

Report to Council



Date: February 22, 2021
To: Council
From: City Manager
Subject: Energy Step Code Implementation Strategy for Part 3 Buildings
Department: Policy & Planning

Recommendation:

THAT Council receives, for information, the Report from the Policy & Planning Department dated February 22, 2021 with respect to the Energy Step Code Implementation Strategy for Part 3 Buildings;

AND THAT Council endorse the requirement that, effective January 1, 2022, Part 3 building permit applications will need to demonstrate compliance with the Energy Step Code requirements as outlined in the Report from the Policy & Planning Department dated February 22, 2021;

AND FURTHER THAT Bylaw No. 12166, being Building Bylaw Amendment No. 14 of the Building Bylaw No. 7245 be forwarded for reading consideration.

Purpose:

To present the Energy Step Code Implementation Strategy for Part 3 buildings to Council for information and endorsement.

Background:

The Energy Step Code (Step Code) is a provincial standard, designed to help both local government and industry incrementally move toward a future in which all new construction across the province is "net-zero energy ready" by 2032. The Province's CleanBC Plan¹ sets the direction for future iterations of the BC Building Code to require Step Code compliance through a step by step path so that, compared to current base BC Building Code, new buildings will be:

- 20 per cent more energy efficient by 2022²
- 40 per cent more energy efficient by 2027
- 80 per cent more energy efficient by 2032. (See Figure 1)

The Step Code consists of two broad sets of energy standards that cover:

¹ Province of BC, 2018. CleanBC our nature. our power. our future. Retrieved from: https://cleanbc.gov.bc.ca/app/uploads/sites/436/2018/12/CleanBC_Full_Report.pdf.

² Typically Building Code revisions occur later in the year. So, it is anticipated that the Province would require the change at the end of 2022.

- “Part 9” buildings – three (3) stories and less, and not exceeding 600 m² in building area. (The City developed and implemented a strategy which saw Step 1 adopted as of December 1, 2019 moving to Step 3 on June 1, 2021.)
- “Part 3” buildings – large and/or complex buildings such as large multi-family and commercial buildings exceeding three (3) stories and exceeding 600 m² (addressed in this report).



Figure 1: Timeline for energy efficiency requirements in BC Building Code (Part 3 buildings highlighted in red)

The Step Code is currently a voluntary compliance path within the BC Building Code to shift from the current prescriptive energy efficiency requirements to performance requirements for a buildings envelope, equipment and systems, and airtightness. Local governments currently have the option of mandating a specific step within their region.

For Part 3 buildings, local governments outside of Climate Zone 4 (i.e., the Lower Mainland and the southern portion of Vancouver Island) have only been permitted to reference Step Code as of early 2019, as performance metrics had not yet been established for other climate zones (Kelowna sits in Climate Zone 5).

Step Code for Part 3 buildings differs from Part 9 buildings in that the number of ‘steps’ and the ease of achieving each step varies depending on archetype. For residential occupancy (i.e., Group C) buildings, there are four steps; however, what is considered a lower or upper step depends on building construction type (i.e., wood-frame/combustible vs. concrete/non-combustible construction). There are only three steps for commercial occupancy (i.e., Group D & E) buildings. Figure 2 shows the steps for the various Part 3 archetypes.



Figure 2: Energy Step Code 'Steps' (relevant steps for Part 3 buildings are highlighted red)

Discussion:

To develop the Implementation Strategy for Part 3 buildings, the City engaged with affected stakeholders between September 2019 and January 2021 through a series of meetings, information offerings, targeted training opportunities, and a Solutions Lab (see Appendix C of the attached Energy Step Code Implementation Strategy for Part 3 Buildings) as well as reviewed municipal best practices and Provincial standards and recommendations.

Due to the COVID-19 pandemic, moving forward on implementing Step Code for Part 3 buildings was put on hold in March 2020 in order to gauge impacts to the local development community. Consequently, the timelines originally proposed during initial engagement have been adjusted to account for economic recovery from the COVID-19 pandemic, while also ensuring industry stakeholders are prepared for Provincial Step Code requirements slated for late-2022.

Proposed Implementation Timeline and Requirements

The proposed strategy seeks to provide a balance of building industry capacity while making progress on the community's goals for energy efficiency and GHG emissions reduction. The timeline allows industry to prepare for the BC Building Code changes and to show leadership in early adoption in the BC Interior (see Appendix B for a summary of the proposed implementation timelines). Building Bylaw Amendment No. 14 includes a revision to Part 14 ("Energy Step Code") to make explicit and provide transparency for the dates of the different steps of Energy Step Code for both Part 3 and Part 9 buildings. The proposed bylaw amendment also includes minor text amendments unrelated to Step Code (see Appendix C for a summary of Building Bylaw amendments).

The proposed strategy consists of two phases:

- **Phase 1: Voluntary Adoption and Capacity Building (present – December 31, 2021):** To help build awareness of Step Code requirements for both industry and staff, it is valuable to have a

period of voluntary adoption prior to Step Code being mandatory for Part 3 buildings. During this phase, the City will help build capacity for industry and City staff. Building permit applications that use the Step Code pathway during this phase will be accepted and encouraged, but not required. Understanding that most of the development applications received in the latter half of 2021 will not apply for a building permit or begin construction until 2022 or later, Development Permit applications received after June 1, 2021 will need to demonstrate compliance with Step Code requirements in Phase 2.

- **Phase 2: Higher Energy Efficiency Requirements in advance of proposed Building Code changes in 2022 (January 1, 2022):** Most of the proposed solutions from the Solutions Lab indicate Step 2 or 3 should be required in advance of proposed provincial Building Code changes in 2022. In understanding that the ease of achieving different steps will vary depending on archetype for Part 3 buildings, the following steps are proposed for January 1, 2022, based on major occupancy defined by the BC Building Code and archetype:
 - Group C - Residential:
 - Single-detached homes greater than 600 m²: Step 4
 - Multi-unit residential buildings of combustible construction (including hotels and motels): Step 3
 - Multi-unit residential occupancy of non-combustible construction: Step 2
 - Group D & E - Commercial (business and personal service; mercantile): Step 2

Step Code will not apply to buildings with the following major occupancies until the Province develops appropriate performance targets in the BC Building Code:

- Group A – assembly (e.g., schools, libraries, colleges, recreation centres)
- Group B – treatment and detention (e.g., hospitals) and care (care centre)
- Group F – industrial.

Industry Support and Incentives

To support industry and City staff through the Step Code transition, the City will partner with various organizations and stakeholders (e.g., Canadian Home Builders Association of Central Okanagan, FortisBC, Urban Development Institute, University of British Columbia Okanagan, Okanagan College) to develop a training and education program that will extend through the two phases of the Implementation Strategy. This will include administrative training (e.g., Step Code process, City Building Permit submission requirements, etc.), hands-on/technical training, resources (e.g., technical documents, forms, website), and continuous updates (e.g., Step Code e-bulletins).

Applicants will also be connected with FortisBC's Commercial New Construction Program that offers up to \$500,000 in incentives, as well as energy modeling and airtightness testing rebates.

As a potential incentive to downtown development and high-performance building, a Revitalization Tax Exemption (RTE) for Part 3 developments that achieve the highest level of the Step Code in the City's Downtown Tax Incentive Area 2 is being investigated. Amendments to the RTE Program Bylaw 9561 will be presented to Council for consideration later in 2021.

To ensure Part 3 builders who build to the highest steps are not penalized for incorporating well-insulated/thicker walls, amendments to the Zoning Bylaw to allow a reduction of various setback requirements are also being investigated. Development Planning staff are leading a major Zoning

Bylaw update throughout 2021; therefore, any “thick wall” policy will occur in coordination with this update.

Energy Step Code Beyond 2022

This strategy extends to at least the end of 2022, when the Province is expected to make updates to the BC Building Code that would require buildings to be 20 per cent more efficient than current base Code. Through CleanBC, the Province has also indicated that additional Building Code changes will occur in 2027, which will require buildings to be 40 per cent more efficient than current base Code. It is recommended that the City re-evaluate the Step Code strategies for Part 9 and Part 3 buildings in late 2022 or early 2023 to see if higher steps should be required and/or if the RTE for Part 3 buildings can be expanded beyond Downtown Tax Incentive Area 2.

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 optimally achieving GHG emissions reductions from the built environment. 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. The City 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.

Conclusion:

The proposed Energy Step Code Implementation Strategy for Part 3 Buildings takes into consideration numerous inputs including the mandated provincial timelines and the aggregated stakeholder feedback. The timeline allows Kelowna to accelerate energy efficiency improvements and GHG emissions reduction, and ensures industry is prepared for the BC Building Code changes slated for the end of 2022. Further, requiring Part 3 buildings to be at least 20 per cent more efficient in advance of the provincial Building Code update allows the building community to focus on the other changes in the 2022 Code update.

With the continued urgency for addressing climate change, it is critical to take action. Implementing Step Code directly aligns with the Council priority of environmental protection. It also demonstrates the commitment to two Council-endorsed plans, the *Community Climate Action Plan* and the *Healthy Housing Strategy*.

Internal Circulation:

Development Services
Development Planning
Building Services
Communications

Legal/Statutory Authority:

To support energy conservation and GHG emissions reduction objectives, Section 5 of the *Building Act* (“Unrestricted Matters”) authorizes local governments in BC (except the City of Vancouver) to reference the BC Energy Step Code in their policies and bylaws, and may begin enforcing requirements as of December 15, 2017, subject to notification timelines.

Existing Policy:

The City of Kelowna has established several climate action goals and programs that are delivering on Council's commitment to low-carbon energy, including:

- 2030 Official Community Plan³
 - OCP Objective 5.16. "Improve the energy efficiency and environmental performance of new buildings."
 - OCP Objective 6.2. "Improve energy efficiency and reduce community greenhouse gas emissions."
 - OCP Policy 6.2.1 GHG Reduction Target and Actions. The City of Kelowna will, in partnership with senior governments; local residents and businesses; NGOs; external agencies; and utility providers, work towards reducing absolute community greenhouse gas emissions by:
 - 4% below 2007 levels by 2023;
 - 25% below 2007 levels by 2033; and
 - 80% below 2007 levels by 2050.
- Our Kelowna as We Take Action: Kelowna's Community Climate Action Plan (2018-2023)⁴:
 - Action # B9: Investigate options for implementing the Energy Step Code for Part 3 buildings once the Province makes it available for referencing in local policies and regulations.
- Healthy Housing Strategy⁵
 - Recommended Action: Implement the Energy Step Code for New Housing - Develop an Energy Step Code Implementation Plan to increase energy efficiency and reduce utility costs in new builds to reduce household carrying costs.
- Imagine Kelowna⁶
 - Principle 2: Smarter – A community willing to learn, adapt, and grow so that we can thrive amid rapid change.
 - Take action and be resilient in the face of climate change
 - Principle 4: Responsible – A community where decisions are made ethically and where social and environmental concerns are prioritized.
- Council Priorities⁷
 - Resiliency and adaptability to climate change
 - Greenhouse gas emissions are decreasing

External Agency/Public Comments:

To advise on strategy development, staff administered various external stakeholder engagements over the past year and half, including the following:

- On September 18, 2019, Staff facilitated a Step Code Solutions Lab for Part 3 buildings with 30 participants. The intent of the Solutions Lab was to gather a diverse group of representatives from

³ City of Kelowna. 2011. Kelowna 2030 – Official Community Plan. Retrieved from: <https://www.kelowna.ca/city-hall/city-government/bylaws-policies/kelowna-2030-official-community-plan>.

⁴ City of Kelowna. 2018. Our Kelowna as We Take Action: Kelowna's Community Climate Action Plan. Retrieved from: https://www.kelowna.ca/sites/files/1/docs/community/community_climate_action_plan_june_2018_final.pdf.

⁵ City of Kelowna. 2018. Healthy Housing Strategy. Retrieved from: https://www.kelowna.ca/sites/files/1/docs/logos/healthy_housing_strategy_final_reduced_size.pdf.

⁶ City of Kelowna. 2018. Imagine Kelowna: the Visions to 2040. Retrieved from: https://www.kelowna.ca/sites/files/1/docs/related/imagine_kelowna_short_report_digital.pdf.

⁷ City of Kelowna. 2019. Council Priorities 2019-2022. Retrieved from: https://www.kelowna.ca/sites/files/1/docs/council_priorities_2019-2022_summary.pdf.

the building industry (e.g., energy modelers, professional architects and designers, professional engineers, builders, tradespeople, developers, etc.) to gather feedback on an implementation strategy for Part 3 buildings. A summary of feedback obtained in the Solutions Lab is provided in Appendix C of the attached Energy Step Code Implementation Strategy for Part 3 Buildings.

- Meetings with relevant stakeholders to get input on Step Code for Part 3 buildings (e.g., Roundtable Architects quarterly meetings, Canadian Home Builders Association of Central Okanagan, various members of Urban Development Institute).
- Presentations at local Step Code events (e.g., Okanagan Construction Industry Conference, Building Net-Zero: Constructing Affordable Step Code Homes in the Okanagan, BCIT Lab in a Box Airtightness and Assembly Details, Built Green Canada Kelowna Workshop).
- Regular updates through the Step Code e-subscribe list (863 subscribers as of January 18, 2021).
- Participation on the Province's Local Government Energy Step Code Peer Network quarterly meetings.
- A review of best practices from other BC communities and conversations with several communities.
- The draft strategy was placed on the City Step Code webpage for review and comments between December 3, 2020 and January 14, 2020. In addition, the strategy was circulated to the following recipients for final comments:
 - Step Code e-subscribers
 - Urban Development Institute (UDI)
 - Canadian Home Builders Association of Central Okanagan (CHBA-CO)
 - City's Roundtable Architects list (24 listed architects or designers)
 - Okanagan Local Government Step Code Peer Network (local government representatives from nine neighbouring local governments and First Nation communities)
 - Participants of the Step Code Solutions Lab hosted on September 18, 2019.

No letters of comment were received from any of the recipients.

Submitted by:

C. Ray, Community Energy Specialist

Approved for inclusion:



D. Noble-Brandt, Dept. Manager of Policy and Planning

cc:

Divisional Director, Planning & Development Services
Development Services Director
Development Planning Department Manager
Community Communications Manager

Attachments:

Appendix A: Energy Step Code Implementation Strategy for Part 3 Buildings
Appendix B: Implementation Timeline

Appendix C: Building Bylaw Amendment (Bylaw No. 12166 as Amendment No. 14)