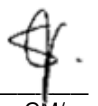



AGENDA INFORMATION	
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8.5

	 GM/ Director	 CAO
Dept. Manager		

## The District of North Vancouver REPORT TO COUNCIL

June 23, 2023  
File: 13.6770/Climate Change/File

**AUTHOR:** Adam Wright, Sustainability Planner, Climate Action, Natural Systems and Biodiversity  
Brett Dwyer, Assistant General Manager, Regulatory Review and Compliance

**SUBJECT: Proposed Update to Step Code Requirements**

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**RECOMMENDATION:**

THAT Construction Bylaw 8271, 2017 Amendment Bylaw 8627, 2023 (Amendment 3) is given FIRST, SECOND and THIRD Readings.

**SUMMARY:**

Following Council direction in February 2023, the District partnered with the City of North Vancouver and the District of West Vancouver to engage industry regarding proposed higher efficiency requirements for new Part 9 buildings (single-family homes, duplexes and smaller townhouse buildings). Consultation indicated a high level of readiness to move from Step 3 (in place since 2018) to Step 4 for new Part 9 residential buildings.

This report introduces a bylaw (**ATTACHMENT A**) to improve the energy performance of new Part 9 buildings in the District of North Vancouver. The proposed bylaw aims to harmonize requirements with the City of North Vancouver and the District of West Vancouver to maintain consistency across the North Shore.

**BACKGROUND:**

At the Regular Council meeting on February 27, 2023, Council directed staff to engage with industry stakeholders on a proposed increase from Step 3 to Step 4 for the District's minimum energy performance levels for new Part 9 buildings (Table 1). A copy of this report is included as **ATTACHMENT B**.

The following table shows the proposed changes to the current Step Code requirements for new Part 9 residential buildings.

**Table 1: Current and Proposed Requirements for new Part 9 Buildings**

<b>Current Requirement</b>	<b>Proposed Requirement</b>
Step 5	Step 5
OR	OR
Step 3 with a Low Carbon System	Step 4 with a Low Carbon System

**EXISTING POLICY:**

In 2019, Council declared a climate and ecological emergency and subsequently adopted the Community Energy and Emissions Plan which set a target of 45% emissions reduction by 2030 and net zero emissions by 2050. The District was an early adopter of the BC Energy Step Code and has been implementing requirements since July 2018 to improve the energy efficiency of new buildings in the community. The District established Step 3 as the minimum energy efficiency requirement for new Part 9 homes in 2018 and local builders have been meeting or exceeding this base code requirement for the past five years.

While not the focus of this report, the District is also advancing innovative and industry leading policy for Part 3 buildings (e.g. multi-family residential, mixed-use, commercial and industrial). These buildings currently must demonstrate high levels of energy efficiency and low carbon performance under the District’s Energy Step Code requirements and are expected to include measures to prevent overheating, support indoor air quality, and account for embodied carbon under the Climate Ready Rezoning Policy.

**ANALYSIS:**

Demonstrating leadership beyond minimum code requirements and North Shore alignment

The Province of B.C. has recently enacted changes to the BC Building Code that increase the minimum code requirements for all new buildings to be 20% more energy efficient. For new Part 9 residential buildings, this means as of May 1, 2023, that Step 3 is the minimum standard Province-wide. The bylaw introduced in this report would allow District requirements for new Part 9 homes to continue to demonstrate leadership beyond code minimums and advance efficient home construction on the North Shore. The proposed update would harmonize requirements with those proposed for the City of North Vancouver and the District of West Vancouver to maintain consistency across the North Shore.

The District would maintain an existing low carbon energy system incentive pathway by continuing to provide the existing option of Step 5 along with a “step down” option (to Step 4) in exchange for installing a low carbon energy system. The proposed bylaw also includes housekeeping changes to align the District’s low carbon energy system option with the

Province's recently introduced greenhouse gas emissions standards for both residential and commercial buildings and updated language for public sector buildings now included in the BC Building Code.

In addition, the proposed bylaw removes the Step Code requirement for large commercial renovation projects. Given that the step code was largely designed for new construction along with indications that the Province is preparing a broader retrofit framework more suited to existing buildings, staff are proposing to remove the current step code application to large renovation projects.

#### North Shore Consultation and Industry Engagement

District staff coordinated industry engagement with the District of West Vancouver and the City of North Vancouver, which included formal correspondence and outreach to the Homebuilders Association of Vancouver (HAVAN), Urban Development Institute (UDI), and contractors and professionals, a virtual webinar with an online survey, and updates to the District's Energy Step Code webpage. District staff submitted a Notice of Consultation to the Building Standards and Safety Branch, as recommended by the Province of British Columbia.

Industry stakeholders included general contractors, architects, designers, energy advisors, mechanical contractors, and engineers. In total, approximately 75 contractors and professional attended the virtual workshop hosted on April 20, 2023, by the three North Shore municipalities. Results of the workshop survey were as follows:

The majority of respondents indicated:

- high levels of readiness to achieve Step 4 (i.e. when asked to ranked their level of readiness on a scale of 1 to 5 with 5 being completely ready, participants expressed an average of 4).
- prior experience working on projects at higher step levels (e.g. Step 4 or Step 5) (69%).

Additional feedback included:

- Interest in additional training on measures needed to achieve Step 4 (e.g. techniques to improve energy efficiency and airtightness);
- Importance of an early and integrated design process involving Energy Advisors;
- Concerns over potential cost implications;
- Concerns about moving ahead of minimum provincial deadlines and;
- Support for using Provincial materials (e.g. compliance forms) for consistency.

The engagement workshop involved a presentation from BCIT's Zero Emissions Building Learning Centre to outline discounted training programs that are available to achieve higher levels of energy performance in new home construction. Additional outreach and communication is expected to occur with relevant stakeholders prior to implementation on November 1, 2023, to ensure readiness for an effective transition.

#### **Timing/Approval Process:**

The proposed bylaw references an effective date of implementation of November 1, 2023.

#### **Concurrence:**

The proposed approach is informed by research and engagement with staff responsible for implementing the District's Energy Step Code requirements. Staff continue to work closely with the City of North Vancouver and the District of West Vancouver to work towards consistency across the North Shore.

**Environmental Impact:**

The proposed updates are designed to provide for energy-efficient buildings and low-carbon construction that will assist the District in achieving climate resilience and GHG emissions reduction targets.

**Options:**

1. District of North Vancouver Construction Bylaw 8271, 2017 Amendment Bylaw 8627, 2023 (Amendment 3) be given FIRST, SECOND and THIRD reading (staff recommendation)
2. Provide alternate direction to staff.
3. Make no changes to the Construction Bylaw at this time.

Respectfully submitted,



Adam Wright  
Sustainability Planner,  
Climate Action, Natural Systems and  
Biodiversity



Brett Dwyer  
Assistant General Manager, Regulatory  
Review and Compliance

**Attachment A - Construction Bylaw 8271, 2017 Amendment Bylaw 8627, 2023 (Amendment 3)**

**Attachment B - February 27, 2023 Council report entitled Proposed Engagement – Updated Part 9 Step Code Building Requirements**

<b>REVIEWED WITH:</b>					
<input type="checkbox"/> Community Planning	_____	<input type="checkbox"/> Clerk's Office	_____	External Agencies:	
<input type="checkbox"/> Development Planning	_____	<input type="checkbox"/> Communications	_____	<input type="checkbox"/> Library Board	_____
<input type="checkbox"/> Development Engineering	_____	<input type="checkbox"/> Finance	_____	<input type="checkbox"/> NS Health	_____
<input type="checkbox"/> Utilities	_____	<input type="checkbox"/> Fire Services	_____	<input type="checkbox"/> RCMP	_____
<input type="checkbox"/> Engineering Operations	_____	<input type="checkbox"/> ITS	_____	<input type="checkbox"/> NVRC	_____
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<input type="checkbox"/> Review and Compliance	_____	<input type="checkbox"/> Planning	_____		
<input type="checkbox"/> Climate and Biodiversity	_____				

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# ATTACHMENT 1

## The Corporation of the District of North Vancouver

### Bylaw 8627

A bylaw to amend Construction Bylaw 8271, 2017

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The Council for The Corporation of the District of North Vancouver enacts as follows:

#### Citation

1. This bylaw may be cited as “Construction Bylaw 8271, 2017, Amendment Bylaw 8627, 2023 (Amendment 3)”.

#### Amendments

2. Construction Bylaw 8271, 2017 is amended as follows:

- a. deleting the following to definitions in section 1.4 in alphabetical order:

*greenhouse gas intensity* means a measure of a greenhouse gas (GHG) performance using the definition, calculation, and fuel type emissions factors established in the energy modelling guidelines referenced by the Energy Step Code that is a calculated value determined through energy modeling and reported in kilograms carbon dioxide equivalent per square metre per year (kgCO<sub>2</sub>e/m<sup>2</sup> /yr);

*low carbon energy system (LCES)* means a mechanical system or systems that provide thermal conditioning and domestic hot water for a building primarily from low carbon energy sources such that the total modelled greenhouse gas intensity is no more than 3kg CO<sub>2</sub>e/m<sup>2</sup> /yr;

- b. adding the following to definition in section 1.4 in alphabetical order:

*emissions level* means the greenhouse gas emissions level as described in Article 9.37.1.3 of Division B for buildings regulated under Part 9 of the Building Code and Article 10.3.1.3 of Division B for building regulated under Part 3 of the Building Code.

- c. deleting Part 14 and substituting the following:

**PART 14 ENERGY CONSERVATION AND GHG EMISSION REDUCTION**

14.1 An application for a *building permit for construction* of a new *building* which contains one or more *major occupancy* listed in the table below must:

14.1.1 be designed and *constructed* to meet or exceed the performance requirements set out in the table below; and

14.1.2 provide sufficient documentation to demonstrate compliance, if applicable, to the satisfaction of the *Chief Building Official*;

<b>Major Occupancy Use in a Building Code</b>	<b>Performance Requirement</b>
Part 9 – Residential	Step 5 or Step 4 + Emission level 3 (EL-3)
Part 3 – Residential	Step 4 or Step 3 + Emission level 3 (EL-3)
Part 3 – Commercial (Group D or Group E)	Step 3 or Step 2 + Emission level 3 (EL-3)
Part 3 – Schools other than colleges, Libraries, Colleges, Recreation Centres, Hospitals, and Care Centres	Step 2

**Effective Date**

3. The effective date of this bylaw is November 1, 2023.

**READ** a first time

**READ** a second time

**READ** a third time

**ADOPTED**

\_\_\_\_\_  
Mayor

\_\_\_\_\_  
Municipal Clerk



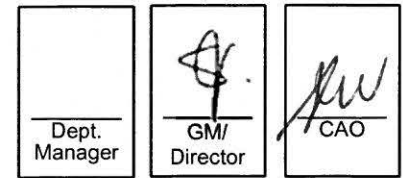
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Municipal Clerk

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## The District of North Vancouver REPORT TO COUNCIL

February 7, 2023

File: 13.6770/Climate Change/File

**AUTHOR:** Adam Wright, Sustainability Planner, Climate Action, Natural Systems and Biodiversity  
Brett Dwyer, Assistant General Manager, Regulatory Review and Compliance

**SUBJECT: Proposed Engagement - Updated Part 9 Step Code Building Requirements**

### RECOMMENDATION:

THAT staff is directed to engage with industry stakeholders on proposed updates to the District's Part 9 Step Code building requirements as detailed in the February 7, 2023, joint report of the Assistant General Manager, Regulatory Review and Compliance and Sustainability Planner entitled Proposed Engagement - Updated Part 9 Step Code Building Requirements.

### SUMMARY:

The purpose of this report is to seek direction from Council to engage with stakeholders regarding proposed changes that would increase the minimum energy efficiency levels for new Part 9 homes (generally single family homes, duplexes and smaller townhouse buildings) in the District of North Vancouver. The proposed changes would ensure that new Part 9 homes are energy efficient, low carbon, and resilient, and would allow the District to continue to advance high performance construction above minimum code requirements. The District aims to harmonize requirements with the City of North Vancouver and the District of West Vancouver to maintain consistency across the North Shore.

### BACKGROUND:

In 2019, Council declared a climate and ecological emergency and subsequently adopted the Community Energy and Emissions Plan which set a target of 45% emissions reduction by 2030 and net zero emissions by 2050. The District has subsequently identified six key directions to reduce greenhouse gas emissions, protect and enhance ecosystem health and biodiversity, and improve our resilience to climate change. Advancing energy efficiency in new home construction advances the Low Carbon Buildings direction (Figure 1).



Figure 1: Climate Action & Environment Key Directions

Energy Step Code

The BC Energy Step Code was introduced in 2017 and establishes a series of increasing energy efficiency steps for new buildings that local governments can encourage or require. The Step Code illustrates the path towards “net zero ready” new Part 9 buildings by 2032 (Figure 2)

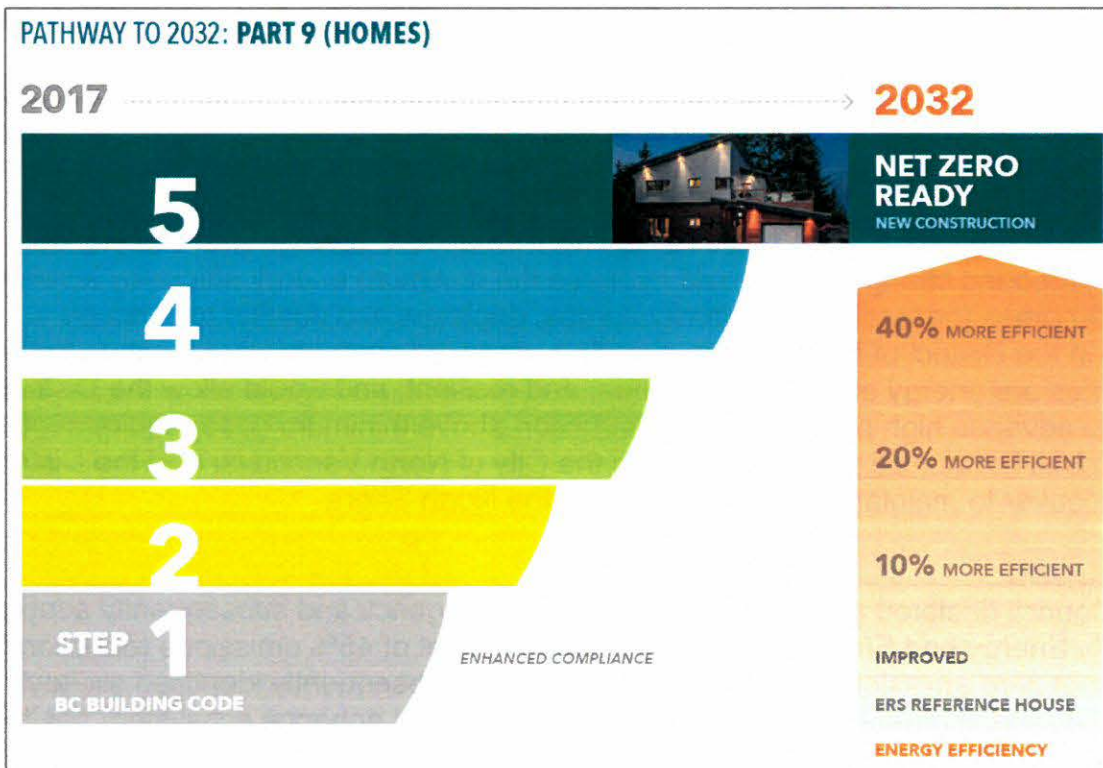


Figure 2. The BC Energy Step Code for new Part 9 homes.

**SUBJECT: Proposed Engagement - Updated Part 9 Step Code Building Requirements**

February 2, 2023

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Building types: Part 9 vs Part 3

The British Columbia Building Code regulates buildings in two main categories:

- **Part 9:** Smaller, primarily residential buildings, for example, single family homes, duplexes and smaller townhouse buildings
- **Part 3:** Larger (over 3 storeys) buildings, for example, multi-family residential, mixed-use, commercial and industrial buildings.

This report focuses on regulations affecting Part 9 residential buildings.

High performance construction on the North Shore

In July 2018, the District of North Vancouver along with the City of North Vancouver and the District of West Vancouver implemented the BC Energy Step Code which established energy performance requirements for new buildings. The District's requirement at this time was to require all new Part 9 residential buildings be constructed to Step 3 of the BC Energy Step Code.

In 2021, the three North Shore municipalities introduced a new option to allow builders to decide whether to build to the highest level of the BC Energy Step Code or to a lower step, provided that they include a 'Low Carbon Energy System' (Table 1). The majority of new homes in the District are now built in accordance with this low carbon compliance pathway.

Table 1: The District's current requirements for Part 9 Homes.

<b>Building Type</b>	<b>Current Requirement</b>
Part 9 (residential)	Step 5  OR  Step 3 with a Low Carbon System

BC Building Code moving to Step 3

The Province is proposing changes to the BC Building Code that are anticipated to take effect this year. One of the key changes the Province is proposing is to increase the minimum code requirements for all new buildings to be 20% more energy efficient. For Part 9 buildings, this means requiring a minimum of Step 3 Province-wide.

**EXISTING POLICY:**

In 2019, Council declared a climate and ecological emergency and subsequently adopted the Community Energy and Emissions Plan which set a target of 45% emissions reduction by 2030 and net zero emissions by 2050. The District has been implementing the BC Energy Step Code since July 2018 to improve the energy efficiency of new buildings in the community and help advance high performance construction.

**SUBJECT: Proposed Engagement - Updated Part 9 Step Code Building Requirements**

February 2, 2023

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**ANALYSIS:**

Opportunity for continued leadership

The proposed Province-wide increase to Step 3 means that the District's requirements become the minimum code requirements, as the District (along with the City of North Vancouver and the District of North Vancouver) has been requiring Step 3 since 2018. Staff are seeking Council direction to initiate engagement with industry regarding strengthening District requirements for new Part 9 homes to continue to demonstrate leadership and advance high performance construction.

Proposed increase to Step 4 for low carbon pathway in the DNV

Staff are seeking direction to engage with stakeholders on a proposed increase from Step 3 to Step 4 for the District's lowest step for Part 9 buildings (Table 2). The existing option of Step 5, the highest step, would remain the same and thus the District would maintain the existing low carbon energy system incentive pathway by continuing to provide a "step down" option (to Step 4) in exchange for installing a low carbon energy system.

Table 2. Proposed change to Step Code requirements for Part 9 buildings.

<b>Building Type</b>	<b>Current Requirement</b>	<b>Proposed Requirement</b>
Part 9 (residential)	Step 5	Step 5
	OR	OR
	Step 3 with a Low Carbon System	Step 4 with a Low Carbon System

At the time of writing, staff from the City of North Vancouver and the District of West Vancouver are proposing a similar approach for their respective Council's consideration. Staff also note that the District of Squamish and the Village of Pemberton currently reference Step 4 as the lowest step for Part 9 buildings.

The incremental increase in the lowest step from Step 3 to Step 4 is recommended for the following reasons:

- Enables the District to continue to advance high performance construction by requiring energy efficiency standards above minimum code requirements.
- Supports consistency across the North Shore, as proposed updates are coordinated with the District of West Vancouver and City of North Vancouver.

**Timing/Approval Process:**

Following Council direction, staff will initiate stakeholder engagement and report back to Council with proposed amendments to the District's Construction Bylaw later this year. The timing/effective date of proposed requirements would be determined following stakeholder consultation.

**SUBJECT: Proposed Engagement - Updated Part 9 Step Code Building Requirements**

February 2, 2023

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The District undertook a two-year public engagement process to develop the Community Energy and Emissions Plan, which includes a key action to accelerate to the highest steps of the BC Energy Step Code. The proposed engagement with industry will fall on the “consult” level of the District’s public engagement spectrum.

**PUBLIC ENGAGEMENT SPECTRUM**

Adapted and used with permission from the International Association for Public Participation (IAP2 Federation).

Inform	Listen & Learn	Consult	Involve	Collaborate	Empower
“We will keep you informed. We will provide information that is timely, accurate, balanced, objective, and easily understood. We will respond to questions for clarification and direct you to sources of additional information.”	“We will listen to you and learn about your plans, views, and issues; and work to understand your concerns, expectations, and ideas.”	“We will keep you informed, and listen to and acknowledge your concerns and aspirations in developing final solutions, and we will report back to you on how your input influenced the decision.”	“We will work with you to ensure your concerns and aspirations are directly reflected in the alternatives developed, and we will report back on how your input influenced the decision.”	“We will look to you for advice and innovation in formulating solutions, and we will incorporate your recommendations into the decisions to the maximum extent possible.”	“We will implement what you decide.”

**Concurrence:**

The proposed approach is informed by research and engagement with staff responsible for implementing the District’s BC Energy Step Code. Staff continue to work closely with the City of North Vancouver and the District of West Vancouver to coordinate engagement and work towards consistency across the North Shore.

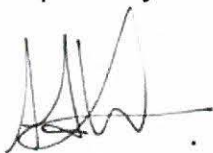
**Financial Impact:**

Should Council endorse the report recommendation, stakeholder engagement would be completed using existing resources.

**Environmental Impact:**

The proposed updates are designed to provide for energy-efficient buildings and low-carbon construction that will assist the District in achieving climate resilience and GHG emissions reduction targets.

Respectfully submitted,



Adam Wright  
Sustainability Planner,  
Climate Action, Natural Systems and  
Biodiversity



Brett Dwyer  
Assistant General Manager, Regulatory  
Review and Compliance

**SUBJECT: Proposed Engagement - Updated Part 9 Step Code Building Requirements**

February 2, 2023

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<b>REVIEWED WITH:</b>		
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<input type="checkbox"/> Development Planning	_____	
<input type="checkbox"/> Development Engineering	_____	
<input type="checkbox"/> Utilities	_____	
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<input type="checkbox"/> Review and Compliance	x	
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		<input type="checkbox"/> RCMP _____
		<input type="checkbox"/> NVRC _____
		<input type="checkbox"/> Museum & Arch. _____
		<input type="checkbox"/> Other: _____