

Municipality of North Cowichan Committee of the Whole AGENDA

Wednesday, December 18, 2019, 11:30 a.m.
Municipal Hall - Maple Bay Meeting Room

Pages

1. CALL TO ORDER

2. APPROVAL OF AGENDA

Recommendation:

That the December 18, 2019 Committee of the Whole agenda be adopted as circulated [or as amended].

3. PUBLIC INPUT

Brief public input from registered speakers regarding items on this agenda.

4. BUSINESS

4.1 BC Energy Step Code

2 - 29

Purpose: To provide the Committee with an overview of the BC Energy Step Code program, information on evaluating the merits of the Step Code and present options and a recommendation to advance a Step Code program in North Cowichan.

Recommendation:

That the Committee of the Whole recommend to Council to direct staff to prepare a phased implementation strategy for the BC Energy Step Code that combines regulation, incentives and industry engagement.

5. NEW BUSINESS

6. QUESTION PERIOD

Public opportunity to ask brief questions regarding the business of this meeting.

7. ADJOURNMENT

Recommendation:

That the Committee of the Whole meeting be adjourned at ____ p.m.

Report

Date	December 18, 2019	Prospero No: SPP00070
To	Committee of the Whole	File: 3090-20 19.05
From	Lane Killick, Chief Building Inspector	Endorsed:
Subject	BC Energy Step Code	

Purpose

1. To provide the Committee with an overview of the BC Energy Step Code Program;
2. To evaluate the merits of the Step Code and of adopting a local implementation program; and
3. To outline options for Council to advance a Step Code program in North Cowichan.

Background

The BC Energy Step Code (the Step Code) is a provincial regulation that local governments in British Columbia may use, if they wish, to incentivize or require a level of energy efficiency in new construction that goes above and beyond the requirements of the base building code. The Province of British Columbia has committed to taking incremental steps to increase energy-efficiency requirements in the BC Building Code to make new buildings net-zero energy ready by 2032. The Step Code is the part of the BC Building Code that works towards achieving that effort. A brochure with additional information about the Step Code is attached to this report as **Attachment 1**.

Council's 2019-2022 Strategic Plan contains an Action to "Evaluate the merits of adopting the BC Energy Step Code". This report is intended to provide an evaluation of the Step Code program and to outline a process for implementing the program in North Cowichan.

Discussion

Program Description:

The Step Code is a voluntary provincial standard enacted in 2017, with the intention that all local governments in BC engage by the year 2020. In addition to promoting energy efficient new construction, the program is also intended to improve consistency by creating a Provincial standard for energy efficient buildings that replaces the patchwork of different energy standards previously developed or implemented by the private sector and government agencies.

The Step Code takes a new, performance-based approach to energy efficiency standards rather than the traditional prescriptive approach. This means the Step Code does not specify how to construct a building, but rather identifies an energy-efficiency standard that must be met and lets the designer/builder decide how to meet it. Compliance with the Step Code standards are determined by modeling the building design prior to construction and by testing the building with respect to the standard following construction.

The 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). Local Governments are able to determine the Step Code standard they wish to apply locally, but the Province has indicated it will phase in progressively higher mandatory Step Code standards between 2022 and 2032.

Merits of the BC Step Code Program

A key feature of the Step Code is that every level of performance (or 'step') is evaluated using the same tests and metrics. This consistent way of measuring and understanding energy use in all buildings, regardless of their level of performance, helps transition the building industry to a province-wide performance-based building standard. Higher steps in the 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 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 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.

Overall, the Step Code program offers:

- A gradual method of implementing higher efficiencies for new buildings.
- Improved long-term affordability of utilities while providing healthier living conditions with improved ventilation.
- Support for the Province's long-term energy reduction objective of having all new homes be net zero energy ready by 2032.
- Business opportunities related to the design and testing of new buildings.
- A consistent, clear program for achieving multiple levels of energy efficient designs and materials.
- Opportunity to work with adjacent local governments with a multi jurisdictional implementation.

Considerations for Local Governments:

Cost

The cost of implementing the Step Code for new construction will vary depending on which step is applied, the type of building proposed and the climatic zone where the proposed building is located. Studies commissioned by the Province on the feasibility and affordability of the Step Code (Metrics Research Report, 2017 and 2018) estimate that the program would add between one and three percent to total construction costs. Costs associated with the Step Code include approximately \$1,000 for an energy adviser and air leakage test and construction costs related to design, materials, labour and equipment required to achieve the level of efficiency sought. Literature on the financial implications of Step Code implementation indicate that most local governments in the Province can target Step 3 for both Part 3 and Part 9 buildings as an aggressive but affordable base code.

Capacity-Building, Communications and Engagement

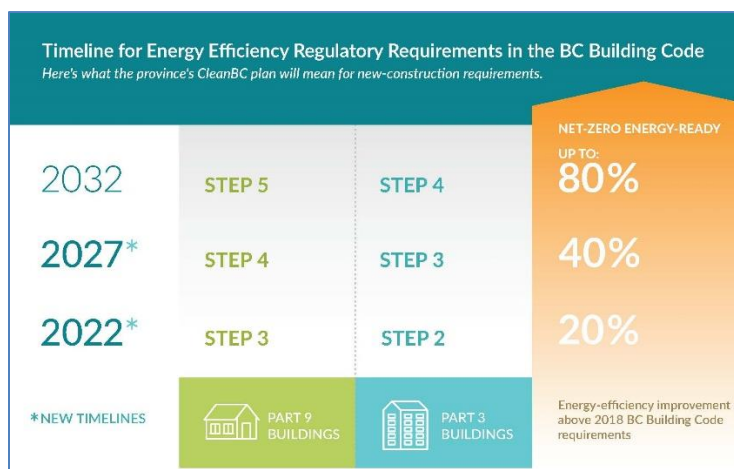
In order to successfully implement the Step Code in North Cowichan, it is necessary to have industry capacity in the form of energy advisors and energy modellers that can work with building permit applicants to achieve compliance with Step Code requirements. There likely is not sufficient local industry capacity to implement a mandatory Step Code requirement at this time. A phased-in approach is expected to enhance industry capacity by attracting more people and business to the industry of energy advising and modelling. If the Municipality and other local governments in the region provide clear and gradual implementation of the Step Code, it is expected that a right-sized pool of local energy advisors and modellers will be established in the mid-to-long term.

Education and outreach will also be required with the local building industry to familiarize it with the Step Code and the requirements and implications that implementation of the Step Code will have for new construction. An information and engagement strategy should be included in any Step Code implementation program.

Some capacity building and resourcing for North Cowichan's Planning and Building Department will also be necessary for it to participate in community and industry engagement processes and to develop and implement new processes and procedures associated with a performance based building code standard. Coordinating and harmonizing North Cowichan's implementation of the Step Code with implementation initiatives of other local governments in the Cowichan Valley will also require resourcing and prioritization.

Implementation of the Step Code:

Step Code is currently a voluntary program. However the BC Safety Standards Branch has announced that it intends to enact regulations to make Step 3 a requirement in the BC Building Code in 2022. The period prior to this is an opportunity for local governments to create incentive programs and to phase-in regulations to encourage an early and gradual implementation process and to educate and prepare industry professionals and government staff for the pending change. An Implementation Guide (**Attachment 2**) provides direction for local governments to implement the Step Code and it is recommended that this document be used to guide North Cowichan's Step Code implementation.



The Implementation guide recommends that local governments not regulate steps higher than Step 3 until at least 2020. Introducing the Step Code gradually provides builders, property owners, land developers and municipal staff the opportunity to develop the knowledge, skills and procedures related to the design, construction and inspection of Step Code complaint buildings in an orderly and predictable manner.

The Implementation Guide also recommends that local governments develop incentives to help offset a portion of the cost. The Step Code comparison chart in **Attachment 3** shows how a number of local governments in BC have chosen to implement Step Code early.

Options Analysis and Resource Requirements:

In reflecting on the merits of the Step Code program outlined above and in the attachments, Council might consider the following approaches to implementation of a Step Code Program:

1. Phase In with Incentives Approach – Establish a voluntary, incentivized program with industry consultation and engagement until the Step 3 is required by Provincial regulation.

An incentive should not directly subsidize construction costs, but could subsidize a portion of the engagement of an energy advisor upon occupancy of a building that met Step 3. This process would require funding, and internal and external funding sources would need to be explored. This option would be the most gradual approach and provide staff and the industry the ability to work together to adjust to a new regulatory environment. Once the Province enacts Step Code compliance requirements, the program could be evaluated and adjusted or renewed.

2. Regulation Approach – Establish regulation to require Step Code compliance in advance of Provincial regulation.

North Cowichan could mandate compliance with the Step Code (e.g. Step 3) through an amendment to Building Bylaw No. 3172. In this case, no incentive would be in place to ensure gradual transition to the Step Code. Compliance and enforcement requirements would be immediate. This would be the most direct implementation approach, but would be disruptive and costly to the building industry. It would also be difficult for Planning and Building Department staff to administer in the short term.

3. Do Nothing Approach – Do not adopt Step Code regulation or incentives at this time and wait for the Step Code to be mandated by the Province in 2020.

Outside of voluntary efforts in the industry, this would be an abrupt and obtrusive approach.

4. Phased Implementation Strategy with Incentives and Regulation Approach – Establish Step 2 requirements by regulation in 2021 with a phased, incentivized implementation for Steps 3 and above.

This option involves a bylaw amendment to require Step 2 alongside a two-year incentive program for Step 3, 4 or 5. It is anticipated that an amendment to the Building Bylaw to require Step 2 would be undertaken in 2020 but not come into effect until 2021. By adopting Step Code regulation in advance of Provincial implementation, the local industry would have the certainty needed initiate the transition. The incentive program creates space for applicants and staff to engage and work through the incentive program and to encourage construction to higher level steps.

This would be the most effective approach in transitioning the local building industry to Step Code's performance based building standard and improving the energy efficiency of new construction in the Municipality. It would also have the greatest administrative burden for implementation and industry outreach.

Staff believe a combination of regulation, incentives and industry engagement would best support the objectives of the Province and Council in improving the energy efficiency of new buildings while helping the local building industry transition to the new Step Code standards the Province will be mandating in a manageable and cost effective manner.

In order to proceed with the implementation of the Step Code in 2020, it will be necessary to include the project in the Building Department's 2020 work plan and in the 2020 budget. While there are some external programs that may assist with funding incentives and implementation, it is expected that a Municipal budget allocation of \$25,000 to \$30,000 will be necessary to fund the program outlined in the recommended option.

Options

Alternative Options:

1. That Council direct staff to report back with a draft terms of reference and proposed options for funding for a BC Energy Step Code incentive program, as well as a public education, communications and engagement strategy.
2. That Council direct staff to prepare draft documents to require all new construction meet Step 3 of the BC Energy Step Code, including a bylaw amendment to Building Bylaw No. 3712; a public education, communications and engagement plan; and an implementation strategy for Council's consideration.
3. That Council receive the December 18, 2019 report from the Chief Building Inspector for information and that no action be taken on the implementation of the BC Energy Step Code at this time.

Staff Recommendation:

4. That Council direct staff to prepare a phased implementation strategy for the BC Energy Step Code that combines, regulation, incentives and industry engagement.

Recommendation:

That the Committee of the Whole recommend to Council to direct staff to prepare a phased implementation strategy for the BC Energy Step Code that combines regulation, incentives and industry engagement.

Attachments:

1. BC Energy Step Code Brochure.
2. Provincial Policy: Local Government Implementation of the BC Energy Step Code
3. BC Energy Step Code implementation comparison chart

How the BC Energy Step Code Works

The Province of British Columbia first introduced energy efficiency as a BC Building Code objective in 2008. Ever since, designers and builders have had the option to use either “prescriptive” or “performance” approaches to comply with the code’s efficiency requirements.

To date, the vast majority of builders in British Columbia have pursued the prescriptive approach. Following this approach, buildings must meet specific requirements for insulation, windows, furnaces, water heaters, lighting and other equipment and systems. It focuses on individual elements, rather than ensuring the building functions well as a system. The result can be a building that does not perform as well as intended.

Builders have a second option to comply with the energy-efficiency requirements of the BC Building Code: the performance approach. The BC Energy Step Code offers a specific form of this approach.

The performance approach establishes a desired outcome, and leaves it to the design and building team to decide how to achieve it.

To comply with the BC Energy Step Code, builders must use energy software modelling and on-site testing to demonstrate that both their design and the constructed building meet the requirements of the standard. They may use any materials or construction methods to do so.

This approach echoes that taken by many green-building certification programs, including Natural Resources Canada’s Energy Star for New Homes™ and R-2000™ programs, and Passive House Institute (in Darmstadt) certification, as well as the Canadian Home Building Association’s Net Zero Home™ and Net Zero Ready Home™ programs.

A High-Performance Staircase

As shown below, the regulation sets performance targets for new construction and groups them into “steps” that apply across various building types and regions of the province. The Lower Steps are relatively straightforward to meet; the Upper Steps are more ambitious.

All authorities having jurisdiction over the BC Building Code—including local governments—can choose to require or incentivize builders to meet one or more steps of the BC Energy Step Code as an alternative to the code’s prescriptive requirements.

For governments, the BC Energy Step Code offers assurance that new buildings are performing as billed. Meanwhile, on the other side of the counter, builders have a more flexible option to comply with the energy-efficiency provisions of the provincial

legislation. The new standard empowers builders to pursue innovative, creative, cost-effective solutions—and allows them to incorporate leading-edge technologies as they come available.

Local governments can choose to require or incentivize a given step of the BC Energy Step Code in new construction. In addition, beyond the regulatory context, builders and developers can adopt a given step to use across all of their projects, if they wish.

The diagrams below show what the performance improvements look like for simple buildings (those covered under Part 9 of the BC Building Code) and more complex buildings (covered by Part 3 of the code). The first diagram outlines five steps from the current BC Building Code requirements to net-zero energy ready requirements for Part 9 residential buildings. As shown in the second diagram, the same progression for Part 3, wood-frame residential buildings is four steps.

PATHWAY TO 2032: **PART 9 (HOMES)**

2017



PATHWAY TO 2032: **PART 3 (WOOD-FRAME RESIDENTIAL)**

2017



Over time, as high-performance designs, materials, and systems become increasingly available and cost-effective, the building industry will integrate new techniques into all new buildings. By 2032, the BC Building Code will move toward the higher steps of the BC Energy Step Code as a minimum requirement. The National Building Code of Canada is similarly moving towards this outcome by 2030.

Page Last Updated: December 31, 2018.



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

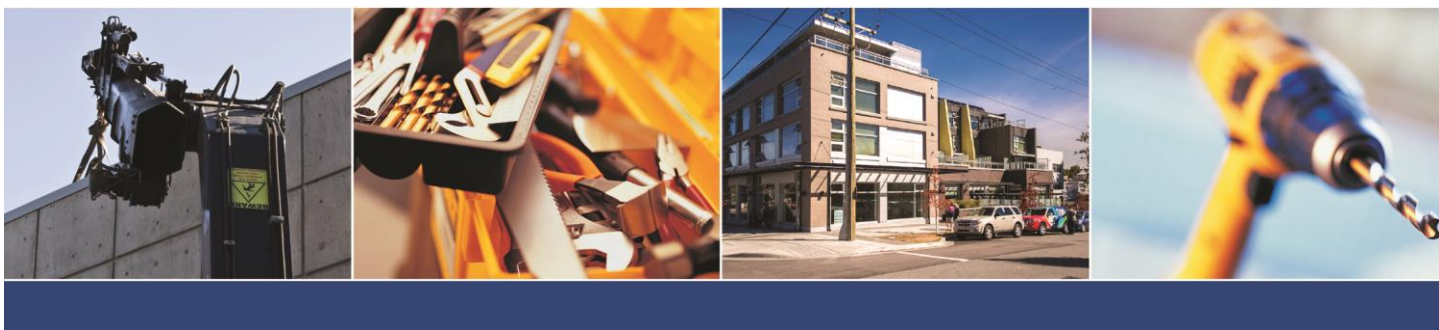
- A1 - Understanding B.C.'s Building Regulatory System
- A2 - A Guide to the *Building Act*: Modernizing B.C.'s Building Regulatory System
- A3 - *Building Act* Brochure
- A4 - *Building Act* Introductory PowerPoint Presentation

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).

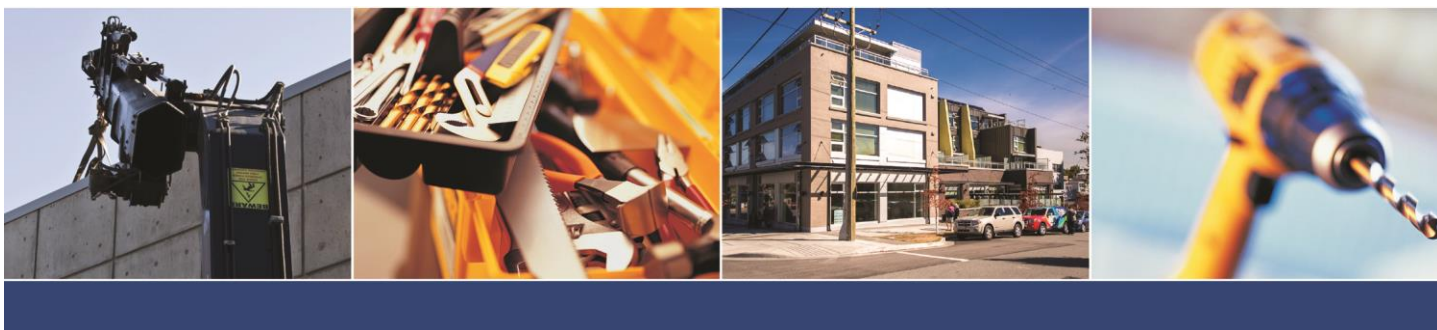
A key feature of the BC Energy Step Code is that every level of performance (or ‘step’) is evaluated using the same tests and metrics. This is intended to create a consistent way of measuring and understanding energy use in all buildings, regardless of their level of performance, and prepare industry 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.

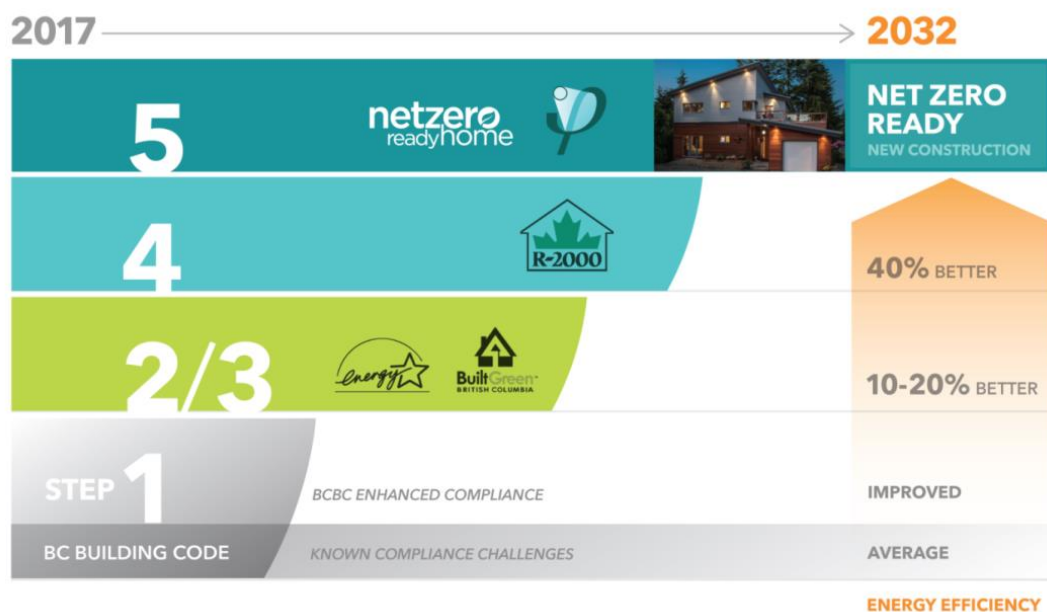
BC Energy Step Code: Lower and Higher Steps		
Building Type	Lower Steps	Higher Steps
Part 3 Residential	Steps 1 and 2	Steps 3 and 4
Part 9 Residential	Steps 1, 2 and 3	Steps 4 and 5



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.

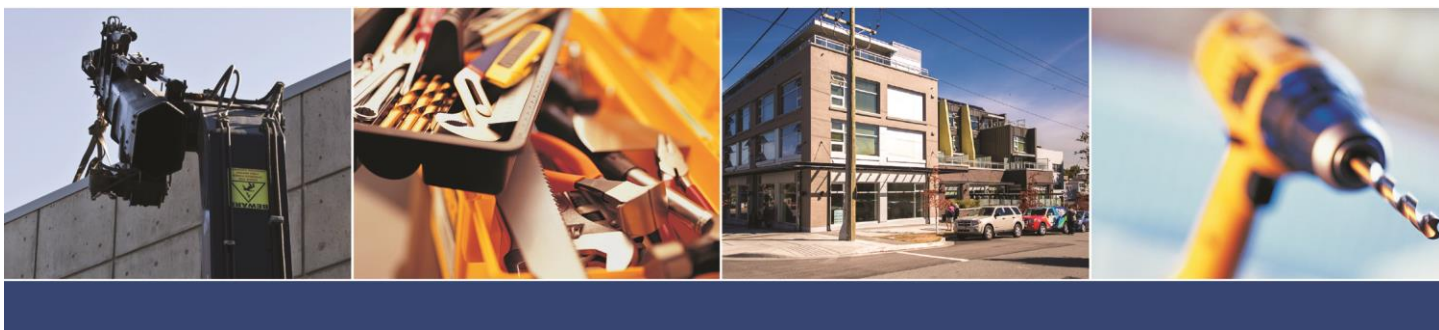
The BC Energy Step Code: Steps for Part 9 Buildings



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

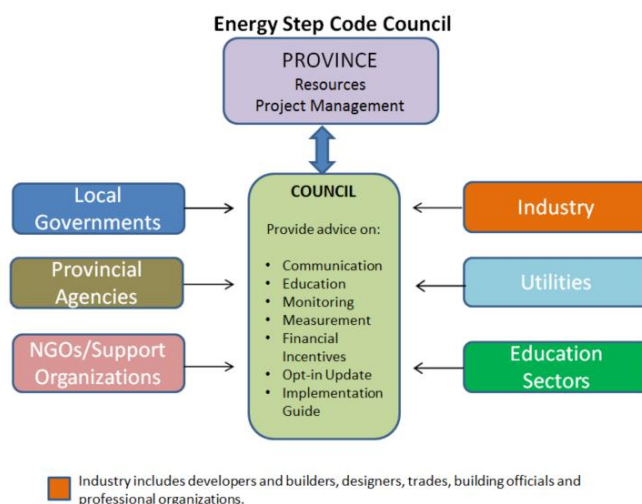
The Province, local governments, industry, and utilities are embarking on the BC Energy Step Code together. Success will require continued commitment from all involved during a transition period that will take place over at least the next three years (2017-2020). An Energy Step Code Council has been 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).

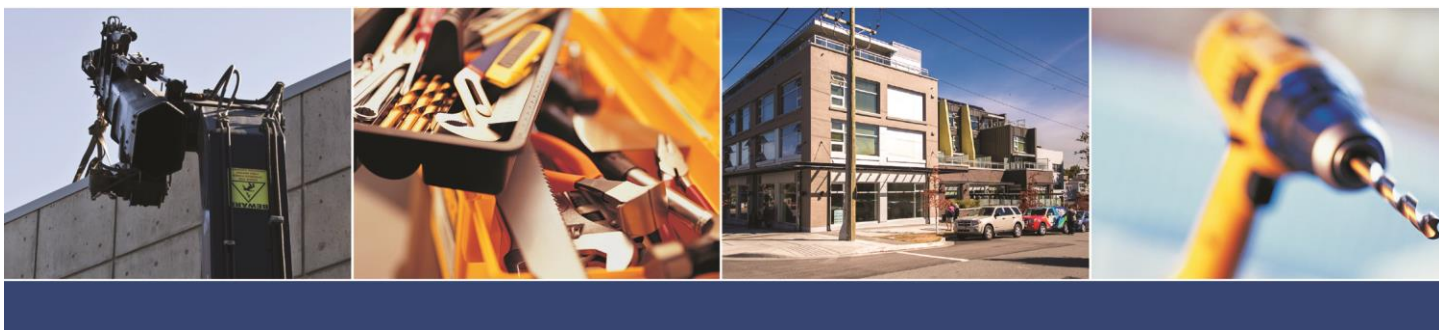
In addition to leadership from the Energy Step Code Council, successful implementation will require:

- 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.

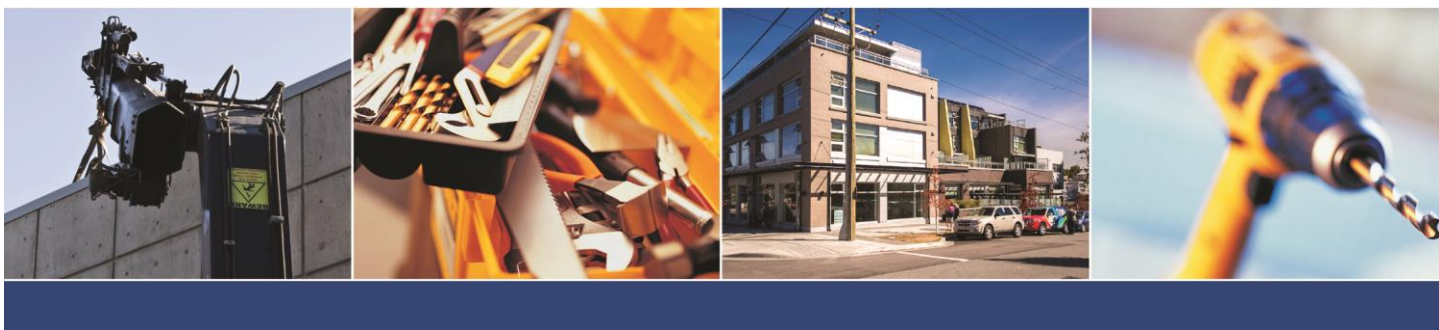
Until December 2017, the focus of the transition will be on helping shift local governments with existing energy-efficiency programs (for buildings) to appropriate targets in the BC Energy Step Code. From 2018 - 2020, the transition period will continue to support local governments using the BC Energy 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.

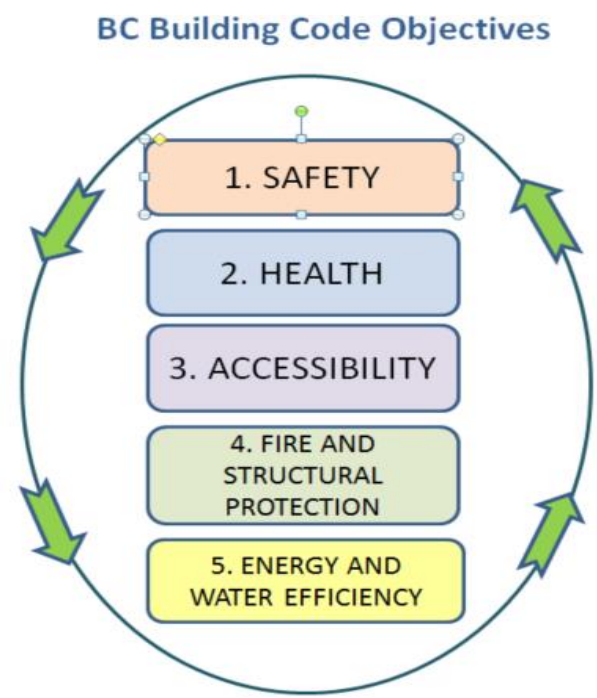
3.3.5 A local government should notify the Energy Step Code Council when bylaws or policies that reference the BC Energy Step Code are ratified, and of the date of enactment.



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.





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.

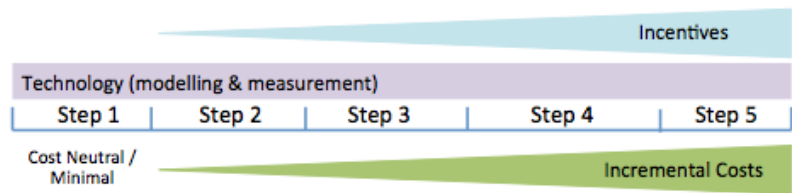
- 3.5.2 In situations where there is no development process in place (e.g., Part 9 buildings), there should also be a three-month grace period between enactment and enforcement.

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.

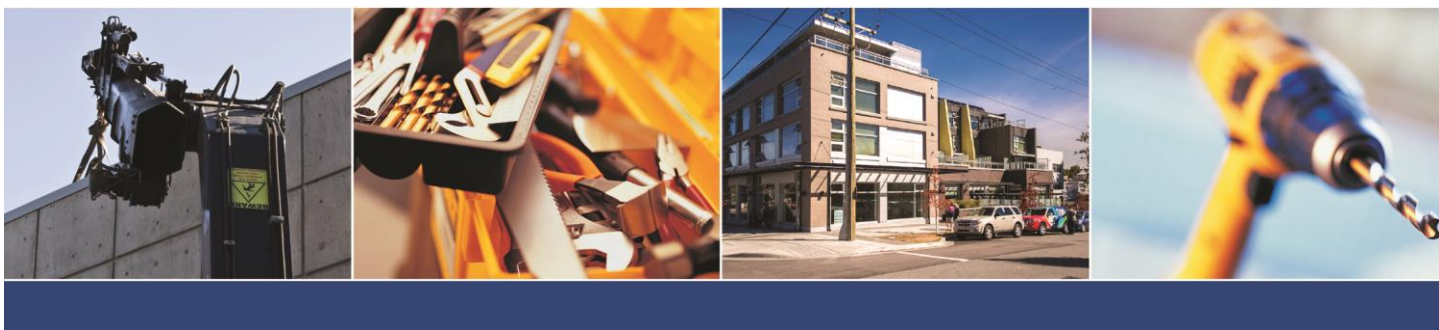
3.7 Financial Tools and Incentives

- 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.

Email: Building.Safety@gov.bc.ca

Mail: Building and Safety Standards Branch
Office of Housing and Construction Standards
PO Box 9844 Stn Prov Govt
Victoria, British Columbia
CANADA - V8W 9T2



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

BC Energy Step Code comparison chart

Step Code	Voluntary	Mandatory	Incentives	Residential	Commercial	Incentive Non-monetary	Phased	Other Energy Incentives
Penticton	Starts	2021	Up to \$1500	yes	no	no	yes	yes
Campbell River	yes	no	Up to 100% of BP fee	yes	no	Yes	no	yes
Saanich	Starts	2020	Flat \$500	yes		no	no	yes
Kamloops	yes	no	Up to \$3000	yes	yes	no	no	yes
Squamish	no	yes	none	yes	yes	none	yes	no
Whistler	no	yes	none	yes	yes	none	no	yes
Kimberly	yes	no	yes	yes	yes			yes
Kelowna	yes	yes	yes	yes	no	no	yes	yes
Whistler	no	yes	no	yes	yes	no	yes	yes