

DATE OF MEETING March 29, 2021

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SUBJECT BC ENERGY STEP CODE REZONING POLICY

OVERVIEW

Purpose of Report

To present to Council the BC Energy Step Code Rezoning Policy for adoption. |

Recommendation

That Council:

1. adopt the BC Energy Step Code Rezoning Policy; and
2. direct Staff to implement the Step Code Rezoning Policy three months after adoption.

BACKGROUND

On 2018-JUL-09, Council received and adopted the BC Energy Step Code Implementation Strategy. The strategy included a number of recommendations, including the incorporation of the BC Energy Step Code (the “Step Code”) standards into the City of Nanaimo “Building Bylaw 2016 No. 7224” (the “Building Bylaw”), the introduction of density bonus points for meeting higher Step Code requirements in the “City of Nanaimo Zoning Bylaw 2011 No. 4500” (the “Zoning Bylaw”), and the development of a BC Energy Step Code rezoning policy. Council adopted the Building Bylaw and Zoning Bylaw amendments in October and November 2019. On 2019-SEP-16, Council directed Staff to develop the BC Energy Step Code Rezoning Policy (the “Rezoning Policy”), and on 2020-JUN-03, an initial draft of the policy was presented to and endorsed by the City Environment Committee. This report presents the final draft for Council consideration and adoption.

BC Energy Step Code Implementation

The Province of British Columbia has set a long-term goal for all new buildings to be net-zero-energy-ready by 2032 through implementation of the Step Code. Through its CleanBC Plan, the Province has made a commitment to follow a step-by-step pathway to make this transition through the BC Building Code (BCBC).

Compared to the 2018 BCBC energy-efficiency requirements, by following the Step Code, new homes will be:

- 20% more energy efficient by 2022,
- 40% more energy efficient by 2027, and
- 80% more energy efficient by 2032 – Net Zero Energy Ready.

The Step Code applies to new construction in buildings under Part 9 (houses and small buildings) and Part 3 (large and complex buildings) of the BCBC. Initially, the Step Code provides local governments with the option to require lower steps (Steps 1 to 3), and incentivize higher steps (Steps 4 and 5) as a way to speed up the implementation of the Step Code.

In Nanaimo, Step Code requirements were included into the City's Building Bylaw, beginning with Step 1 (Enhanced Compliance) in 2020. Enhanced Compliance requires builders to complete an EnerGuide or energy modeling assessment to BCBC requirements. Currently, the City requires all Part 9 buildings to meet Step 2 (20% greater than current BCBC energy-efficiency requirements). Part 3 buildings remain at Step 1 until January 2022. The current pace for meeting the Step Code allows the local development industry to make adjustments in training and building techniques in order to help minimize financial impacts and allow industry capacity to develop as the transition to higher energy-efficiency buildings progresses. |

Climate Action Update: Community Greenhouse Gas Inventory

On 2020-NOV-09, Staff presented a Climate Action Plan update to the Governance and Priorities Committee. During the presentation, the consultant from C2MP provided a review of the City's greenhouse gas (GHG) emission profile. Using fuel-use and energy-use data released by the Province, an analysis was conducted that showed Nanaimo's GHG emissions have increased by 18% between 2010 and 2017 (the latest year where data is available). When comparing population growth during this period at 14%, it shows emissions are growing faster than population growth.

Growth is particularly dramatic in the building sector, which saw large growth in natural gas use (55% increase), and much smaller increases in electricity (5%). While some of the growth is likely from economic growth and expansion of energy-intensive workplaces, a large proportion is likely due to residents and businesses continuing a long-term shift from electricity to natural gas due to the arrival of natural gas on the Island in the 1990s. As natural gas produces 16 times more emissions than BC Hydro electricity for an equivalent unit of energy, this shift has profound implications for Nanaimo's ability to reach its climate targets.

DISCUSSION

On 2020-JUN-03, an initial draft of the policy was presented to and endorsed by the City Environment Committee. Committee members commented on the need to accelerate the Step Code measures, the cost of construction when adding additional energy-efficiency requirements, and the various approaches that can be taken to reach the net-zero-energy-ready target in 2032.

Following endorsement of the draft policy by the Environment Committee, Staff met with development industry stakeholders, represented by the Nanaimo Development Group, in September and November 2020, and again in January 2021, to receive input on the draft policy. The comment and input received generally centered on concern for the cost of implementing the policy and the impact on the affordability of housing in Nanaimo, as well as concern that such a policy would deter developers from proceeding with the rezoning of properties. The use of incentives over regulation was raised as an alternative approach for the City to consider.

Staff also presented the draft policy and received input from the Vancouver Island chapter of the Canadian Homebuilders' Association in November 2020. Input was received that supported the incentive approach to reaching for higher steps, and it was suggested that if the rezoning process is used to lift a project to a higher Step Code level, there should be an offsetting gain through density bonuses or a reduction in another requirement.

After reviewing the input received, Staff feel the density bonus amenity incentive currently provided through Schedule D of the Zoning Bylaw, allows for adequate incentive opportunity for builders and developers to offset additional costs from the Step Code increases in the Rezoning Policy. In response to the input received and to provide another option for developers that helps the City meet its Climate Emergency Declaration greenhouse gas (GHG) reduction goals, an alternative low-carbon energy system path has been added to the draft Rezoning Policy (Attachment A).

Low-Carbon Energy Systems (LCES)

While the Step Code establishes a framework for reducing energy use in new buildings, it does not explicitly address GHG emissions from buildings. In order to provide an alternative to higher Step Code commitment through rezoning that would address building GHG emissions, the policy has been drafted to allow a commitment to installation of a low-carbon energy system to heat and cool the building as another option.

A low-carbon energy system is a professionally installed and maintained, high-efficiency mechanical system that supplies space heating, cooling, and domestic hot water heating demands primarily from renewable energy sources (i.e., electricity).

The draft policy allows for two options: 1) exceed the Step Code requirement for Part 9 and Part 3 buildings by one-step; or 2) meet the Step Code requirement and commit to installation of a low-carbon energy system that meets a set standard for greenhouse gas intensity ("GHGI", Attachment A).

GHGI is a measure that can be collected as part of an energy modeling for a building at the time of building permit application. Elsewhere in the province, most local governments that provide an LCES option over a higher Step Code requirement use GHGI requirements in their policies. A best practice guide developed by AES Engineering for the Energy Step Code Peer Network (AES Study) recommends a GHGI level of 3kg of CO²/m²/year or lower be followed.

The Step Code Rezoning Policy would be applied as outlined according to building type:

Part 9 Building Type	Energy Step Code Paths for Rezoning Applications		
	2021 (three months after adoption)	2022	2027
Single dwelling, duplex, row housing, small- scale multi- residential and commercial.	Step 3	Step 4	Step 5
	Step 2 with a Low- Carbon Energy System	Step 3 with a Low- Carbon Energy System	Step 4 with a Low- Carbon Energy System

Part 3 Building Type	Energy Step Code Paths for Rezoning Applications		
	2021 (three months after adoption)	2022	2027
Multi-Residential Buildings	Step 2	Step 3	Step 4
	Step 1 with Low- Carbon Energy System	Step 2 with Low-Carbon Energy System	Step 3 with Low- Carbon Energy System
Commercial / Hotel	Step 2	Step 3	Step 4
	Step 1 with Low- Carbon Energy System	Step 2 with Low- Carbon Energy System	Step 3 with Low- Carbon Energy System

While the draft policy includes the option of meeting the basic Step Code with a commitment to a Low-Carbon Energy System for commercial / hotel classes, the AES Study also recommends exemptions for commercial buildings and hotels in order to recognize the needs of commercial kitchens and businesses with intense energy demands. As such, Staff do not anticipate a significant uptake of the Low-Carbon Energy System option for these classes of development.

The BC Energy Step Code Rezoning Policy keeps within Council direction around reducing GHGs and improving energy efficiency in new construction. There are also density amenity bonus options available for developers under Schedule D of the Zoning Bylaw that can help soften potential financial impact of requiring higher Step Code or Low-Carbon Energy System requirements through rezoning.

Staff recommend a three-month window before implementation of the policy to allow for adequate notice to the development community of the change in policy. |

OPTIONS

1. That Council:
 1. adopt the BC Energy Step Code Rezoning Policy for adoption; and
 2. direct Staff to implement the Step Code Rezoning Policy three months after adoption.
 - Advantages: Accelerates the implementation of the BC Energy Step Code and helps meet the City's GHG reduction targets.
 - Disadvantages: The development community has expressed concern over additional requirements and costs and the potential to discourage rezoning.

2. That Council deny adoption of the BC Energy Step Code Rezoning Policy.
 - Advantages: Additional requirements and costs on the development community avoided.

- Disadvantages: The City will not be able to accelerate implementation of the BC Energy Step Code and will not be able to encourage the use of Low-Carbon Energy Systems through rezoning. It will become more difficult for the City to meet its GHG reduction targets, as expressed in the Climate Emergency Declaration.]

SUMMARY POINTS

- On 2018-JUL-09, Council received and adopted the BC Energy Step Code Implementation Strategy. The strategy included a number of recommendations, including the incorporation of the Step Code standards into the Building Bylaw, the introduction of density bonus points for meeting higher Step Code requirements in the Zoning Bylaw, and development of a BC Energy Step Code rezoning policy.
- The draft policy allows for two options: 1) exceed the Step Code requirement for Part 9 and Part 3 buildings by one-step; or 2) meet the Step Code requirement, and commit to installation of a low-carbon energy system that meets a set standard for greenhouse gas intensity.
- The BC Energy Step Code Rezoning Policy keeps within Council direction around reducing GHGs and improving energy efficiency in new construction. There are also density amenity bonus options available for developers under Schedule D of the Zoning Bylaw that can help soften potential financial impact of requiring higher Step Code or Low-Carbon Energy System requirements through rezoning

ATTACHMENTS:

ATTACHMENT A: BC Energy Step Code Rezoning Policy |

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