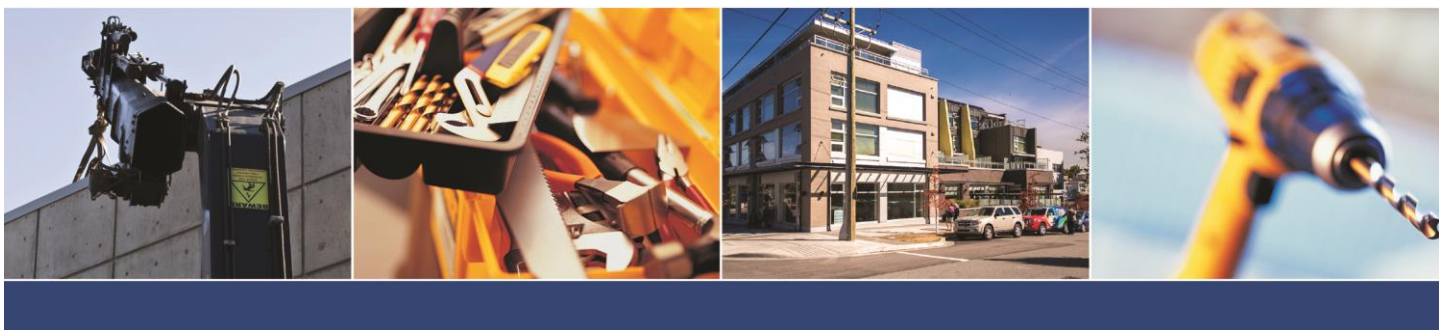
3.3.6.5 Local governments are advised to exercise caution when calculating the anticipated increased cost of building to the performance targets in the BC Energy Step Code. Over time, the cost of building to the BC Energy Step Code is expected to decrease as familiarity with it increases.

3.3.6.6 The use of higher steps in the BC Energy Step Code will require financial or other incentives. Depending on local circumstances, value could be added through a significant increase in buildable floor area, revitalization tax exemptions, or other inducements.

3.3.7 Supporting the energy-efficiency requirements in the BC Energy Step Code does not mean the other BC Building Code objectives are less important. The BC Building Code sets technical building requirements to meet five objectives; energy efficiency is just one of the five. Buildings that meet the higher energy targets in the BC Energy Step Code must still meet all other requirements supporting the four other Building Code objectives.

BC Building Code Objectives





3.4 Minimum Timelines for Requiring the BC Energy Step Code

- 3.4.1 This policy sets a framework for local governments to support progressively higher energy performance buildings in concert with increasing local industry capacity. Minimum timelines are intended to:
- Reduce the risk of a community requiring a performance level that local industry or internal staff cannot meet;
 - Provide an adequate consultation window for industry to provide input on policy and bylaw changes that may have an impact on their work;
 - Give the Energy Step Code Council information to track projected and actual BC Energy Step Code uptake provincially;
 - Create an opportunity to mitigate unintended consequences as they arise;
 - Provide an adequate time for industry and local governments to prepare after adoption; and
 - Encourage incremental adoption of steps rather than big leaps.
- 3.4.2 All Programs: During the transition period (i.e., until at least 2020), local governments should not apply community-wide requirements to meet higher steps of the BC Energy Step Code.
- 3.4.3 New Programs, Lower Steps (Part 3 & Part 9 buildings): Local governments intending to require lower steps should notify industry and the Energy Step Code Council of their intent to reference the BC Energy Step Code at least six months prior to enforcement.
- 3.4.4 New Programs, Higher Steps (Part 3 & 9 buildings): Local governments intending to require higher steps (in a specific location or situation) should notify industry and the Energy Step Code Council of their intent to reference the BC Energy Step Code at least 12 months prior to enforcement.
- 3.4.5 Existing Programs, All Steps (Part 3 & 9 buildings): After December 15, 2017, existing programs may be deemed equivalent to the BC Energy Step Code per an equivalency table that will be available from the Energy Step Code Council. These programs may reference an equivalent step of the BC Energy Step Code without a delay for enforcement.
- 3.4.6 When existing programs in a community are applied in a new location within that community (e.g., a neighbourhood plan) or situation (e.g., rezoning), the minimum timeline between notifying industry and enforcement of the BC Energy Step Code is three months.

3.5 Grace Period for In-stream Projects

- 3.5.1 When a local government implements the BC Energy Step Code, applicants who have applied for a development application (rezoning, development permit, development variance permit, or building permit), with detailed design drawings, should be permitted to build to the energy standards in place at the time of application, as long as they have moved to full building permit application within one year. In-stream protection of one year from the proposed enactment of the BC Energy Step Code regulation is considered appropriate. An exemption to this is where there has been a lengthy consultation process



with the public and industry to increase the energy requirements of a development, prior to adoption of a bylaw referencing the BC Energy Step Code.

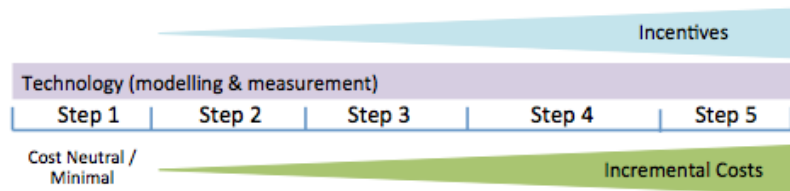
- 3.5.2 In situations where there is no development process in place (e.g., Part 9 buildings), there should also be a three-month grace period between enactment and enforcement.

3.6 Equivalency Table for the BC Energy Step Code

- 3.6.1 The Building and Safety Standards Branch will provide information, through the Energy Step Code Council, for local governments seeking to replace current technical building requirements for energy efficiency in bylaws with equivalent steps in the BC Energy Step Code.

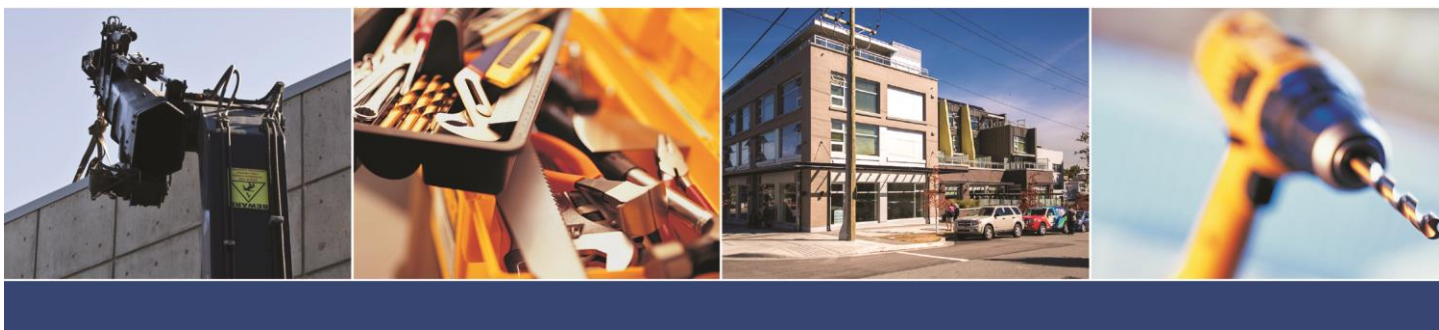
3.7 Financial Tools and Incentives

- 3.7.1 In some cases, financial tools and incentives will be required to expedite and support BC Energy Step Code implementation. Step 1 is expected to be cost minimal or cost neutral, as these costs are needed to bring buildings up to the energy performance standard expected in the BC Building Code. For steps beyond step 1, local governments are advised to conduct cost analysis to ensure benefits offered through incentives and financial tools match additional costs, and do not add hardship to industry. The figure below illustrates when financial support may be necessary to achieve higher steps of the BC Energy Step Code. A list of incentives and financial tools for consideration will be available in the best practice implementation guide.



3.8 Policy Alignment

- 3.8.1 **Policy alignment with district energy:** Where a district energy system is planned or in operation, or an innovative renewable energy source is being incorporated, local governments are advised to consider lowering the required step of the BC Energy Step Code.
- 3.8.2 **Where to seek support for resolving issues:** The Province commits to continuing to be involved directly in the implementation of the BC Energy Step Code through active participation in and resourcing of the Energy Step Code Council. This engagement will ensure direct communication between the development industry, local governments, and the Province.



4. Other Implementation Information

The Province and the Energy Step Code Council realize that successful implementation of the BC Energy Step Code will be a collaborative effort. This guide outlines provincial BC Energy Step Code policy only; it does not contain all of the information needed to understand and implement the BC Energy Step Code.

Additional educational and implementation materials will be developed and distributed by the Energy Step Code Council and the Building and Safety Standards Branch, including:

- A local government implementation best practice guide.
- Communication and training materials for:
 - Local government councils;
 - Local government staff;
 - Design professionals (e.g., architects, engineers);
 - Professional associations;
 - Developers, builders and those in the trades;
 - Suppliers; and
 - Others as needed.
- Costing studies on the costs of building to the enhanced energy-efficiency steps in the BC Energy Step Code.
- Funding programs offered by the utilities and governments.

Please visit the provincial website (www.gov.bc.ca/buildingcodes) for regular updates.



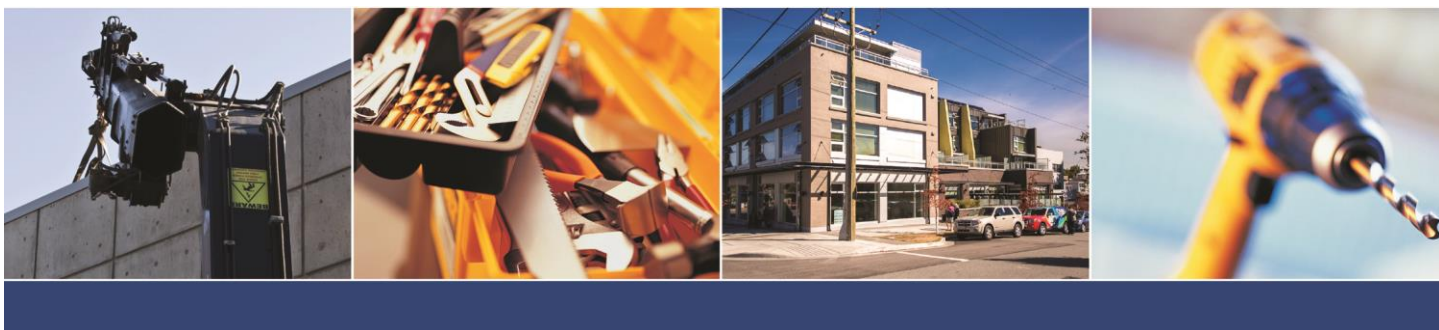
5. For More Information

Find out more about the *Building Act*:

Website: Regular updates, including other guides in this series, will be posted online as they become available - see www.gov.bc.ca/buildingact.

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6. Glossary of Terms

BC Energy Step Code: A voluntary compliance path within the BC Building Code that local governments across B.C. can use to encourage or require the construction of more energy-efficient buildings in their jurisdictions. Building owners may also voluntarily choose to build to the BC Energy Step Code.

- Steps 3 and 4 are the higher steps for Part 3 buildings (step 4 being the highest).
- Steps 4 and 5 are the higher steps for Part 9 buildings (step 5 being the highest).

Energy Step Code Council: A multi-stakeholder committee, chaired by the Province, established to support local governments and industry towards smooth implementation of the BC Energy Step Code, and guide market transformation towards higher-performance buildings within B.C.

Net Zero Energy Ready Buildings: A building built to high energy-efficiency standards such that it could (with additional measures) generate enough onsite energy to meet its own energy needs.

Part 3 Buildings: Buildings regulated under Part 3 of the BC Building Code. Part 3 buildings include large, complex buildings.

Part 9 Buildings: Buildings regulated under Part 9 of the BC Building Code. Part 9 buildings include houses and small buildings.



FOR MORE INFORMATION PLEASE VISIT:
WWW.GOV.BC.CA/BUILDINGACT