

Mar 29, 2021
BUILDING DIVISION

BC Energy Step Code Requirements: Part 9 Multi-Family 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 bit.ly/SurreyStepCodeAlerts

Purpose and Background:

On July 23, 2018, Surrey City Council approved Corporate Report R179¹ that requires new buildings to be constructed to the energy efficiency requirements set under the BC Energy Step Code. This bulletin is provided to inform applicants and designers of new Part 9 multi-family 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 3 Buildings**.

Implementation:

Effective Jan 1, 2021, Step 3 of the BC Energy Step Code will apply to all new building permit applications for new Part 9 multi-family residential buildings.

Building Type	Building Permits application filed before Jan 1, 2021	Building Permits application filed on or after Jan 1, 2021
Part 9 multi-family residential buildings	Step 1	Step 3

To comply with the BC Energy Step Code, builders must work with Licensed Energy Advisor or 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

¹ The July 2018 Council Report is available online. Any information in the Council Report that is inconsistent with City bylaws or bulletins should be considered out-of-date: https://www.surrey.ca/sites/default/files/corporate-reports/RPT_2018-R179.pdf

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>

Rezoning and Development Permit Applications and Approvals:

As part of rezoning and development permit applications, applicants are expected to conduct energy modelling and provide a statement to the City that their proposed design will meet the City's Energy Step Code requirements in place at the time of the associated building permit application. This statement must be submitted prior to the City considering the rezoning and/or development 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.

Building Permit Submission Requirements:

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

1. Printed copy of *BC Energy Compliance Report – Performance Paths for Part 9 Buildings: Pre-Construction form*³ completed by either a Licensed Energy Advisor or a Registered Professional. If completed by a Registered Professional, they must be 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* noted above. Sections A, B, D, E, and F must be completed. Any Registered Professional completing the report must include their Registration/License number after their name in Section E. Sections C and G should be completed if applicable.
2. Printed copy of HOT2000 Full House reports or alternative energy model reports for both the proposed and reference buildings, completed by a Licensed Energy Advisor or a Registered Professional acting as the QM or EMS on the project. If the modelling is conducted by a Registered Professional, the model report must be sealed by the QM or EMS, as per the Guidelines. In defining model assumptions in HOT2000, use the “Lower Mainland–City of Vancouver” weather file and 18 inches for frostline depth. The City may request the associated model files for auditing purposes.
3. For each Licensed Energy Advisor, a printed copy of valid liability insurance certificate.
4. Plan drawings clearly showing all energy efficiency upgrades beyond minimum energy code requirements as well as the type of air barrier.

Note that Registered Professionals of Record (RPRs) are already required to submit Letters of Assurance (Schedule B) for their respective disciplines for Part 9 Multi-Family Buildings. The RPRs for the architectural, mechanical, plumbing, and electrical disciplines each have specific responsibilities to energy efficiency requirements under the BC Energy Step Code. The City will not accept Letters of Assurance (Schedule B) if the BC Energy Step Code section has been crossed out.

Mid-Construction Blower Door Test Requirement prior to Insulation Inspection:

All Part 9 buildings must complete a mid-construction blower door test conducted by Licensed Energy Advisor or Registered Professional prior to Insulation Inspection. Applicants must submit a complete *Mid-Construction Verification Report*⁴ before a Building Official will conduct the Insulation Inspection. The Building Inspection Section may require two days advanced notice of the blower door test so that they may choose to attend this test.

For Step 1 projects, applicants do not need to achieve a specific mid-construction airtightness performance but are expected to take steps to improve performance as necessary before installing drywall.

For Step 3 projects, applicants must achieve a mid-construction performance ≤ 1.5 ACH above the final requirement of 2.5 ACH, for a maximum of 4.0 ACH, before a Building Official will complete an Insulation Inspection.

³ Download the *BC Energy Compliance Report – Performance Paths for Part 9 Buildings: Pre-Construction form* here: <https://energystepcode.ca/compliance-tools-part9/>

⁴ Download the Mid-Construction Verification Report here: <https://energystepcode.ca/compliance-tools-part9/>

For the projects taking the EnerGuide Rating System compliance pathway require the mid-construction blower door test conducted for each townhome unit. Sampling testing is not allowed for now.

Final Building Inspection Requirements:

All Part 9 multi-family residential buildings must demonstrate compliance with either the EnerGuide Rating System or 9.36.5 pathway under the requirements of the BC Building Code, including a post-construction airtightness test. The Building Inspection Section may require two days advanced notice of the blower door test so that they may choose to attend this test.

The following documents must be completed prior to Final Building Inspection:

1. Printed copy of *BC Energy Compliance Report – Performance Paths for Part 9 Buildings: As-Built form*⁵ completed by a Licensed Energy Advisor or the Registered Professional acting as the QM or EMS. The form must include post-construction blower door test results and verification of all building energy efficiency upgrades. Sections A, B, D, E, and F must be completed. Any Registered Professional completing the report must include their Registration/License number after their name in Section E. Sections C and G should be completed if applicable.
2. Printed copy of revised HOT2000 Full House reports or alternative energy model reports for both the building as constructed and the reference building. If the modelling is conducted by a Registered Professional, the model report must be sealed by the QM or EMS, as per the *Professional Practice Guidelines*. The City may request the associated model files for auditing purposes.
3. Printed copy of final airtightness test report.

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 with any Licensed Energy Advisor involved. For the projects taking the EnerGuide Rating System compliance pathway require final airtightness test conducted for each townhome unit. Sampling testing is not allowed for now.

Non-Compliance with Energy Step Code requirements:

If a building does not meet the BC Energy Step Code requirements after the post-construction blower door test, a Building Official *may* issue an inspection notice for occupancy if the following conditions are met:

- a. The applicant demonstrates that all reasonable measures were taken to improve the energy performance of the building *after* the initial post-construction blower door test.
- b. Another post-construction blower door test is conducted by a Licensed Energy Advisor or Registered Professional.
- c. The applicant submits a revised *BC Energy Compliance Report – Performance Paths for Part 9 Buildings: As-Built form*, completed by the Licensed Energy Advisor or Registered Professional acting as QM or EMS, indicating the updated post-construction blower door test results and verification of all building energy efficiency upgrades.
- d. The building constructed must demonstrate compliance with an alternative energy efficiency performance or prescriptive requirements set out in the building code for Part 9 construction.

⁵ Download the *BC Energy Compliance Report – Performance Paths for Part 9 Buildings: As-Built* form here: <https://energystepcode.ca/compliance-tools-part9/y>

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.
- BC Building Code Technical Bulletins: <https://www2.gov.bc.ca/gov/content/industry/construction-industry/building-codes-standards/bc-codes/technical-bulletins>.
- If you have additional questions regarding the BC Energy Step Code, visit energystepcode.ca/contact-us/ or email building.safety@gov.bc.ca

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

- Sign-up for email notifications whenever new information is available, including bulletin updates, education and engagement opportunities, and incentives and capacity building opportunities: bit.ly/SurreyStepCodeAlerts.
- 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.