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October 2, 2020
BUILDING DIVISION

BC Energy Step Code Requirements: Part 3 Buildings

DISCLAIMER: The information presented below is subject to addition and revision in future versions of this Building Division Bulletin. Notes below indicate some, but not all, items that may be revised. To be notified whenever this Bulletin is updated, sign up for email alerts at www.surrey.ca/stepcode.

Purpose and Background:

On July 23, 2018, Surrey City Council approved Corporate Report R179[1] that requires new buildings to be constructed to the energy efficiency requirements set under the BC Energy Step Code, as of April 1, 2019. This bulletin is provided to inform applicants and designers of new Part 3 buildings about the City of Surrey's BC Energy Step Code requirements.

- Refer to the **Additional Information** section at the bottom of this bulletin for additional Step Code information and resources.
- BC Energy Step Code and associated requirements for other building types can be found in similar City bulletins for **Part 9 Single- and Two-Family Dwellings** and **Part 9 Multi-Family Residential Buildings**.

Implementation:

Effective April 1, 2019, any eligible Part 3 building permit application for new construction submitted must demonstrate compliance and be constructed to meet the steps in the table below. To comply with the BC Energy Step Code, builders must work with a Registered Professional to ensure building designs meet all applicable energy performance and administrative requirements. All Registered Professionals are expected to follow the Joint Architectural Institute of BC and Engineers and Geoscientists BC *Professional Practice Guidelines – Whole Building Energy Modelling Services*.[2]

Building Permit application submitted on or after April 1, 2019		
Part 3 Buildings	Residential Buildings (Group C) (Including hotel and motel occupancy)	Step 3 *OR* Step 2 for buildings complying with the Low-Carbon Energy System Pathway
	Commercial Office and Mercantile Buildings (Group D, E)	Step 2

[1] Any information in the Council Report that is inconsistent with City bylaws or bulletins should be considered out-of-date
[2] Download AIBC and EGBC's *Joint Professional Practice Guidelines for Whole Building Energy Modelling Services* here: https://www.egbc.ca/Practice-Resources/Professional-Practice-Guidelines

Low-Carbon Energy System (LCES) Pathway:

As noted in the table above, Part 3 buildings with Group C residential occupancies may be constructed to Step 2 if they meet requirements under the LCES Pathway. A low carbon energy system means a highly efficient, professionally operated and maintained mechanical system that supplies a building's space, heating, cooling and domestic hot water heating demand primarily from renewable energy sources, at a carbon intensity that is low enough so that when applied to modelled building energy use, the development satisfies the City's defined GHG limits. If a building is connected with the City's District Energy System it qualifies for the LCES pathway. An LCES may consist of a City-owned system (Surrey City Energy), a utility-owned district LCES, a utility-owned on-site LCES, or a user-owned on-site LCES. An LCES must meet specific criteria for efficiency and operations and maintenance. For more details, refer to the *LCES Policy Bulletin*[3].

Rezoning and Development Permit Applications and Approvals:

As part of rezoning and development permit applications, applicants are expected to assure the City that their proposed design will meet the City's Energy Step Code and (if applicable) LCES requirements in place at the time of the associated building permit application. It is incumbent on applicants to ensure their proposed building design will meet the City's Energy Step Code requirements. Any revisions to building design may require applicants to reapply for updated rezoning and/or development permit approvals. The following must be provided prior to issuance of a Development Approval, or 3rd Reading of a Rezoning:

1. All projects must provide an **attestation letter**, prepared by a registered professional and signed by the owner, committing to achieving the required Step of Energy Step Code and (if applicable) implementing a low-carbon energy system that meets the City's LCES policy and GHG limits, implementing **energy benchmarking** (see descriptions below) and any other energy and emissions-related commitments made as a condition of development approval.
2. If the development has opted for the **LCES pathway**, additional documentation is required, as outlined in the LCES Policy Bulletin[3].

Building Permit Submission Requirements:

The following documents must be completed and submitted with the Building Permit application package:

1. The *Energy Design Report for the BC Energy Step Code for Part 3 Buildings*[4] must be completed by a Registered Professional who is either a Qualified Modeller (QM) or overseeing a QM in the role of Energy Modelling Supervisor (EMS), as per the *Joint Professional Practice Guidelines for Whole Building Energy Modelling Services*[5]. The Registered Professional must include their Registration/License number after their name.
2. Printed copy of energy model report for each building, sealed by the Registered Professional acting as the QM or EMS on the project.
3. Plan drawings clearly showing all energy efficiency upgrades beyond minimum energy code requirements, LCES system components (if applicable), as well as the type of air barrier.

Final Building Inspection Requirements for Occupancy:

All Part 3 buildings must demonstrate compliance with the 10.2.3 pathway under the BC Building Code, including a post-construction airtightness test. Applicants must notify the City's Building Inspections Section at least 48 hours before a scheduled airtightness test so that a Building Official may, at the discretion of the Building Official, attend the testing.

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[3] See this page, under "Key Resources > Bulletins > Low Carbon Energy Systems for Part 3 Buildings."
https://www.surrey.ca/renovating-building-development/green-buildings/bc-energy-step-code-for-new-buildings

[4] Available at: https://energystepcode.ca/compliance-tools-part3/

[5] https://www.egbc.ca/News/Articles/Practice-Guidelines-on-Whole-Building-Energy-Model

Final Building Inspection Documents:

1. The *Energy Design Report for the BC Energy Step Code for Part 3 Building* must be completed by the Registered Professional acting as the QM or EMS. The form shall include post-construction airtightness test results and verification of all building energy efficiency upgrades. The Registered Professional must include their Registration/License number after their name on both tabs.
2. Digital copy of energy model (for filing purposes) and printed copy of energy model report for each building as constructed, sealed by the Registered Professional acting as the QM or EMS, as per the *Professional Practice Guidelines* noted above.
3. Final airtightness test report, with results incorporated in final energy model.
4. Confirmation of set-up of Portfolio Manager account for energy benchmarking, as described below.

For assurance purposes, the City will rely on Schedules C-A (Assurance of Coordination of Professional Field Review) and C-B (Assurance of Professional Field Review and Compliance). Where there is a discrepancy between the *As-Built Compliance Report* and designs submitted with the application, the City will refer the issue to the involved Registered Professionals for resolution.

Building Energy and Greenhouse Gas Emissions Benchmarking Requirement[6]:

Energy benchmarking refers to tracking and reporting energy use of the occupied building over time. The purpose of this program is for the City to inform policy and to understand the modelled versus actual energy performance of Step Code buildings, but will not be used for Step Code compliance, nor will it be publicly disclosed. Prior to final building inspection, the applicant must set up an ENERGY STAR Portfolio Manager account,[7] create a property for each building and populate it with the basic property data, provide the City with "Read Only" permission for each property, and, where applicable, provide the necessary account information and City- and/or utility-provided resources to the strata and/or building manager responsible for the building.

Additional Information:

BC Energy Step Code:

- Receive up-to-date information by signing up for the Province's BC Energy Step Code Stakeholder Update newsletter: bit.ly/StepCodeStakeholderNewsletter.
- To learn more about the BC Energy Step Code, including performance requirements, resources for industry, and upcoming events, visit energystepcode.ca.

City of Surrey's Implementation of the BC Energy Step Code:

- For more information and to subscribe to email notifications whenever new information is available, including bulletin updates, education and engagement opportunities, and incentives and capacity building opportunities: www.surrey.ca/stepcode
- For information about the City of Surrey's implementation of the BC Energy Step Code, visit www.surrey.ca/stepcode.
- If you have additional questions regarding the City's Implementation of the BC Energy Step Code, please email stepcode@surrey.ca.

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[6] *The City is currently in the process of developing more guidance for meeting energy benchmarking requirements; this section will be updated in future.*

[7] Get started with Portfolio Manager http://www.bchydro.com/powersmart/business/resources/energy-efficiency-benchmarking.html