DISTRICT OF NORTH VANCOUVER

BC Energy Step Code – Information for Applicants
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What is the BC Energy Step Code?

The BC Energy Step Code is a provincial energy efficiency code which has set out performance based targets for new buildings to meet. These standards have been set to encourage the construction of energy efficient and airtight buildings, making all new buildings net zero ready by 2032.

Summary

- Since 2018, most new buildings are to be designed and constructed to the energy efficiency targets set out in the BC Energy Step Code.
- As of July 1, 2021, the requirement for new buildings has been upgraded to encourage the use of a low carbon energy system.

BC Energy Step Code Requirements

On December 7, 2020, Council approved a low carbon approach to the District's implementation of the BC Energy Step code which is effective as of July 1, 2021.

This table provides a summary of the District's BC Energy Step Code requirements.

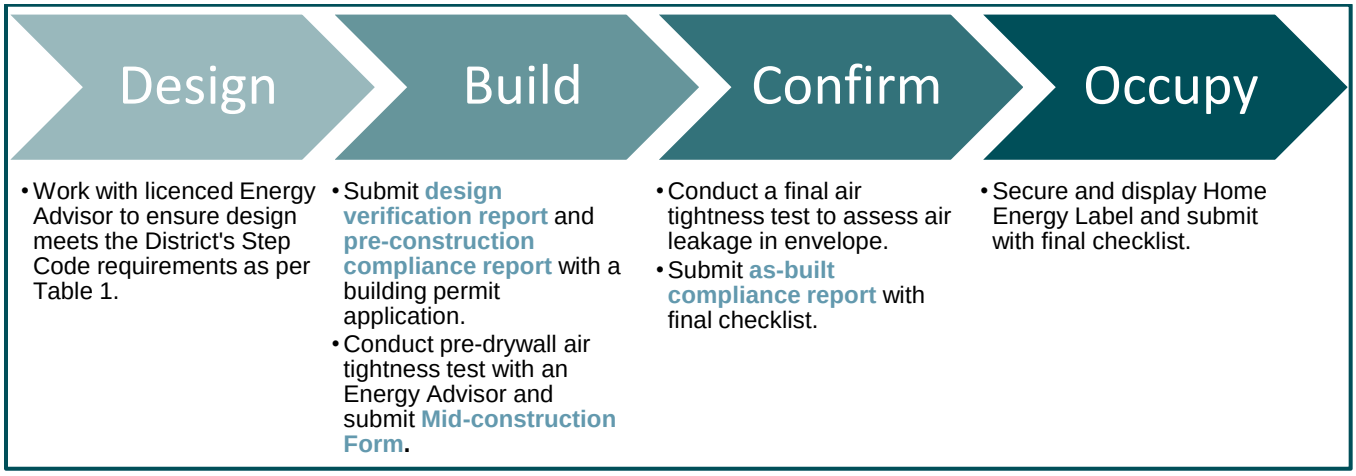
Table 1: BC Energy Step Code Requirements

Building	Description	Requirement as of July 1, 2021*
Part 9 residential	Single family home, coach house, smaller townhouse	Step 5 OR Step 3 with a low carbon energy system **
Part 3 residential	Larger multi-family and apartment projects	Step 4 OR Step 3 with a low carbon energy system **
Part 3 commercial	Larger commercial, office, and retail buildings	Step 3 OR Step 2 with a low carbon energy system **
Part 3 commercial	Significant renovations	Step 1
Public sector buildings	Schools, libraries, colleges, recreation centres, hospitals, and care centres	Step 1

* The requirements do not apply to renovations in residential buildings, and are not retroactive.

** A low carbon energy system (LCES) is one that uses primarily low carbon energy sources to provide heating, cooling, and hot water for a building, and has a total modelled greenhouse gas intensity of no more than 3kg CO_2e/m^2/year. See below for more information on meeting this requirement.

Process for Part 9 Buildings (Single family home, coach house, smaller townhouse)



Calculating Greenhouse Gas Intensity (GHGI) - Information for Energy Advisors

To meet the Low Carbon Energy System requirement, Energy Advisors must demonstrate that the modelled greenhouse gas intensity (GHGI) of the proposed building is no more than 3 kg CO_2e /m^2/yr.

Modeling generated by HOT2000 can inaccurately result in a GHGI value that exceeds the Low Carbon Energy System requirement; Therefore, applicants should use the GHG Calculator available on DNV.org to calculate an accurate GHGI and include this calculator with their submission.

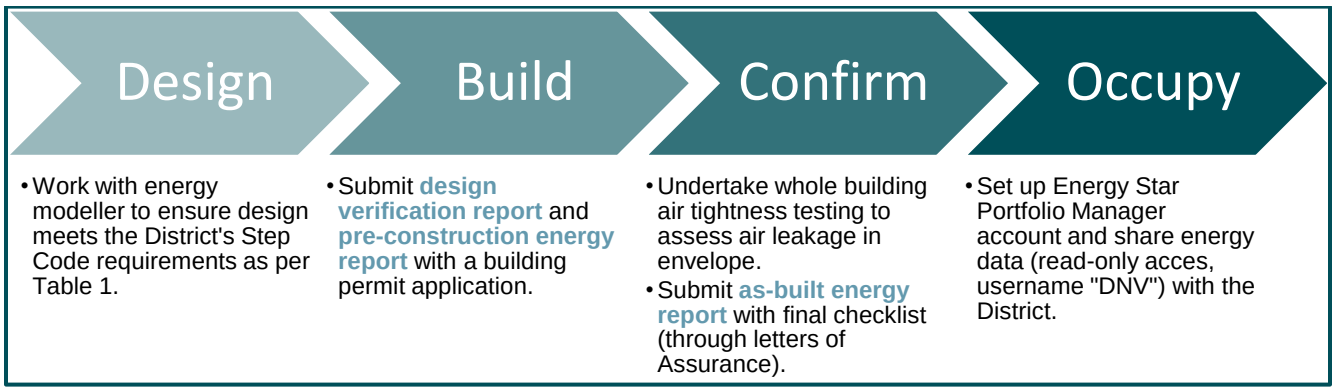
Primary Heating System

Due to a limitation with HOT2000, applicants must model the highest-emitting system as the primary heating system and use the **estimated annual fuel consumption summary** to calculate the GHGI and potential GHG emissions. For example, where projects propose a heat pump with a gas backup system, the gas system must be modelled as primary and the heat pump excluded from the model (e.g. select 'N/A' for Type 2 systems).

Home Energy Labels

Upon approval of the As-Built energy model, the homeowner will receive an EnerGuide Rating System home energy label from Natural Resources Canada. The District of North Vancouver requires that the EnerGuide label, or a "comparable" home energy label, be affixed on or near the electrical panel within each dwelling unit in each building. See **Appendix 1** for more details.

Process for Part 3 Buildings (Larger multi-family and apartment projects, commercial, office, and retail buildings)



Energy Benchmarking (Part 3 Buildings)

Prior to occupancy, the District of North Vancouver requires that applicants:

- Create an Energy Star Portfolio Manager profile of the building(s) (see: Energy efficiency benchmarking (bchydro.com).
- Share the property profile with the District of North Vancouver (Username “DNV”) as a “Read Only” permission level.

Need more info?

For information and resources on the BC Energy Step Code, including the implementation guide, technical webinars, incentives and FAQs, visit www.energystepcode.ca. Additional questions can be submitted to building@dnv.org.

Appendix 1: Requirements for Home Energy Labels

As an administrative requirement for occupancy, the District of North Vancouver requires that an energy label be affixed on next to the electrical panel in each housing unit where an electrical panel is present.

The following energy labels are acceptable:

- EnerGuide Rating System energy label, OR
- Passive House Certificate OR
- An comparable energy label including all required information

The “comparable energy label” can be used when:

- Energy modellers are using software tested in accordance with ANSI/ASHRAE 140 Evaluation of Building Energy Analysis Computer Programs;
- Energy advisors not registered with the EnerGuide Rating System use Hot2000 to model a home and produce a BC Energy Compliance Report; OR
- Registered energy advisors are using HOT2000 but are unable to produce a formal EnerGuide Rating System home energy label. (e.g. when energy advisors use HOT2000 to model a townhome or row home as-a-building rather than as a unit). Note also that when EnerGuide Rating System energy advisors are using alternate energy modelling and blower door testing procedures they are not able to produce an EnerGuide home energy label.

Comparable Energy Labels Must include the following information:	
Address:	• The street address of the home.
Modeller:	• The date that the evaluation was conducted. • The company name and name of energy modeller that conducted the evaluation. • The name of the entity that provides quality assurance.
Energy Rating:	• **Energy Rating:** Energy consumption of the home in GJ per year, including baseloads. • Reference House Energy Rating: Reference house energy consumption in GJ per year, with baseloads.
Energy Metrics:	• **Rated Annual Energy Consumption: Energy** consumption GJ per year, broken down by fuel type (Natural Gas, Electricity, Oil, and Propane). • **Breakdown of Rated Annual Energy Consumption by system: Percentage** of total energy consumption GJ per year by end use (space heating, space cooling, water heating, ventilation, lights & appliances, and other electrical) • **Rated On-site Renewable Energy Contributions:** Energy generated annually from onsite renewable sources (solar PV, wind, solar hot water). • **Rated Energy Intensity:** Measured in gigajoules per square meter per year. • **Rated Greenhouse Gas Emissions:** Annual amount of greenhouse gases emitted in tonnes/year. • **Total Heated Floor Area:** The total usable heated floor area of the building unit, including all above-grade heated areas regardless of ceiling height, and all below-grade heated areas with a ceiling height of more than 1.2m (i.e. basements)