

DATE: February 22, 2022

TO: MAYOR AND COUNCIL

NAME AND TITLE: Deanna Wasnik, Director of Planning and Development

SUBJECT: BC Energy Step Code Implementation

ATTACHMENT(S): 2020 BC Step Code Consultation Summary

RECOMMENDATION(S):

THAT Council:

1. DIRECTS Administration to follow Option 1 as provided in the report dated February 22, 2022, from the Director of Planning and Development, titled “BC Energy Step Code Implementation”.

PURPOSE:

The purpose of this report is to inform Council on BC Energy Step Code stakeholder engagement progress to date, and to request Council to direct Administration to follow Option 1 as outlined in this report regarding the early implementation of the BC Energy Step Code.

BACKGROUND:

BC Building Code

The BC Building Code separates all buildings into two basic categories – Part 9 and Part 3. The requirements of the BC Energy Step Code are defined according to these building types, so it is important to understand the difference between them:

Part 9 buildings include single-family houses and small multi-family and commercial buildings that are three storeys or less, and have a building area of 600m² or less.

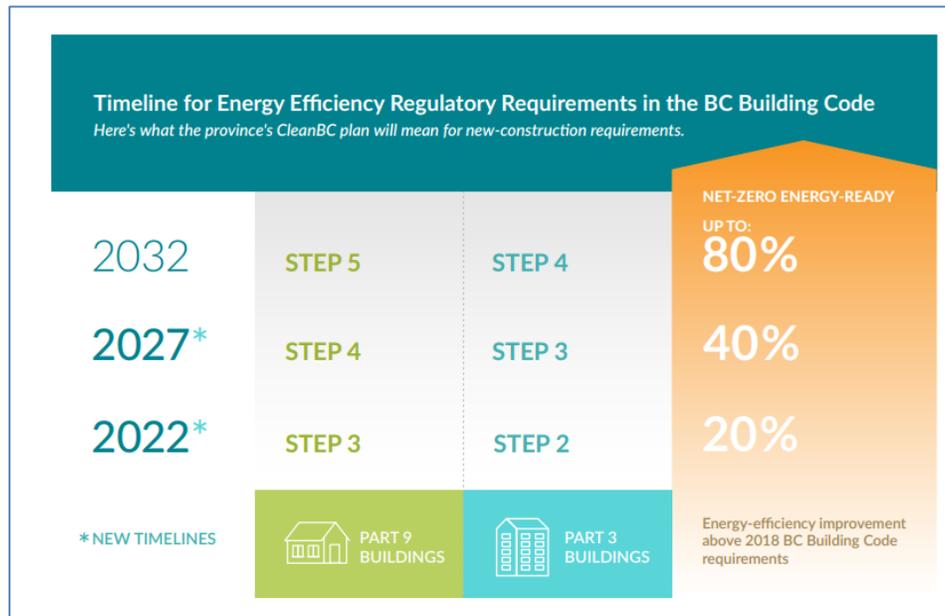
Part 3 buildings include large and complex buildings that are four storeys and taller, and greater than 600m² in building area (ie. large apartment buildings, condos, office buildings, hospitals, etc.).

BC Energy Step Code

The BC Energy Step Code is a performance standard designed to drive steady increases in energy efficiency in new construction. The BC Energy Step Code provides an incremental approach to achieving the provincial Clean BC goal of 80% improved energy-efficiency in new construction by 2032.

In December 2022, the BC Building Code will require that all new builds must be 20% more energy efficient than the base building code requirements today, which is Step 3 for Part 9 buildings, and Step 2 for Part 3 buildings.

Local governments have the authority to require builders to meet one or more steps prior to the mandatory implementation of the BC Energy Step Code in December 2022. The advantage of this is to prepare builders and designers for the upcoming provincial requirement of Step 3 for Part 9 buildings, and Step 2 for Part 3 buildings.



(As illustrated in BC Energy Step Code PPT, Best Practices Guide Version 2 – July 2019)

The BC Energy Step Code has five steps for Part 9 buildings, and all steps of the BC Energy Step Code require the builder to work with an Energy Advisor to conduct energy modelling and airtightness (“blower-door”) testing to demonstrate the levels of energy-efficiency achieved.

Step 1 – Enhanced Compliance

Step 1 of the BC Energy Step Code is a “no-fail” Step and simply requires builders to work with an Energy Advisor and build to the base BC Building Code. The Energy Advisor will utilize energy modelling (envelope, equipment, and systems) and airtightness testing to fulfill the requirements of Step 1.

Step 2

The overall energy-efficiency and airtightness of the building must be improved by 10% from the base building code requirements, as demonstrated by working with an Energy Advisor.

Step 3

Effective in December 2022, the overall energy-efficiency and airtightness of the building must be improved by 20% from the base building code requirements, as demonstrated by working with an Energy Advisor. To achieve the lower steps (Steps 1–3), building and design professionals can rely on conventional building designs with careful air sealing practices, and incrementally incorporate some key elements into the design, building envelope, and systems.

Step 4

Effective in 2027, the overall energy-efficiency and airtightness of new construction must be improved by 40% from the current building code requirements, as demonstrated by working with an Energy Advisor.

Step 5

Effective in 2032, the overall energy-efficiency and airtightness of new construction must be improved by 80% from the current building code requirements. To achieve the upper steps (Steps 4 and 5), builders and designers will need to adopt a more integrated approach to building design and may need to incorporate more substantial changes in building design, layout, building techniques, system selection, and materials.

Stakeholder Engagement

Stakeholder engagement regarding the BC Energy Step Code began in February 2020. On March 5, 2020, City of Prince George, along with the Canadian Home Builder's Association Northern BC, hosted a "Builder's Breakfast" for local building professionals, Building Officials' Association of BC, Regional District of Fraser – Fort George, and City of Prince George divisions. Administration sought to inform and gather feedback from these stakeholders regarding the BC Energy Step Code and potential implementation strategies.

Feedback from the stakeholders present confirmed that the building community is aware of the BC Energy Step Code, and indicated some concerns related to capacity, costs, technology, and supply of materials that relate to the implementation of the BC Energy Step Code.

For more information regarding stakeholder engagement, a consultation summary from March 5, 2020 is attached to this report.

DISCUSSION:

Administration is seeking Council's direction regarding implementation of the BC Energy Step Code. Administration recommends Option 1, as outlined below:

Option 1:

- Implement the BC Energy Step Code in alignment with the BC Building Code update in December 2022 to require Step 3 for Part 9 buildings and Step 2 for Part 3 buildings.
- This would allow Administration to focus on active land use applications for the 2022 building season and to prepare materials and provide training, to both the customers and staff, for the December mandatory implementation of Step Code.
- This option allows builders to voluntarily utilize Step Code.

ALTERNATIVES:

Should Council not support Administration's recommendation, then the following option is provided for Council's consideration:

Option 2:

- Proceed with early implementation of Step 1 of the BC Energy Step Code for Part 9 buildings only.
 - Require that all new construction Part 9 buildings meet Step 1 of the BC Energy Step Code, if the building permit application is made on or after June 1, 2022.

- This will provide City staff, owners, contractors, and energy advisors an adjustment period to deal with the impacts of the BC Energy Step Code, prior to higher Steps becoming a mandatory requirement in the BC Building Code.
- This provides consistency with the Regional District of Fraser – Fort George updated Building Bylaw, which requires new builds for simple buildings and residential complex buildings to meet Step 1 if the application is received on or after April 1, 2022.
- This option does not provide staff and customers a significant amount of time for training of the process and procedure of the implementation Step 1 of the BC Energy Step Code, as it relates to the existing process for building permit review and inspection.

STRATEGIC PRIORITIES:

Preparing for the BC Energy Step Code is in alignment with the 2022-2024 Strategic Plan – Environmental Leadership and Climate Action Goals which supports the continued implementation of the Climate Mitigation and Adaptation Plans.

The following areas of the Climate Mitigation and Adaptation Plans that speak to BC Energy Step Code are as follows:

2020 Climate Change Mitigation Plan:

- To make a commitment to create complete, compact, and energy efficient communities.
 - To plan for the Provincial implementation of the BC Energy Step Code, and consider requiring higher levels of energy efficiency for new builds.

Climate Change Adaptation Strategies for the Community of Prince George 2020:

- To work with construction businesses that are implementing Energy Step Code to assist in promoting the benefits of their builds' energy efficiency.

Climate Forward Implementation Strategy, Phase 1: 2021-2025:

- Objective: To engage with the building community on the BC Energy Step Code and plan for the Provincial implementation of the BC Energy Step Code.

SUMMARY AND CONCLUSION:

Administration recommends that Council direct Administration to action Option 1 outlined in this report regarding the BC Energy Step Code.

RESPECTFULLY SUBMITTED:

Deanna Wasnik, Director of Planning and Development

PREPARED BY: Kailyn van der Ham, Environmental Technician

APPROVED:

Walter Babicz, City Manager

Meeting Date: 2022/03/14