

NO: R057

COUNCIL DATE: April 1, 2019

REGULAR COUNCIL

TO: **Mayor & Council** DATE: **March 12, 2019**

FROM: **General Manager, Parks, Recreation & Culture** FILE: **0512-02**
General Manager, Planning & Development
General Manager, Engineering

SUBJECT: **BC Energy Step Code: Building Bylaw Amendment Regulatory Updates**

RECOMMENDATION

The Parks, Recreation & Culture Department, the Engineering Department and the Planning & Development Department recommend that Council:

1. Receive this report for information;
2. Approve amendments to *Surrey Building Bylaw, 2012, No. 17850*, as generally described in this report and detailed in Appendix "I;"
3. Approve a mid-construction airtightness testing requirement for new Part 9 buildings as generally described in this report;
4. Authorize the City Clerk to bring forward the necessary bylaw for the required readings.

INTENT

The purpose of this report is to obtain Council approval to amend *Surrey Building Bylaw, 2012, No. 17850* to incorporate regulations in support of the City's previously adopted BC Energy Step Code approach (Corporate Report R179; 2018), to obtain Council approval to implement a mid-construction airtightness test requirement for Part 9 buildings, and to provide Council an update on City implementation of Step Code and capacity building activities being provided to local industry. The Building Bylaw amendments are required to ensure Surrey's building regulations are in line with BC Energy Step Code, the Province's performance-based energy code for buildings.

BACKGROUND

The BC Energy Step Code

The BC Energy Step Code (“Step Code”) is an energy code for buildings that was collaboratively developed by the Province, local governments, the building and development sectors (and the trades and professions that support them), utilities, and other stakeholders, through a two-year consultation process led by the Building and Safety Standard Branch of the Ministry of Municipal Affairs and Housing. Step Code involves a set of incremental levels (“Steps”) that are performance-based, envelope-focused, and explicit about airtightness, and reach “net-zero energy” levels of performance at the highest Steps. Although currently optional for municipalities to adopt, the Province has signalled its intention to mandate increased performance requirements across the Province in 2022 and 2027, on the way to requiring the highest Steps in 2032 (Figure 1). Corporate Report, No.R179; 2018, “BC Energy Step Code – Proposed Approach for City of Surrey” provides a more comprehensive overview of the Step Code (attached as Appendix “II”)

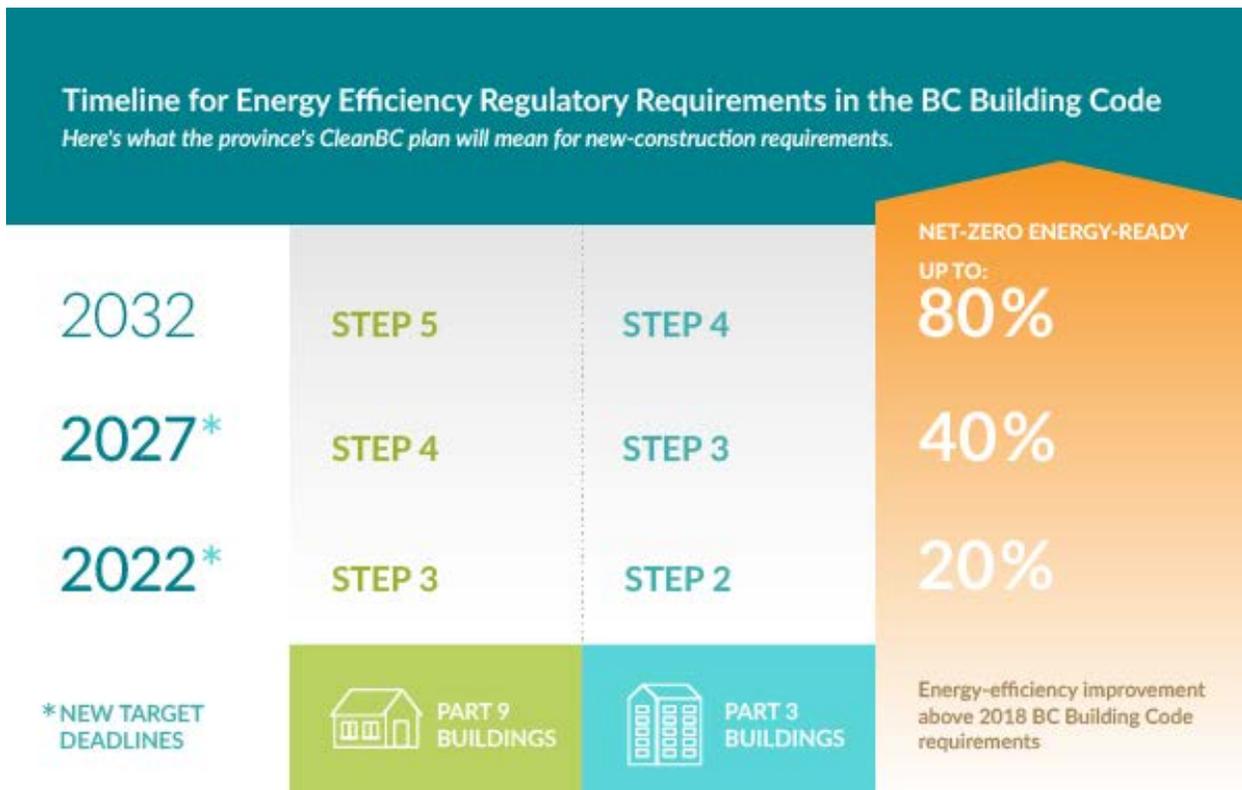


Figure 1 Overview of increases in BC Energy Step Code requirements included in *CleanBC* (December 2018).

Surrey’s BC Energy Step Code Approach

The City adopted the Step Code in July 2018 after consultation with local industry (developers, builders, architects, and related consultants) and related stakeholders, including the Greater Vancouver Home Builders’ Association, Urban Development Institute – Pacific Region, FortisBC, BC Hydro, Surrey City Development Corporation, Surrey Board of Trade, BC Housing, and the City’s Development Advisory Committee. A detailed overview of the consultation process and findings was included in the Appendix “II” of Corporate Report, No.R179; 2018 (report attached as Appendix “II”).

The City’s current and potential future Step Code requirements are summarized in Table 1. Future Step Code requirements will be proposed only after a review of the City and industry’s experience with the City’s current requirements.

Table 1 Current and Potential Future City of Surrey BC Energy Step Code Requirements

Building Type	Building permit application filed on or after		Estimated timetable for future adoption	
	April 1, 2019	January 1, 2021	2023/24	2025/26
Buildings subject to Part 9 of the Building Code All eligible buildings required to have a home energy label				
Single- and two-family dwellings	Step 1	Step 3	Step 4	Step 5
Row housing and other multifamily buildings	Step 1	Step 3	Step 4	Step 5
Buildings subject to Part 3 of the Building Code All eligible buildings required to participate in building energy benchmarking				
Residential buildings >6 storeys or non-combustible construction	Step 3 OR Step 2 for buildings complying with the Low-Carbon Energy System Pathway		Step 4 OR Step 3 for buildings complying with the Low-Carbon Energy System Pathway	
Residential buildings ≤6 storeys and combustible construction			OR Step 2 for buildings connected to Surrey City Energy	
Commercial office and mercantile	Step 2		Step 3	

Note: Table 1 is revised from the original table summarized in Corporate Report No.R179; 2018 due to BC Energy Step Code performance adjustments for small residential buildings.

The adopted approach was guided by five objectives:

1. Provide a clear timeline of upcoming changes;
2. Promote alignment with neighbouring jurisdictions;
3. Leverage existing training and support resources;
4. Implement an efficient compliance process; and
5. Ensure greenhouse gas reductions are being achieved.

These objectives continue to guide staff in the development and application of administrative requirements to ensure the efficient implementation of Step Code in Surrey.

Preparing the City for Step Code Implementation

City staff have been planning and preparing for Step Code implementation and enforcement since July 2018. This process has been driven by a core Step Code Implementation Team, including representatives from:

- Planning and Development: the Building Division, Community Planning, Area Planning & Development – North, and Area Planning & Development – South;
- Engineering: Utilities; and
- Parks, Recreation & Culture: the Sustainability Office.

Through this process, those involved considered administrative requirements and staff roles, responsibilities and service provision, as well as the Information Technology and other systems that support these, from development inquiry through to building occupancy and beyond. Where valuable, staff consulted internally with Legal Services, and externally with the BC Building and Safety Standards Branch (“BSSB”), the BC Utilities Commission (“BCUC”), and other Metro Vancouver municipalities. External consultations were facilitated, in part, through the City’s Climate and Energy Manager being one of two Union of BC Municipalities representatives on the Province’s Energy Step Code Council, as well as the Chair of the Large Local Government Step Code Peer Network.

The Implementation Team considered amendments to all formal documents listed in Recommendation 3 of Corporate Report No.R179; 2018 that may be necessary or useful for the City’s initial April 1, 2019 enforcement date. Staff determined that only Building Bylaw amendments are required at this time. Within these proposed amendments, the only refinement to the City’s approach as outlined in Corporate Report No.R179; 2018 is to the requirements originally proposed for the City’s Low-Carbon Energy System (“LCES”) Pathway, which is the City’s optional path for Part 3 residential buildings seeking to comply with Step 2 rather than Step 3. Industry stakeholders strongly requested this Pathway if the City set Step 3 requirements and urged staff to ensure consistency with other local governments and conduct consultation with energy system providers. The revisions to the original draft approach are based on consultation with the BCUC, neighbouring municipalities with LCES Pathways, utilities and other energy system providers, and energy system designers and engineers. The revisions were made to improve inter-jurisdictional consistency for industry, ensure the Pathway offers the intended design and engineering flexibility, reduce administrative effort required by City staff, and align the Pathway with potential Provincial Step Code requirements in the future.

Impacted Divisions have already begun making administrative and organizational changes to prepare for Step Code enforcement beginning April 1, 2019 and the Implementation Team are developing training and support materials for affected staff and the City’s Advisory Design Panel, with training and education sessions planned throughout March and April 2019. These sessions will be delivered both by City staff and external experts, including alongside other Building Officials across Metro Vancouver. Note that although Step Code is in force on April 1, 2019, the Building Bylaw amendments proposed below include Transitional Provisions for rezoning, development, and building permits that are applied for before April 1 (as previously outlined in Corporate Report No.R179; 2018), which will delay inspections and related enforcement actions by staff for several months.

Supporting Industry in Transitioning to Step Code

Staff outlined plans for local industry communication and education in Corporate Report No.R179; 2018 and have since implemented the following:

- Building Division Bulletins released for all covered buildings;
- Step Code page on the City's website, with links to key resources (surrey.ca/stepcode);
- Surrey Step Code email alerts available for as-needed communications (e.g. bulletin updates, training and education opportunities, consultation on future changes);
- Rebate of up to \$400 for mid-construction airtightness tests (half-funded by BC Hydro);
- Processes to alert applicants building to Step 1 if their energy model uses an overly optimistic airtightness assumption; and
- Presence at local building and construction industry sessions and conferences.

Furthermore, staff are actively planning or have arranged the following for March and April 2019:

- Builder Breakfasts with presentations from local experts speaking about building Step 1 homes, working with energy advisors, and succeeding with airtightness requirements;
- Local energy advisor tradeshow and demonstration of airtightness practices; and
- City staff-coordinated hands-on airtightness course locally and/or at the BC Institute of Technology.

Supporting Industry in Transitioning to Airtight Buildings

Airtightness is an important subject for industry capacity building, particularly for single-family homes and row housing. A building's airtightness performance indicates how well it holds in—or loses—heat and is most often associated with an occupant's feelings of a home being draughty or cold. Poor airtightness occurs when a building envelope is not properly sealed, leaving holes or gaps that allow heat loss (e.g. where outlets are installed, at edges and corners). Airtightness is the least expensive way to improve energy performance; it mostly just requires care and attention-to-detail when applying air barriers and sealing tape before drywall is installed.

Although the BC Building Code incorporates airtightness requirements, the Province only began requiring testing as part of Step Code. When considering our region's relatively mild climate, it is perhaps no surprise that buildings in the Lower Mainland have the poorest airtightness performance in British Columbia and Canada, where colder winters make such poor airtightness performance untenable. These factors mean airtightness poses the greatest challenge to improving Part 9 buildings for Step Code implementation. As such, staff are requesting Council's endorsement of a mid-construction airtightness test requirement, as described below.

DISCUSSION

Mid-Construction Airtightness Test Requirement for Part 9 Buildings

Staff are seeking Council's endorsement of a mid-construction airtightness testing requirement for Part 9 buildings. A mid-construction airtightness test takes place before drywall has been installed, when a construction team still can identify and inexpensively seal any holes or gaps in the building envelope. It provides the builder with an airtightness value that they can take action to improve, with support from their energy advisor, before proceeding with insulation and finishing, after which airtightness repairs would be more difficult and costlier.

As mentioned above, the City is already providing a financial incentive for builders to conduct mid-construction airtightness tests, an approach supported by the Greater Vancouver Home Builders Association because it allows building professionals to learn on their own buildings. Furthermore, the Building Division plans to apply a capacity building-focused lens to airtightness final inspection. Specifically, at final inspection, after an applicant has conducted two unsuccessful airtightness tests, the Building Official may allow the applicant to pass final inspection by sending at least two staff and/or tradespeople to an airtightness training course hosted by the BC Institute of Technology (“BCIT”). The Building Official would only allow this if there is evidence that the applicant made all reasonable efforts to improve performance before the second test. This approach was one component of a successful effort to improve airtightness performance in new homes in the City of Vancouver.

Staff consulted with industry stakeholders about this potential requirement during engagement about the City’s Step Code approach between January 2018 and July 2018, as noted in Appendix “II” of Corporate Report No.R179; 2018. Stakeholders made two requests: (1) apply the requirement to only a sampling of townhouses in large developments based on BC Housing’s testing approach and (2) provide builders a process to apply to be exempted from the requirement where previous performance success can be demonstrated. City staff are seeking reasonable processes that are consistent with other municipalities and oriented towards capacity building, and therefore support both requests.

Adopting a mid-construction airtightness testing requirement for Part 9 buildings would help ensure local builders learn airtightness techniques prior to stricter Step 3 requirements coming into force. The requirement would also continue to align the City with other local governments in the region and best serve to avoid delays and grievances at final inspection during early implementation. Staff’s specific request is as follows:

- Step 1, starting April 1, 2019: Require a mid-construction airtightness test after the frames inspection and before the applicant can schedule an insulation inspection. No performance requirement, but applicant expected to take steps to improve performance as necessary before installing drywall.
- Step 3, starting January 1, 2021: Require builders to achieve a mid-construction airtightness performance no more than 1.5 air changes per hour (“ACH”) above the final requirement of 2.5ACH before the applicant can schedule an insulation inspection.

Building Bylaw Amendments

The following section outlines the proposed amendments to the Building Bylaw (further detailed in Appendix “I”) intended to support the City’s previously adopted Step Code approach.

1. Add new definitions relevant to the BC Energy Step Code:
New definitions include Energy Step Code, energy advisor, specific building types found in the City’s Zoning Bylaw, specific occupancy types found in the BC Building Code, a term adapted from the Step Code’s energy modelling guidelines, and LCES Pathway and related terms.

2. Incorporate energy performance into tests considered by Building Officials:
Account for airtightness testing requirements by adding “energy performance” to the list of items for which a “Building Official may withhold, or refuse to issue a permit where the results of tests” do not demonstrate substantial compliance.
3. Add a new “Energy Step Code” section:
This new section is proposed to put into regulation: the City’s previously adopted Step Code requirements; the updated requirements for the optional LCES Pathway; the competency, license, and insurance requirements for energy advisors; language required to support Building Officials enforce Step Code; language to formally align the LCES Pathway with related processes applied by the BC Utilities Commission; and, a transitional provision for initial implementation of Step Code.
4. Add Schedule “B” to specify Step Code requirements:
This schedule is included to specify the City’s specific Step Code and LCES Pathway requirements beginning April 1, 2019 and January 1, 2021, as well as the eligible LCES Types.
5. Housekeeping:
This is limited to a few font and formatting changes and clarification of one term across Parts 12, 16, and 18A to correct inconsistencies with rest of Bylaw.

LEGAL SERVICES

Legal Services has reviewed the proposed amendments to the Building Bylaw and have no concerns.

SUSTAINABILITY CONSIDERATIONS

The proposed approach to implementing the BC Energy Step Code supports the objectives of in the City’s Sustainability Charter 2.0. In particular, this work relates to the Sustainability Chart 2.0 themes of Built Environments & Neighborhoods and Economic Prosperity & Livelihoods. Specifically, this project supports the following Desired Outcomes (“DO”) and Strategic Directions (“SD”):

- Neighbourhoods and Urban Design: DO9 - All aspects of planning, design and construction include climate change impacts, greenhouse gas (GHG) mitigation, adaptation, and resiliency strategies.
- Neighbourhoods and Urban Design: DO11 - Surrey is at the forefront of sustainable and restorative building design and technology.
- Neighbourhoods and Urban Design: DO13 - Buildings are healthy and energy and resource efficient.
- Neighbourhoods and Urban Design: SD13 - Continue to support low-carbon district energy networks.
- Neighbourhoods and Urban Design: SD14 - Promote and strengthen high quality design and healthier, more energy efficient buildings in public and private development.
- Innovation: DO13 - Surrey businesses demonstrate environmental stewardship in their products, services and practices.

- All Infrastructure: DO3 - Infrastructure systems are designed to protect human health, preserve environmental integrity, and be adaptable to climate change impacts.
- Energy and Climate: DO7 - Per capita emissions are low, and align with global, national and provincial GHG reduction targets.
- Transportation: DO10 - Buildings in the community are energy-efficient and offset energy use with onsite energy generation.
- Energy & Climate: SD8 - Identify areas (residential, commercial and industrial) where low-carbon district energy is viable and support development of new systems.

CONCLUSION

With enactment of the BC Energy Step Code, the City is working to raise the standard of the buildings in our community and helping ensure local builders develop the skills and knowledge required to succeed under the Province's new performance-based energy code for buildings. The regulatory updates and airtightness education approach proposed herein were developed in consultation with key industry stakeholders, other governments, and City staff, and serves to implement Step Code in a reasonable and timely way with a focus on cost-effective energy performance and education-focused enforcement.

Based on the above discussion, the Parks, Recreation & Culture Department, the Engineering Department and the Planning & Development Department recommend that Council approve amendments to *Surrey Building Bylaw, 2012, No. 17850*, as generally described in this report and authorize the City Clerk to bring forward the necessary bylaw for the required readings.

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Appendix "I" - Proposed Amendments to Surrey Building Bylaw, 2012, No. 17850
Appendix "II" - Corporate Report, No. R179; 2018

APPENDIX "I"

CITY OF SURREY
BYLAW NO. 19796

A bylaw to amend the provisions of "Surrey Building Bylaw, 2012, No. 17850," as amended.

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The Council of the City of Surrey ENACTS AS FOLLOWS:

1. "Surrey Building Bylaw, 2012, No. 17850", as amended is hereby further amended as follows:
 - a. In the Table of Contents, after the words "Part 16 – Occupancy Permits" insert a new row with the words "Part 16A – Energy Step Code".
 - b. Part 1 – Introductory Provisions, Section 2. Definitions, is amended, as follows:
 - i. Insert new definitions of "duplex", "dwelling unit", "energy advisor" and "Energy Step Code" after the definition of "development" as follows:

"duplex"

has the same meaning as the term "Dwelling – Duplex" in the Zoning Bylaw.

"dwelling unit"

has the same meaning as the term "Dwelling Unit" in the Zoning Bylaw.

"energy advisor"

means a registered energy advisor in good standing with Natural Resources Canada, who conducts EnerGuide home evaluations on behalf of service organizations licensed by Natural Resources Canada.

"Energy Step Code"

means the Province of British Columbia's performance-based standard for energy efficiency in new construction requiring energy modelling and on-site testing to demonstrate minimum performance against metrics for building envelope, equipment and systems, and airtightness requirements, and including Step 1, Step 2, Step 3, Step 4, and Step 5, as

defined in Sections 9.36.6 and 10.2.3 of the Building Code, all as amended or re-enacted from time to time."

- ii. Insert new definitions of "greenhouse gas intensity (GHGI)", "Group C Residential occupancy", "Group D Business and personal services occupancy" and "Group E mercantile occupancy" after the definition of "General Manager, Planning and Development" as follows:

"greenhouse gas intensity (GHGI)"

means a measure of a building's 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 ($\text{kgCO}_2\text{e}/\text{m}^2\text{a}$).

"Group C Residential occupancy"

means a residential occupancy as defined in the Building Code.

"Group D Business and personal services occupancy"

means a business and personal services occupancy as defined in the Building Code.

"Group E mercantile occupancy"

means a mercantile occupancy as defined in the Building Code."

- iii. Insert new definitions of "low-carbon energy", "low-carbon energy system (LCES)" and "Low-Carbon Energy System (LCES) Pathway" after the definition of "lot" as follows:

"low-carbon energy"

means heat energy with a carbon dioxide-equivalent intensity ($\text{kgCO}_2\text{e}/\text{kWh}$), calculated using the energy modelling guidelines referenced by the Energy Step Code, that is much less than that of fossil fuels, and low enough so that when applied to a building's modelled energy use allows the building to meet building GHGI limits under the City's Low-Carbon Energy System Pathway.

"low-carbon energy system (LCES)"

means a utility-owned on-site, utility-owned district, or user-owned on-site energy system, as defined in Schedule "B", that supplies heat energy primarily derived from highly efficient and renewable sources in order to provide space heating and conditioned ventilation air, and possibly domestic hot water and space cooling, for buildings seeking to comply

with the City's Low-Carbon Energy System Pathway requirements in Schedule "B" and elsewhere in this Bylaw.

"Low-Carbon Energy System (LCES) Pathway"

means an Energy Step Code compliance pathway whereby an applicant can apply to have an eligible building comply with a lower step if it is supplied energy through either:

- (a) a connection to a City-owned district energy utility system, or
- (b) a low-carbon energy system that enables a building to meet the building GHGI limits in Schedule "B",

and meets all other requirements in this Bylaw."

- iv. Insert new definitions of "modelled floor area" and "multiple-unit residential building" after the definition of "major occupancy" as follows:

""modelled floor area"

means the total enclosed floor area of the building, as reported by energy simulation software, excluding exterior areas and indoor (including underground) parking areas, and including all other spaces, including partially-conditioned and unconditioned spaces, as defined in the energy modelling guidelines referenced by the Energy Step Code.

"multiple-unit residential building"

has the same meaning as the term "Multiple Unit Residential Building" in the Zoning Bylaw."

- v. Insert new definitions of "row housing building" and "semi-detached residential building" after the definition of "registered professional" as follows:

""row housing building"

has the same meaning as the term "Row Housing Building" in the Zoning Bylaw.

"semi-detached residential building"

has the same meaning as the term "Semi-Detached Residential Building" in the Zoning Bylaw."

- vi. Insert a new definition of "single family dwelling" after the definition of "simple building" as follows:

""single family dwelling"

has the same meaning as the term "Dwelling – Single Family" in the Zoning Bylaw."

- vii. In the definition of "Zoning Bylaw" delete the words "Surrey Zoning Bylaw, 1993, No. 12000" and replace them with the words "Surrey Zoning By-law, 1993, No. 12000".
- c. Part 5 – The Building Official, Section 17, is amended by deleting the words "or foundation conditions" and replacing them with the words ", foundation conditions or energy performance".
- d. Part 12 – Issuance of Permits, Section 50.(b), is amended by inserting the words "of British Columbia". after the word "Province".
- e. Insert a new Part 16A – Energy Step Code after Part 16 – Occupancy Permits as follows:

"Part 16A - Energy Step Code

- 75.1 Buildings and structures must be designed and constructed in compliance with the applicable step of the Energy Step Code and, if applied for, the requirements associated with the City's Low-Carbon Energy System (LCES) Pathway as set out in Schedule "B".
- 75.2 For a Part 9 building or structure that is designed in compliance with the applicable step of the Energy Step Code but where the constructed building or structure does not meet the performance requirements of the step, after all reasonable mitigation measures are implemented to the satisfaction of the Building Official, the Building Official may issue an occupancy permit if the building or structure is constructed in compliance with alternative energy efficiency performance or prescriptive requirements set out in the Building Code for Part 9 construction.
- 75.3 For single family dwelling, duplex, or semi-detached residential building permits, the owner must, to the satisfaction of the Building Official, provide all documentation required by the City's Energy Step Code administrative requirements or as required by the Building Official, prepared by an energy advisor or a registered professional.
- 75.4 Building permits for buildings other than a single family dwelling, duplex, or semi-detached residential building, require the owner, to the satisfaction of the Building Official, to provide all documentation required by the City's Energy Step Code administrative requirements or as required by the Building Official, prepared by a registered professional.
- 75.5 Any energy advisor providing the required documentation set out in the Energy Step Code must provide evidence to the Building Official that they are an energy advisor registered and in good standing with Natural Resources Canada.

- 75.6 Where an energy advisor provides the required documentation set out in the Energy Step Code, the owner must provide proof of insurance coverage in an amount and form satisfactory to the Building Official prior to issuance of a building permit.
- 75.7 In addition to the specific requirements of the Low-Carbon Energy System (LCES) Pathway in Schedule "B", an applicant must also demonstrate to the satisfaction of the Building Official that the LCES type meets the following:
- (a) each LCES type must comply with all applicable requirements of the *Utilities Commission Act*, as amended or re-enacted from time to time;
 - (b) whenever the requirements of an LCES type involve a utility, such utility must be authorized to operate in British Columbia, and to engage in the required activity, in accordance with the *Utilities Commission Act*, as amended or re-enacted from time to time;
 - (c) whenever the requirements of a LCES type include certain contracts relating to the LCES or the supply of energy service, such contracts, if applicable, must comply with the *Utilities Commission Act*, as amended or re-enacted from time to time, and have been approved by the British Columbia Utilities Commission (BCUC);
 - (d) prior to development permit approval, the applicant must attest that the LCES has been registered or will be registered as a Stream A Thermal Energy System with the BCUC in accordance with the BCUC Thermal Energy Systems Regulatory Framework Guidelines, as amended or replaced from time to time, or attest that the LCES is exempted from active regulation by BCUC;
 - (e) prior to development permit approval, the applicant must submit a plain-language explanation of the LCES that includes the minimum provisions included in section 2.3.2 of the BCUC Thermal Energy Systems Regulatory Framework Guidelines, as amended or replaced from time to time, and must attest that the contents of this plain-language explanation will be included in any subsequent property disclosure statement or similar disclosure document provided to a purchaser or potential purchaser of the lot; and
 - (f) as part of the building permit application, each LCES type must be accompanied by a signed and sealed LCES design report and associated drawings from an engineer, confirming it achieves the requirements in Schedule "B".
- 75.8 Buildings constructed after April 1, 2019 may be eligible to be subject to the energy requirements in the Building Code in force immediately before April 1, 2019 if applicants meet the transitional provision requirements set out in Schedule "B".
- f. Part 18A Hazardous Lands is amended by inserting a hyphen in the heading between the words Part 18A and Hazardous Lands.

- g. Insert a new Schedule "B" attached to this bylaw.
- h. The Table of Contents is amended to reflect the amendments set out in this Bylaw.
- 2. This Bylaw shall be cited for all purposes as "Surrey Building Bylaw, 2012, No. 17850, Amendment Bylaw, 2019, No. 19796".

PASSED FIRST READING on the th day of , 2019.

PASSED SECOND READING on the th day of , 2019.

PASSED THIRD READING on the th day of , 2019.

RECONSIDERED AND FINALLY ADOPTED, signed by the Mayor and Clerk, and sealed with the Corporate Seal on the day of , 2019.

_____MAYOR

_____CLERK

"Schedule "B"
"Surrey Building Bylaw, 2012, No. 17850"

A. Energy Step Code Step requirements

Building Type	Building permit application received on or after	
	April 1, 2019 up to and including December 31, 2020	January 1, 2021
Buildings subject to Part 9 of the Building Code		
single family dwelling, duplex, semi-detached residential building, and dwelling units	Step 1	Step 3
row housing building and multiple-unit residential buildings	Step 1	Step 3
Buildings subject to Part 3 of the Building Code		
Group C Residential occupancy	Step 3 OR Step 2 for buildings complying with the Low-Carbon Energy System Pathway	
Group D Business and personal services occupancy	Step 2	
Group E mercantile occupancy	Step 2	

B. LCES Pathway GHGI requirements

Building Type	Building permit application received on or after	
	April 1, 2019 up to and including December 31, 2020	January 1, 2021
Buildings subject to Part 3 of the Building Code		
Group C Residential occupancy	6kgCO ₂ e/m ² a	

C. LCES Pathway eligible low-carbon energy system types

LCES Type 1: Utility-Owned On-Site LCES

This type refers to a new utility-owned LCES located on-site within a development.

LCES Type 2: Utility-Owned District LCES

This type refers to a utility-owned district-scale LCES.

LCES Type 3: User-Owned On-Site LCES

This type refers to an on-site system that supplies low-carbon energy and meets the following requirements:

- (a) the system seasonal average co-efficient of performance > 2;
- (b) the modelled GHGI < (GHGI limit - 33%); and
- (c) any natural gas fired peak demand heating equipment is sized appropriately and is to augment the primary low-carbon system under peak demand conditions.

D. LCES Pathway administration requirements

The General Manager, Planning and Development may from time to time establish forms, processes and similar administrative requirements in relation to an LCES Pathway:

- (a) evidence that a utility will purchase a LCES;
- (b) evidence that the ownership of the LCES has transferred to a utility;
- (c) evidence of long-term energy service;
- (d) evidence that the applicant has experience with other similar successful energy systems;
- (e) evidence of long-term supply of low-carbon energy;
- (f) annual reporting;
- (g) maintenance, warranty, and optimization contract(s);
- (h) long-term, owner-funded maintenance contract(s); and
- (i) funding structure for long-term maintenance of strata-owned energy systems.

E. Energy Step Code transitional provisions

1. The Energy Step Code requirements in this Schedule "B" shall not apply to building permits that are:
 - (a) in-stream on the effective date
 - (b) on lands, other than those zoned single family (or single family with suite) or proposed to be zoned single family (or single family with suite), with a precursor application that was in-stream on the effective date and for which a complete application for a related building permit is submitted, to the satisfaction of the Building Official, within one year of the effective date,in which case the building will be subject to the energy requirements in the Building Code in force immediately before April 1, 2019.
2. For the purposes of this Schedule "B" the following definitions shall apply:

"complete application" means, in the case of a building permit, an application which meets the requirements of an in-stream application and for which:

 - (a) Council has approved any applicable rezoning and/or development permit and/or development variance permit;
 - (b) all required off-site legal encumbrances relating to engineering services have been registered at the Land Title Office on title to the subject property;

- (c) any plan, including a plan of subdivision, consolidation, or road dedication, that would affect the legal description of the subject property has been registered at the Land Title Office on title to the subject property; and
- (d) all applicable fees and levies have been paid.

"effective date" means the date on which this Schedule "B" comes into force, which is April 1, 2019.

"in-stream" means, in reference to an application, not determined, rejected or withdrawn and:

- (a) in the case of an application for building permit, one for which the application form has been completed, the application fee has been paid, and all required supporting documentation including all applicable architectural, structural, plumbing, electrical, mechanical and site drainage drawings necessary to make the application complete has been submitted and accepted by the City as a legitimate application;
- (b) in the case of a rezoning application, one for which the application form has been completed, the application fees have been paid and all required supporting documentation necessary to make the application complete has been submitted and accepted by the City as a legitimate application; and
- (c) in the case of an application for development permit, one for which the application form has been completed, the application fees have been paid and all required supporting documentation necessary to make the application complete has been submitted and accepted by the City as a legitimate application.

"issuable" means, in the case of a building permit, an application which meets the requirements of an in-stream application and for which:

- (a) Council has approved any applicable rezoning and/or development permit and/or development variance permit;
- (b) all required off-site legal encumbrances relating to engineering services have been registered at the Land Title Office on title to the subject property;
- (c) any plan, including a plan of subdivision, consolidation, or road dedication, that would affect the legal description of the subject property has been registered at the Land Title Office on title to the subject property;
- (d) all review comments arising from the building permit application review process have been addressed to the satisfaction of the City; and
- (e) all applicable fees and levies have been paid.

- "precursor application" means, in relation to a building permit, that there is an:
- (a) in-stream development permit application and that the development authorized by the building permit is entirely within the area of land that is subject to the development permit application; or
 - (b) in-stream rezoning application and that the development authorized by the building permit is entirely within the area of land that is subject to the rezoning application."



CORPORATE REPORT

NO: R179

COUNCIL DATE: July 23, 2018

REGULAR COUNCIL

TO: Mayor & Council DATE: July 19, 2018

FROM: General Manager, Parks, Recreation & Culture FILE: 0512-01
General Manager, Planning & Development
General Manager, Engineering

SUBJECT: BC Energy Step Code – Proposed Approach for City of Surrey

RECOMMENDATION

The Parks, Recreation & Culture Department, the Engineering Department and the Planning & Development Department recommend that Council:

1. Receive this report for information;
2. Endorse the proposed approach set out in this report for adopting the BC Energy Step Code, effective April 1, 2019;
3. Authorize staff to implement the BC Energy Step Code through bringing future reports to Council regarding appropriate amendments to Surrey's Building Bylaw, Official Community Plan, Development Permit Procedures and Delegation Bylaw, Development Permit Area Guidelines for Form & Character, Development Application Fees Bylaw, Minimum Land Development Application Submission Requirements, and the Sustainable Development Checklist;
4. Approve a requirement for new eligible buildings to participate in building energy benchmarking or home energy labelling as generally described in this report; and
5. Endorse an allocation from the City of Surrey's carbon tax (CARIP) rebate of \$20,000 towards a capacity building incentive to support mid-construction airtightness testing for Part 9 buildings.

INTENT

The purpose of this report is to seek Council approval of the proposed approach to adopt and implement the BC Energy Step Code in Surrey. The approach has been iteratively developed in consultation with industry stakeholders and City staff. It addresses performance requirements, City staff and processes, industry education and capacity building, ongoing monitoring and adaptation, and tools to support data-driven decision making. This proposal is the first formal step in a long-term transition to zero-emission new construction in Surrey.