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The Corporation of **THE CITY OF NORTH VANCOUVER**
COMMUNITY SERVICES DEPARTMENT

REPORT

To: Mayor Darrell R. Mussatto and Members of Council

From: Emilie K. Adin, Director, Community Services

SUBJECT: INTRODUCTION OF BYLAWS WITH REGARD TO BUILDING ACT AND ENERGY STEP CODE

Date: September 6, 2017 File No: 08-3010-01-0001/2017

The following is a suggested recommendation only. Please refer to Council Minutes for adopted resolution.

RECOMMENDATION

PURSUANT to the report of the Director, Community Services, dated September 6, 2017, entitled "Introduction of Bylaws With regard to Building Act and BC Energy Step Code":

THAT "Zoning Bylaw, 1995, No. 6700, Amendment Bylaw, 2017, No. 8575" (Amendments to Zoning with regard to Building Act and BC Energy Step Code), be considered and referred to a Public Hearing;

THAT "Construction Regulation Bylaw, 2003, No. 7390, Amendment Bylaw, 2017, No. 8576" (Amendments to Transition to the BC Energy Step Code), be considered and referred to a Public Hearing;

AND THAT "Construction Regulation Bylaw, 2003, No. 7390, Amendment Bylaw, 2017, No. 8577" (Amendments to Enhance Energy Performance Under the BC Energy Step Code), be considered and referred to a Public Hearing.

ATTACHMENTS

1. Staff Report entitled "Building Act Update and Implementation Steps," dated June 21, 2017 (Document #1563324)
2. BC Energy Step Code: A Best Practices Guide for Local Governments (Document #1563292)
3. Zoning Bylaw 1995, No. 6700, Amendment Bylaw 2017, No. 8575 (Document #1564825)
4. Construction Regulation Bylaw 2003, No. 7390, Amendment Bylaw 2017, No. 8576 (Amendments to Transition to the BC Energy Step Code) (Document #1558905)
5. Construction Regulation Bylaw 2003, No. 7390, Amendment Bylaw 2017, No. 8577 (Amendments to Enhance Energy Performance Under the BC Energy Step Code) (Document #1561958)

PURPOSE

This report introduces bylaws that respond to the Building Act by seeking to transition existing Zoning Bylaw requirements prior to the Provincial deadline of December 15, 2017, with achievable energy performance improvements to be enacted in July 2018.

BACKGROUND

On June 26, 2017, Council unanimously carried the following resolution:

PURSUANT to the report of the Deputy Director, Community Development, dated June 21, 2017, entitled "*Building Act* Update and Implementation Steps":

THAT Zoning Bylaw and Construction Regulation Bylaw amendments and City policies be prepared for Council's consideration, as outlined in the report, in order to address the City bylaws impacted by the *Building Act* and the Provincial deadline of December 15, 2017;

THAT staff report back to Council on other policy and regulatory matters pertaining to the *Building Act*, in future, as details emerge;

THAT a copy of this report be forwarded to the BC Energy Step Code Council to advise on the City's intended transition to the new step code regulation;

AND THAT a letter from the Mayor, substantially in the form presented as Attachment #2 of the report, be sent to the Minister Responsible for Housing, with copies to local MLA Bowinn Ma, the Urban Development Institute, the Greater Vancouver Homebuilders Association, UBCM and Metro Vancouver.

Background on the Building Act is summarized in the staff report entitled "Building Act Update and Implementation Steps," dated June 21, 2017 (Attachment #1), as well as explored in greater detail in earlier staff reports. Many of the areas of concern that were identified in previous reports have been adequately addressed by the Province in the short term, in that a number of matters of importance to the City have now become listed as "permanently unrestricted," "temporarily unrestricted" or "out of scope" of the Building Act. This includes district energy systems, electric vehicle requirements, noise mitigation, flood construction level requirements, and adaptable design.

DISCUSSION

Of all of the building regulation issues discussed in the June 21, 2017 report, there were four building regulation issues identified by staff for which:

- the City has current bylaw requirements that are impacted by the Building Act, and
- that have not been listed by the Province as permanently unrestricted," "temporarily unrestricted" or "out of scope" of the Building Act.

These issues should be addressed by the City prior to December 15, 2017, when local governments' authority to set technical building requirements by bylaw will change under the Building Act.

The four impacted building regulation issues identified in the June 21, 2017 report were:

1. enhanced energy standards for buildings (i.e., EnerGuide);
2. green building standards for buildings (i.e., LEED);
3. building security requirements; and
4. recycling and garbage storage facility requirements.

This report discusses each of these identified issues in turn.

1. Enhanced energy standards for buildings

Since January 1, 2011, the City has required higher energy performance standards and high compliance for virtually all new buildings, in order that they may achieve "full zoning density" for a development. As the first municipality in BC to implement this strategic approach City-wide for virtually all new buildings, the City has demonstrated strong leadership. The City's award-winning Energy Efficient Buildings Initiative has been guided by the targets adopted through the Official Community Plan and the Community Energy and Emissions Plan. Industry take-up has been in the range of 95-98%.

Until very recently, Provincial law did not provide for City-wide energy performance requirements above Code, except through use of the density bonus tool in the Zoning Bylaw. That is why energy performance requirements for City developments have been

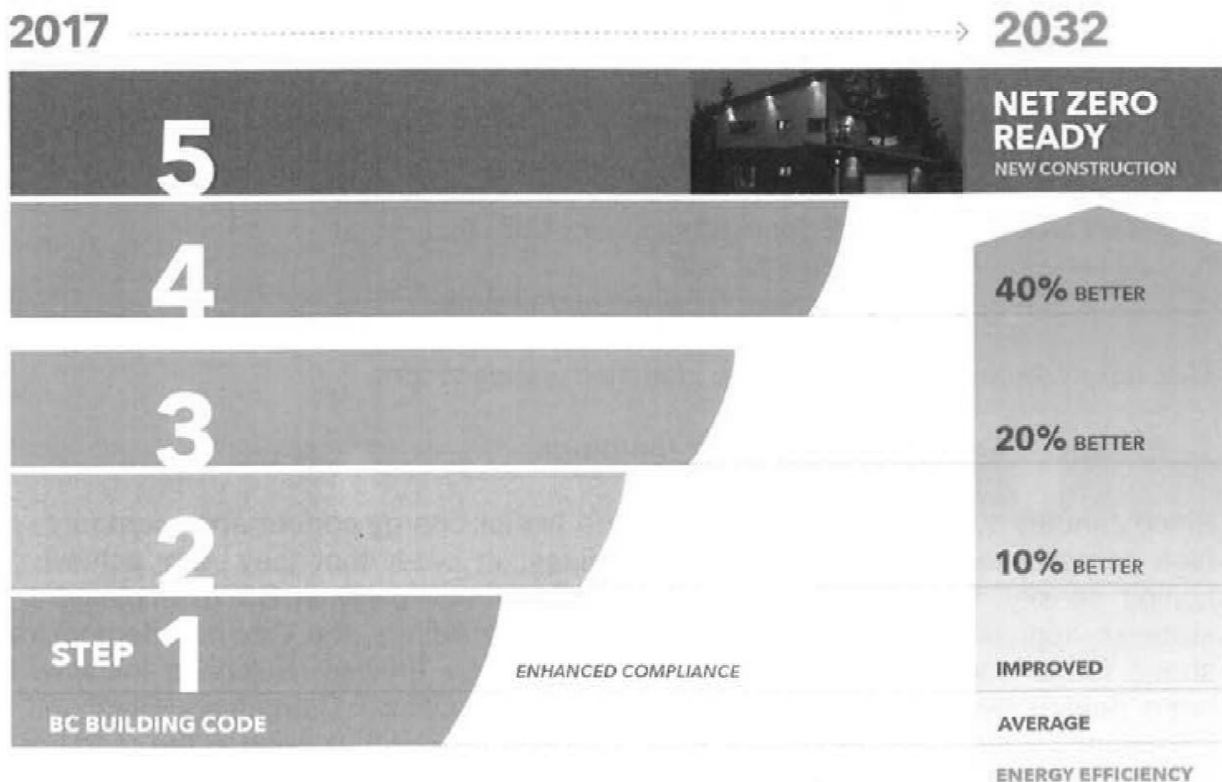
secured as options for full density in the Zoning Bylaw rather than as base requirements in the City's Construction Regulation Bylaw.

The BC Energy Step Code is a provincial standard, enacted in April 2017, which provides an incremental and consistent approach to achieving more energy-efficient buildings that go beyond the requirements of the base BC Building Code. This is part of a longer term effort to make all buildings in the Province net-zero energy ready by 2032. A Best Practices Guide for Local Governments on the Energy Step Code is Attachment #2 to this report.

There are a different number of steps up from BC Building Code to Net-Zero Ready for every building type, however it's important to note that Step 1 is always the lowest step, and in essence requires enhanced verification and compliance of Building Code energy performance standards, while the highest step is always Net-Zero Ready.

This is depicted in the following graphic showing the five steps for Part 9 residential buildings (typically, all residential buildings 3 storeys and under):

Figure 1. "Stepping Up" to Net Zero Ready Construction for Part 9 Buildings



Under the framework of Building Act requirements and the new BC Energy Step Code, the bylaws introduced with this report will:

- Remove from the Zoning Bylaw the density bonus mechanisms to achieve full density in exchange for verified/higher energy performance, outside of the Moodyville area;
- Amend the Zoning Bylaw with regard to energy performance requirements in return for density bonusing in the Moodyville area, so as to conform to the Building Act;
- Within the Construction Regulation Bylaw, create achievable Energy Step Code building requirements for all residential buildings in the City (other than small houses and coach houses under 1,200 square feet), as permitted under the BC Building Code and the Building Act;
- Continue enhanced energy performance compliance requirements for most commercial buildings, but remove energy performance verification requirements for industrial, institutional and some commercial buildings, as required by the Building Act; and
- Remove the energy performance security requirement (1% of construction costs), which has been required for 95-98% of all construction since 2011, except for new multi-unit construction in the Moodyville area.

City-Wide Transitions

Part 9 buildings under the Building Code are typically small residential buildings (three storeys and under) and other small buildings. The City has targeted higher energy performance than required by Building Code since 2011, with over 95% of builders seeking to achieve these targets – and over two-thirds of these builders actually exceeding the minimal requirements. Step 2 of 5 is more equivalent to the City's minimum energy performance standard of EnerGuide 80, in place since 2011, but Step 3 costs only 0% to 1.1% more (depending on the form of building) while achieving demonstrable energy benefits. (See Table 1 below.) Step 3 is proposed to be a requirement for all Part 9 residential construction on July 1, 2018.

An exemption for smaller houses (under 1,200 square feet) to higher energy performance standards is recommended due in part to the fact that the cost differential is higher for these buildings and also due in part to the City's strong policy support for housing choice and diversity. The first step of the Step Code, which is enhanced verification for compliance with the BC Building Code, is recommended as an initial step for smaller houses and would not take full force and effect until July 1, 2018.

Part 3 buildings under the Building Code typically include larger residential and commercial buildings. Step 1 (enhanced compliance) is the equivalent to what the City now requires of all Part 3 development above 1,000 square metres. Step 2 of 4 is recommended as a new base requirement for all residential buildings, beginning in July 2018.

With regard to commercial buildings, an exemption from any “step up” on energy performance requirements is recommended at this time, due to the City’s strong policy support for smart growth and the need to retain the City’s good balance between jobs and homes.

A summary of current and proposed energy performance requirements is shown in Table 1 below. The summary table includes the incremental cost differential (initial construction costs) between the current requirements above Building Code (in place since 2011) and the proposed July 2018 requirements. Costing data comes from a comprehensive province-wide costing study that was recently released in draft form. The final costing report will be made available in September ahead of the Public Hearing, and will be included in the Public Hearing package.

Table 1. Summary of Current and Proposed Energy Performance Requirements for Residential and Commercial Buildings

Building Type	Zoning Bylaw	Construction Regulation Bylaw		Incremental Cost Differential from B to C
	A	B	C	
	Current requirements (to be removed with Bylaw 8575)	December 2017 requirements (equivalent to current req't)	July 2018 requirements (a step up for residential buildings)	
	95-98% take-up (density bonus)	100% requirement Bylaw 8577	100% requirement Bylaw 8576	
Small Part 9 residential buildings	BC Building Code only (coach houses only)	BC Building Code only (houses under 1,200 sq. ft.)	Step 1 of 5 steps (houses under 1,200 sq. ft.)	0.5%
Part 9 residential buildings over 1,200 sq. ft.	EnerGuide 80	Step 2 of 5	Step 3 of 5	0% - 1.1%
Part 9 commercial buildings	Enhanced compliance	BC Building Code only	BC Building Code only	n/a
Part 3 residential building	Enhanced compliance	Step 1 of 4	Step 2 of 4	0.4% - 0.5%
Part 3 commercial building	Enhanced compliance	Step 1 of 3	Step 1 of 3 (no step up)	n/a

Institutional and industrial buildings do not have any Step Code requirements established in the BC Building Code at this time. Accessory buildings that do not require a building permit are also exempted from meeting the Step Code.

The Districts of North Vancouver and West Vancouver are proceeding with establishing minimum Step Code requirements for different building types. In addition, staff is cooperating to align permit processes, industry outreach and applicant documentation to demonstrate Step Code compliance. The proposed requirements in this report will continue the City of North Vancouver's leadership on the North Shore.

BC Housing is planning Building Smart training sessions to support builders and designers in meeting BC Energy Step Code requirements. Vancouver area training seminars will be held November 9 and November 15, 2017, ahead of the City's bylaws coming into full force and effect. The City of North Vancouver will also hold a Builders Forum in November 2017 for the local building community.

Moodyville Transitions

A complex and geographically-specific rezoning package was negotiated with stakeholders with regard to the Moodyville neighbourhood. This included density bonusing for energy performance, affordable housing (lock-off units), enhanced ability to provide frequent transit (road dedications) and noise mitigation. It is recommended that the City transition from current energy performance requirements to the Energy Step Code, while retaining the density bonus mechanism in the Zoning Bylaw as the main instrument for applying these requirements.

The highest step of the Energy Step Code (i.e., Net-Zero Ready) is close in terms of energy performance to Passive House Certified construction, but somewhat less costly to attain. The new provincial Step Code regulation is written such that if you have attained Passive House certification, you are automatically deemed to have achieved the highest step of the Energy Step Code (i.e., you do not need to go through two different energy verification processes in order to prove compliance).

For all residential construction at more than 0.5 times the lot area, in Moodyville zones only, builders will be obligated to achieve one of three options:

- 1) Passive House;
- 2) Highest step of Energy Step Code; or
- 3) Second highest step of Step Code plus additional noise mitigation measures.

The affected Moodyville zones are:

- RS-4B One-Unit Residential 4B (rowhousing up to 0.75 FSR)
- RG-2 Ground-Oriented Residential 2 (townhouses up to 0.75 FSR)
- RG-3 Ground-Oriented Residential 3 (stacked townhouses up to 1.0 FSR)

- RM-2 Medium Density Apartment Residential 2 (stacked townhouses or apartment buildings up to 1.6 FSR)
- RG-4 Ground-Oriented Residential 4 (stacked townhouses up to 1.25 FSR)

2. Green building standards for buildings

Within special residential zones in the Moodyville area, the Zoning Bylaw references LEED Gold certification as a condition of full density. As this green building standard is only required when developers are seeking a density bonus, a legal argument could be made that this is an optional standard rather than a requirement. However, staff recommend removing all references to green building standards from the Zoning Bylaw, and transitioning exclusively to Step Code requirements for the following three reasons:

- 1) To support the spirit of the Building Act which aims to increase consistency between municipal requirements across the region and province;
- 2) In acknowledgement of the City's primary interest in climate mitigation and energy resiliency; and
- 3) Because most of the elements of best practices in construction, achieved through LEED certification, are otherwise achieved through a combination of City bylaws and Development Permit guidelines.

Zoning Amendment Bylaw No. 8575 (Attachment #3) achieves the aim of removing LEED requirements and requiring only a choice for industry between Passive House or Step Code.

3. Building Security Requirements

As outlined in a previous staff report (Attachment #1), these requirements are proposed to be deleted from the Construction Regulation Bylaw. The Province is being urged to consider this issue on a broader scale.

4. Recycling and garbage storage facility requirements.

In previous staff reports, these requirements were identified as potentially in contravention with the requirements of the Building Act. Recycling requirements were not listed as unrestricted matters or out of scope matters by the Province.

However, in further discussions with legal counsel and other stakeholders, staff have determined that the City's requirements, which constitute only floor area requirements, are not addressed by the Building Code and are therefore not contrary to Provincial requirements.

Recycling and garbage storage facility requirements are now recommended to be retained in the Zoning Bylaw. Staff will continue to urge the Province to consider this issue on a broader scale, as a number of technical requirements (ventilation, lighting,

fire safety, etc.) would likely need to be implemented in future, and should be set provincially rather than at a local level.

NEXT STEPS

Consultation and process on proposed bylaws

The creation of the Energy Step Code has been a multi-year, multi-sector process involving representatives from the provincial government, utilities, local governments, and the building, development and design sectors. There was active involvement by the Urban Development Institute, the Greater Vancouver Home Builders Association, the Canadian Home Builders Association and professional associations such as the Architectural Institute of BC, the Engineers and Geoscientists of BC, the Planning Institute of BC, and the Building Officials Association of BC.

Province-wide consultations have gone into the creation of the Step Code; the City has notified the development community and the BC Energy Step Code Council of the impending energy performance transitions and proposed enhancements. Two in-person meetings have been set: a consultative meeting with members of the Urban Development Institute, and a stakeholder meeting with members of the Greater Vancouver Home Builders Association along with other Part 9 residential builders. These meetings will be held in addition to the public hearing that will be set should Council choose to consider and refer the bylaws attached to this report.

Staff recommend that both of the proposed construction regulation bylaws, and the zoning amendment bylaw, be considered altogether at a public hearing. This, despite that provincial law and development procedures only require a public hearing for consideration of the zoning amendment bylaw.

Should staff be directed to schedule a public hearing, the hearing will include:

- A presentation on what is the Energy Step Code;
- An overview of cost implications and training opportunities for industry; and
- Availability of technical experts to respond to costing or technical questions from Council or the public.

Future staff report(s)

In the spirit of consistency and transparency provided by the Energy Step Code, staff are considering a zoning policy on energy efficient buildings. This, to determine the energy requirements to be requested when additional density or land use changes are requested by an applicant. Such a policy would likely apply only to larger buildings (minimum threshold to be determined). For these buildings, the City would likely expect one step above the base Step Code level for the building type. However, more review of the provincial costing study is required before finalizing staff's recommendations to Council in this regard.

FINANCIAL IMPLICATIONS

The removal of density bonusing for energy efficiency and the removal of the process to collect and track letters of credit as security for energy performance for most construction types are both expected to lead to moderate efficiency gains in the City's processing of building permit applications. In all other respects these bylaws are cost-neutral for the City.

A comprehensive costing study has deemed the incremental cost differentials for transitioning to the Energy Step Code to be financially affordable and achievable for the development community.

SUSTAINABILITY IMPLICATIONS

The recommendations of this report are in keeping with current sustainability objectives.

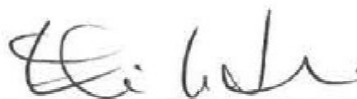
INTER-DEPARTMENTAL IMPLICATIONS

This report has been reviewed and approved by the Civic Projects Team at their meeting on September 5, 2017.

CORPORATE PLAN AND/OR POLICY IMPLICATIONS

The recommendations of this report are in keeping with the Official Community Plan and the Community Energy and Emissions Plan. The Planning Department will follow up with proposed additional changes to city policy, including the Sustainable Development Guidelines.

RESPECTFULLY SUBMITTED:



Emilie K. Adin
Director, Community Services

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