



DISTRICT OF WEST VANCOUVER
750 17TH STREET, WEST VANCOUVER BC V7V 3T3

6.

COUNCIL REPORT

Date:	January 3, 2018
From:	Courtney Miller, Senior Sustainability Planner
Subject:	Energy Step Code Implementation
File:	1610-20-4933

RECOMMENDATION:

THAT

1. Proposed "Building Bylaw No. 4400, 2004, Amendment Bylaw No. 4961, 2018" be read a first, second and third time;
2. Staff bring forward a policy to target a higher step of the BC Energy Step Code than the minimum otherwise required under Building Bylaw No. 4400, 2004 for rezoning applications; and
3. Staff bring forward housekeeping amendments to remove barriers to high-performance buildings.

1.0 Purpose

To request that Council consider a Building Bylaw amendment to implement the BC Energy Step Code, and to direct staff to bring forward further bylaw amendments and policy to encourage high-performance buildings.

2.0 Legislation/Bylaw/Policy

2.1 Legislation

The *Local Government Act* (LGA) enables the District to regulate the construction, alteration, repair or demolition of buildings and structures. The District's existing Official Community Plan (OCP) includes a community greenhouse gas emissions (GHGs) reduction target in accordance with LGA Section 473.

2.2 Bylaw and Policy

The Building Bylaw provides for the health, safety and protection of persons and property related to construction. LGA Section 298(2) identifies energy conservation as a purpose under which construction regulation can be exercised.

The 2016 Community Energy and Emissions Plan (CEE Plan) Housing and Land Use Strategies D1 and D2 support the implementation of the BC Energy Step Code to reduce GHGs. Removing barriers is supported by CEE Plan Housing and Land Use Strategy F to strengthen capacity of the District and industry to meet and exceed building code standards.

3.0 Background

3.1 Previous Decisions

At the October 3, 2016 Council meeting Council passed the following motion:

THAT staff commence Community Energy and Emissions Plan implementation through the Official Community Plan review and other key departmental work plans.

3.2 History

The Building Bylaw has been amended from time-to-time since its 2004 enactment. The CEE Plan guides energy and GHG policies with annual update to Council on implementation status, most recently in April 2017. At that time, staff reported that review of the Energy Step Code was underway and that “greening” bylaws to remove barriers and facilitate innovation would be forthcoming in 2017/2018.

4.0 Analysis

4.1 Discussion

The Building Bylaw is the primary control that allows the District to regulate the construction of buildings and structures. It establishes the overall framework for reviewing and considering various types of construction-related permits, and it enables the District to carry out inspections in accordance with the British Columbia Building Code (BCBC) and other Provincial Statutes.

The Working Group-created CEE Plan advances one of Council’s eight priorities, “Natural Environment and Climate Action,” and it directs policy to lower community GHG emissions. It enables durable and substantive changes that realize a better climate *and* a better community through its implementation.

4.1.1 BC Energy Step Code

The recommendation is that the District reference the BC Energy Step Code effective July 1, 2018. If enacted, the minimum requirement will be Step 1 for Part 3 commercial, Step 2 for Part 3 residential, and Step 3 for Part 9 residential buildings. Some qualifications apply to specific building types within these categories as described in the next section.

The Province enacted the BC Energy Step Code in April 2017. It establishes a consistent approach to more energy-efficient new construction. The number of steps varies by building type as defined by Building Code. Part 9 buildings are generally smaller, simpler buildings, while Part 3 buildings involve larger, more complex construction. Regardless of the number of steps that apply to the building type, the lowest step is the current built-to-code building, but with enhanced verification and compliance. The highest step is net-zero energy ready, meaning a very energy efficient building that—with the addition of on-site, renewable energy systems—has the potential to generate as much clean energy as it consumes. The Province has indicated that net-zero energy ready will be the base building code requirement in less than 15 years (2032).

The Step Code is a performance-based standard. It defines the measurable building envelope, equipment and airtightness standards for each step. A proposed building must be modeled to meet the standard, and airtightness testing is required to demonstrate that the constructed building performs as designed. The Step Code identifies Lower Steps as those that can be achieved utilizing conventional building designs with additional attention to air-sealing practices. These steps are the focus of this report.

The Province developed the Step Code in cooperation with industry representatives and has completed extensive consultation. It also commissioned a comprehensive costing study that found limited construction cost impacts for buildings constructed to meet the Lower Steps. For instance, Step 3 for Part 9 buildings increases performance by 20% over a building constructed to today's code with an incremental cost as low as 0.5%.

4.1.2 North Shore alignment

The proposed bylaw amendment would regularize requirements across the North Shore. Following the announcement of the BC Energy Step Code in February 2017, staff from all three municipalities worked to define a consolidated approach. This alignment standardizes new building energy efficiency, facilitates local builders working across municipal boundaries, and supports the Province's goal of improving consistency and innovation.

It also positions the North Shore to be a leader in high-performance buildings in the region and province. Although there is widespread interest in enacting the Step Code among local governments throughout British Columbia, the North Shore is distinct in its commitment to timely implementation. The City of North Vancouver was the first jurisdiction to adopt bylaws in October 2017, with the District of North Vancouver following the subsequent month.

The table below demonstrates the proposed alignment to occur in July 2018.

Minimum Step effective July 1, 2018

Building Form	DWV Proposed	CNV	DNV
Single-family Residential			
Part 9 coach house	1 of 5	1 of 5	3 of 5
Part 9	< 3 of 5 (aligned) >		
Part 3	3 of 4 ¹	2 of 4	2 of 4
Multi-family Residential			
Part 9	< 3 of 5 (aligned) >		
Part 3	< 2 of 4 (aligned) >		
Commercial			
Part 9	< BCBC (aligned) >		
Part 3	< 1 of 3 (aligned) >		

The shaded fields identify building forms subject to specific consideration by one municipality. West Vancouver coach houses have an area of no more than 111.5 square metres (1,200 square feet). These small homes already utilize far less energy than traditional houses, and the incremental cost to realize the same step is higher. For these reasons, and in alignment with the City of North Vancouver, the recommendation is to continue to encourage coach house construction by requiring only enhanced verification and compliance for these buildings.

A small number of larger West Vancouver single-family houses are considered under Part 3 of the Building Code. This results from a building height over three storeys and/or a building footprint exceeding 600 square metres (6,458 square feet). The recommendation is to adopt Step 3 of 4¹, the highest community-wide standard proposed in the province to date.

4.1.3 West Vancouver leadership

In addition to adopting the Step Code, effective July 2018, the recommendation is that Council direct staff to bring forward housekeeping amendments in March 2018 to remove barriers and incentivize builders to realize Higher Steps. Review of the Zoning Bylaw would consider floor area, siting and height barriers to high-performance building construction requiring significantly thicker walls and roofs. The loss of the usable floor area needed for insulation currently disincentivizes green building construction. In addition, this review would provide an opportunity to address barriers for on-site renewables such as solar photovoltaic panels.

¹ Enforcement of this single provision would be effective October 28, 2018, due to Provincial requirements regarding notification of a Higher Step. A Part 3 single-family house would be required to meet Step 2 from July 1, 2018, until that date.

Any proposed Zoning Bylaw amendment would carefully consider neighbourliness and other impacts. Preferential permit processing and fee consideration are also potential directions to accelerate market transformation.

4.2 Sustainability

The CEE Plan focuses on environmental sustainability by identifying and forwarding strategies to reduce GHG emissions. High-performance homes also advance a range of community social and economic deliverables, including public health and infrastructure savings. The recent OCP Directions workshop and survey found 96% (76% proceed and 20% proceed with conditions) of respondents favoured advancing climate strategies on land use, buildings, transportation and waste.

Improved new building performance contributes to the District's pursuit of its ambitious CEE Plan target of 40% reduction below 2007 emissions by 2040. This progress is supported by senior government action, future technological advances and socio-economic considerations.

4.3 Public Engagement and Outreach

The District's robust engagement on sustainability issues led to the adoption of the Working Group-prepared CEE Plan in 2016. This included outreach on the District's future adoption of improved energy efficiency standards (known as a Stretch Code at that time).

The BC Energy Step Code is the culmination of a multiyear effort led by the Province to define a standard to transition to net-zero energy ready buildings. The Energy Step Code Council benefited from broad industry representation, including the Canadian Home Builders' Association and the Urban Development Institute.

Aligned with the Province's best practices guidance, the District notified the Energy Step Code Council of its intent to consult with stakeholders in October 2017. This allows for an eight month transition—exceeding the six months requested—prior to the proposed enforcement of the Step Code in July 2018.

Staff engaged the West Vancouver Housing Association, and later hosted a local Builders' Forum in October 2017. The input received was generally positive with expressed interest in addressing existing barriers to high-performance buildings. Should Council enact the Step Code, ongoing dialogue with industry will support the effective implementation of new regulations.

4.4 Other Communication, Consultation, and Research

The recommended housekeeping amendments would include a Public Hearing prior to its consideration for adoption. In addition, the continuing implementation of the CEE Plan requires consultation, research and cooperation between District departments as well as with external agencies. This includes quantification of the deliverables of the plan to determine progress towards the adopted CEE Plan and OCP GHG reduction targets.

5.0 Options

5.1 Recommended Option

It is recommended that Council approve the proposed bylaw amendment and direct staff to bring forward further bylaw amendments and policies for consideration.

5.2 Considered Options

Council may request further information (to be specified) or defer consideration of the proposed amendment.

6.0 Conclusion

The District's implementation of the BC Energy Step Code would create North Shore alignment, support local industry to be leaders in the region and province, and deliver two CEE Plan strategies. Removing barriers to high-performance buildings would further advance CEE Plan strategies. With Council's direction, staff will report back on housekeeping amendments to support and incentivize new construction to meet the Higher Steps of the BC Energy Step Code.

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Concurrence:


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Appendix:

- A. Proposed "Building Bylaw No. 4400, 2004, Amendment Bylaw No. 4961, 2018"



District of West Vancouver

APPENDIX A

**Building Bylaw No. 4400, 2004,
Amendment Bylaw No. 4961, 2018**

Effective Date: July 1, 2018

Building Bylaw No. 4400, 2004, Amendment Bylaw No. 4961, 2018

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District of West Vancouver

Building Bylaw No. 4400, 2004, Amendment Bylaw No. 4961, 2018

A bylaw to provide for health, safety and protection of persons and property.

Previous amendments: Amendment bylaws 4521, 4542, 4663, 4685, 4698, 4704, 4720, 4729, 4798, and 4933.

WHEREAS the Council of The Corporation of the District of West Vancouver deems it expedient to amend Building Bylaw No. 4400, 2004;

NOW THEREFORE, the Council of the District of West Vancouver enacts as follows:

Part 1 Citation

- 1.1 This bylaw may be cited as Building Bylaw No. 4400, 2004, Amendment Bylaw No. 4961, 2018.

Part 2 Severability

- 2.1 If a portion of this bylaw is held invalid by a Court of competent jurisdiction, then the invalid portion must be severed and the remainder of this bylaw is deemed to have been adopted without the severed section, subsection, paragraph, subparagraph, clause or phrase.

Part 3 Amendment

- 3.1 Building Bylaw No. 4400 2004 is amended as follows:
 - 3.1.1 Replace 'A Bylaw to provide for health, safety and protection of persons and property.' with:

A Bylaw to provide for health, safety and protection of persons and property, and the conservation of energy.

3.1.2 Following Part 4 Definitions, "Structure" insert the new definition:

"Zoning Bylaw" means the bylaw regulating land use adopted by the Council of the Corporation of the District of West Vancouver, and as amended or re-enacted from time to time.

3.1.3 Following Part 9 Building Permits, Clause 9.1.15 insert the new clause:

9.1.16 Sufficient documentation to demonstrate compliance with the Energy Step Code, defined by the *Building Code* and specified by S. 9.7 and S. 9.8 of this Bylaw, to the satisfaction of the *Building Inspector*,

3.1.4 Renumber Part 9: Previous 9.1.16 becomes 9.1.17; previous 9.1.17 becomes 9.1.18; and previous 9.1.18 becomes 9.1.19;

3.1.5 Following Part 9 Building Permits, Clause 9.6 insert the new clauses:

9.7 A new *Building* used for Residential Occupancies shall be designed to meet the specified requirements of the Energy Step Code defined by the *Building Code*:

9.7.1 Step 3 for a Part 9 *Building*;

9.7.2 Notwithstanding S. 9.7.1 of this Bylaw, Step 1 for a Detached secondary suite as defined by the *Zoning Bylaw*,

9.7.3 Step 2 for a Part 3 *Building*;

9.7.4 Notwithstanding S. 9.7.3. of this Bylaw and effective October 28, 2018, Step 3 for a Part 3 Dwelling, single family as defined by the *Zoning Bylaw*.

- 9.8 A new Part 3 *Building* used for Business and Personal Services or Mercantile Occupancies shall be designed to meet the requirements of Step 1 of the Energy Step Code defined by the *Building Code*.

Part 4 Effective Date

- 4.1 Building Bylaw No. 4400, 2004, Amendment Bylaw No. 4961, 2018 will be effective on July 1, 2018.

READ A FIRST TIME on XXXX, 2018

READ A SECOND TIME on XXXX, 2018

READ A THIRD TIME on XXXX, 2018

ADOPTED by the Council on XXXX, 2018.

Mayor

Municipal Clerk

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