



# Staff Report

DEVELOPMENT SERVICES DEPARTMENT

**To: Council**

File: 3900-20 Bylaw 1465

From: Phil Armstrong, MDS/Planner

Date: February 15<sup>th</sup>, 2022

Subject: Building Regulation Amendment - Step Code

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## RECOMMENDATION

THAT per the Staff Report *Building Regulation Amendment - Step Code*, received February 15<sup>th</sup>, 2022 from the Manager of Development Services, Council CONSIDER passing First, Second and Third Reading to *Town of Golden Building Regulation Amendment Bylaw No. 1465, 2022 – Building Regulation Amendment - Step Code*.

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## CAO COMMENTS

I support the recommendation. This is a necessary step through a number of lenses, not the least of which includes aligning to climate change and emission expectations, creating more efficient and therefore appealing housing stock, meeting provincial positioning and joining our neighbouring and similarly styled communities in solidarity.

## BACKGROUND

Step Code is a provincially legislated initiative to gradually and incrementally introduce energy efficiency requirements for new buildings, aiming for net zero<sup>1</sup> ready buildings in 2032. Step 3 is expected to become mandatory by end of this year, but the Town of Golden has not yet voluntarily adopted lower Steps 1 or Step 2.

The Community Energy Association (CEA) has created this 4 minute video for an introduction to Step Code [https://www.youtube.com/watch?v=3J8nP\\_owhgU&t=2s](https://www.youtube.com/watch?v=3J8nP_owhgU&t=2s) and Town staff are pleased Gaëtane Carignan, Resilience Specialist with CEA can present at today's Council meeting.

## DISCUSSION

In 2018, provincial legislation released the CleanBC strategy which defined a net-zero ready target for all new construction by 2032. A process called “Energy Step Code” establishes interim goals of energy efficiency improvements. The next BC Building Code update, expected in December 2022, will implement the first *mandatory* step (Step 3), with an overall efficiency increase requirement of 20% in comparison to current minimum requirements (see below). Step Code is designed to slowly introduce and increase efficiency requirements, so construction industry and authorities can adapt to the process in a low risk environment.

Municipalities can choose to implement Step Code voluntarily and independently from Building Code.

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<sup>1</sup> Net-zero energy buildings produce as much clean energy as they consume. They are up to 80 percent more energy efficient than a typical new building, and use on-site (or near-site) renewable energy systems to produce the remaining energy they need. A net-zero energy-ready building is one that has been designed and built to a level of performance such that it could, with the addition of solar panels or other renewable energy technologies, achieve net-zero energy performance.

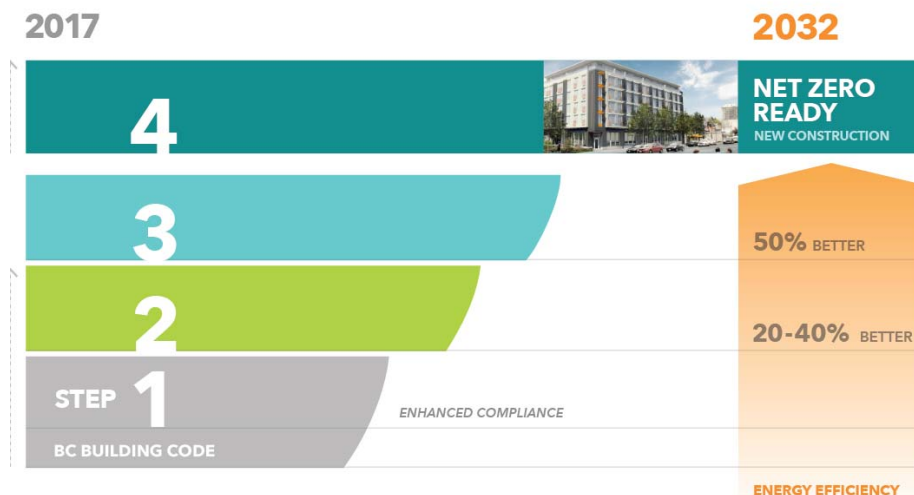
Introduction of Step 1 prior to the more stringent Step 3 can allow Golden’s construction industry to get used to the process without the introduction of higher efficiency requirements in comparison to current Building Code standards. To assist in preparing the building community, in 2020, the Town of Golden hosted an introductory seminar in cooperation with BCIT and the Community Energy Association (CEA). Also, CEA provides Step Code information and has held several webinars, which have seen good attendance from the local licensed home builders. The Building Official has also forwarded relevant webinars and information periodically over the last two years to the building community.

For Part 9 simple smaller buildings (ex. houses, townhouses, 4 plex, 8 plex, small commercial / residential buildings under three storeys), Step 1 requires a new building design to be computer modeled for a prediction of energy performance and to be pressure tested for air leakage. An Energy Advisor<sup>2</sup> must perform this work.



For Part 3 more complex buildings (examples of recent projects include Oso, Kaur i.e four storeys or more or 600 square metre footprint), this means no longer using the 2015 National Energy Code to code minimum, which is actually a lower standard than the current BC Building Code prescriptive path.

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



<sup>2</sup> Town staff has verified there are advisors available to do this work in a timely manner.

Please refer to table below for a comparison of the status of local governments in the region in regards to step code implementation.

Local Government	Step Code referenced		Effective since
	Part 9	Part 3	
City of Fernie	Step 2	Step 1	2021
City of Kimberley	Step 3	Step 1	2020
City of Cranbrook	Step 2	Step 2	2021
District of Invermere			Council discussion recently commenced and ongoing
City of Revelstoke	Step 3	Step 2	Jan. 2022
Regional District of East Kootenay	Step 2	Step 1	Jan. 2022
Columbia Shuswap Regional District			No plan of early adoption
Proposed for Golden	Step 1 2022	Step 2	
	Step 3 December 16 2022		

In closing, staff is recommending first, second and third reading of *Town of Golden Building Regulation Amendment Bylaw No. 1465, 2022 – Building Regulation Amendment - Step Code* in order to address climate action goals and prepare the building community for step three becoming mandatory in 2023.

## DECISION FACTORS

### Council Context

#### **Strategic Lens (Alignment to OCP, Bylaws, Existing Legislation)**

-The Official Community Plan has pages dedicated to Leadership in Energy and Environmental Design (LEED) a private green building design certification. Rather, step code in taking the place of different energy labels, particularly with Part 9 buildings and step code works towards the intent of LEED with the overall goal of lowering energy consumption and carbon emissions and lastly step code will be law next year.

-The OCP states: *The Town of Golden will strive to reduce GHG emissions through the following:*

1. *Land use, energy and transportation planning.*
2. *Infrastructure design.*
3. *Green procurement.*
4. *Building retrofits.*
5. *Water conservation.*
6. *Solid waste diversion.*
7. *Renewable energy.*

-Official Community Plan Amendment Bylaw No. 1270, 2010 , set targets to reduce Green House Gases (GHGs) corporately by 20% and community wide by 33% (A refocus on climate action planning will form part of the new Official Community Plan process to take place in 2023). The bylaw also has the following objectives:

-The Town should explore collaborative and cost effective opportunities to engage the Columbia Shuswap Regional District, other communities, the Columbia Basin Trust and other government and non-government agencies in projects to reduce community-wide greenhouse gas emissions; and  
-The Town will play a leadership role in promoting education for community members and businesses on the link between building design/retrofit, transportation and solid waste diversion and greenhouse gas emissions.

-The Town is a signatory to the 2007 BC Climate Action Charter

-The *BC Energy Step Code* aligns with the Government of Canada's *Pan-Canadian Framework on Clean Growth and Climate Change* (2016) and *Build Smart: Canada's Buildings Strategy* (2017). Both establish a goal that provinces and territories adopt a net-zero energy-ready model building code by 2030; the BC Energy Step Code provides a path to incrementally prepare British Columbia for this coming change.

### **Climate Change (Mitigation/Adaptation Relevance)**

While the Step Code represents a significant achievement in the regulation of building performance, its focus on the use of energy efficiency metrics has raised the question as to whether it is as effective as it could be in reducing GHG emissions from the built environment. In 2019, Integral Group commissioned a study *Implications of the BC Energy Step Code on GHG Emissions* and found that, although Step Code will reduce GHG emissions, its focus on energy efficiency does not guarantee the level of GHG emissions reductions necessary to drive emissions to zero or near-zero levels, as is the intent through CleanBC. Building designers can pursue mechanical system options that result in significantly different GHG intensity's (GHGi) (i.e., GHGs / building area). While the study only modelled GHG emissions impacts for building archetypes in Climate Zone 4 (Golden is zone 6), the general findings of the study are likely to be similar for other climate zones in BC.

That said, most new homes in Golden are powered by electricity and staff will promote and encourage the adoption of low-carbon energy systems (LCES). According to stats from the City of Vancouver switching a single detached home from gas to electricity can reduce carbon pollution by up to 80%.<sup>3</sup>

Lastly, the BC Local Government Energy Step Code Peer Network and the Province are currently conducting research to determine if there are opportunities to align local governments' efforts on GHG emissions reduction through Step Code. Therefore, the Town staff will stay informed on provincial policy development in this area and will look to incorporate progressive GHG emissions reduction policy once options are provided by the Province.

### **Communication (Scope and Tactical Outputs)**

-On February 11, 2022 the Building Official and the Manager of Development Services will email a copy of the report and bylaw to builders and developers.  
-We will also provide information through social media and the newsletter.

### **Financial (All Term Budget Impacts/Asset Management Impacts/Practicality)**

-Some municipalities have implemented rebate programs, but the Town is directing builders and owner to the following available financial incentives and grants:

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<sup>3</sup> <https://vancouver.ca/green-vancouver/green-home-retrofits.aspx>

- ✓ CleanBC GoE electric (Part 9 and Part 3)  
<https://electricvehicles.bchydro.com/incentives/charger-rebates>
- ✓ CleanBC Better Buildings – Custom, Custom Lite, New Construction (Part 3) rebates for home (single family and MURB) and workplace EV charging
- ✓ BCHydro <https://www.bchydro.com/powersmart/business/programs/new-home.html>
- ✓ Better BC Commercial New Construction Program  
<https://betterbuildingsbc.ca/incentives/cleanbc-commercial-new-construction-program/>
- ✓ CMHC Green Home offers a partial refund on the cost of mortgage loan insurance. Buy, build or renovate for energy efficiency and you may be eligible for a refund of up to 25% of your premium. <https://www.cmhc-schl.gc.ca/en/consumers/home-buying/mortgage-loan-insurance-for-consumers/cmhc-green-home>
- ✓ The Better Homes BC has a rebate search tool. <https://betterhomesbc.ca/rebate-search-tool/>

## **Administration Context**

-Building Regulation bylaw refresh is part of the MDS work plan.

## **OPTIONS**

1. Council considers passing first, second and third reading to the *Town of Golden Building Regulation Amendment Bylaw No. 1465, 2022 – Building Regulation Amendment - Step Code*.
2. Council does not consider readings to the bylaw.
3. Council selects another course of action.

Respectfully Submitted,

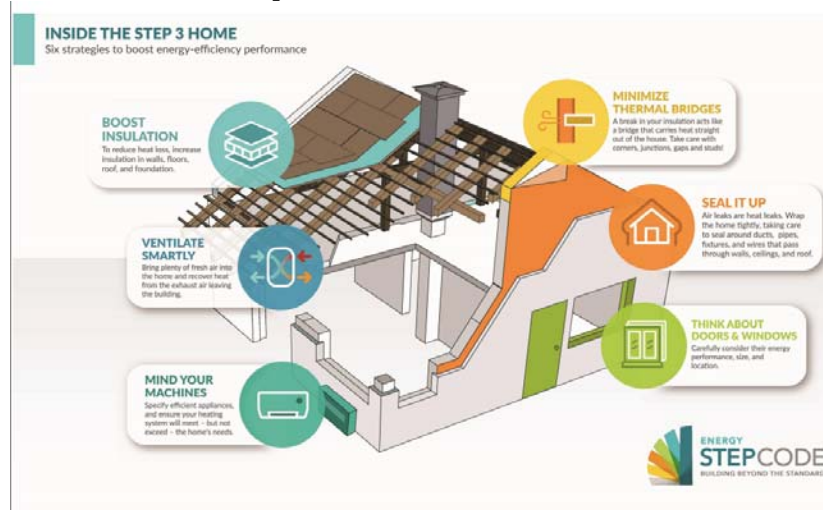


Phil Armstrong MCIP, RPP

Manager of Development Services / Planner

## **Enclosed**

- ✓ Town of Golden Building Regulation Amendment Bylaw No. 1465, 2022 – Building Regulation Amendment - Step Code.





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## **BYLAW RATIONALE STATEMENT**

### ***Town of Golden Building Regulation Amendment Bylaw No. 1465, 2022 – Step Code***

The purpose of this bylaw is to amend the Town of Golden Building Regulation Bylaw to include greenhouse gas reduction and energy efficiency provisions as per the British Columbia Energy Step Code.

**TOWN OF GOLDEN**  
**BYLAW NUMBER 1465, 2022**  
**ZONING BYLAW AMENDMENT**

A Bylaw to amend the “Town of Golden Building Regulation Bylaw No. 1299, 2012”

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The Council of the Town of Golden, in open meeting assembled, **HEREBY ENACTS AS FOLLOWS:**

**1. CITATION**

This Bylaw may be cited for all purposes as the “Town of Golden Building Regulation Amendment Bylaw No. 1465, 2022 – Step Code”

**2. TEXT AMENDMENT**

2.1 That Section 2; Definitions and Interpretation be AMENDED to include GHG and Building Energy Label;

“**GHG** – means greenhouse gas;”

“**Building Energy Label** – means information about a buildings’ energy use, efficiency ratings, how the rating was calculated and where energy is consumed in the building which is posted in a location that is protected from moisture and damage;”

2.2 That the Town of Golden Building Regulation Bylaw No. 1299, 2012 be AMENDED to add;

**“12. ENERGY CONSERVATION AND GHG EMISSION REDUCTION**

12.1 In relation to the conservation of energy and the reduction of greenhouse gas emissions, the Town incorporates by reference the British Columbia Energy Step Code in accordance with sections 12.2 through 12.4.

12.2 A *complex building* must be designed and constructed to meet the minimum performance requirements specified in Step 2 of the Energy Step Code for any permits issued as of March 2, 2022.

12.3 A *standard building* must be designed and constructed to meet the minimum performance requirements specified in Step 1 of the Energy Step Code for any permits issued as of March 2, 2022 and Step 3 of the Energy Step Code for any permits issued as of December 16, 2022.

12.4 Any *building* constructed under permits issued as of March 2, 2022 must include a *building energy label posted* prior to issuance of occupancy certificate.”

**3. SEVERABILITY**

If any portion of this bylaw is found invalid by a court of competent jurisdiction, the invalid portion is severed without effect on the remaining portions of the bylaw.

READ A FIRST TIME THIS DAY OF , 2022.

READ A SECOND TIME THIS DAY OF , 2022.

READ A THIRD TIME THIS DAY OF , 2022.

ADOPTED THIS DAY OF DAY OF , 2022.

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MAYOR

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CORPORATE OFFICER