

2022

Proposed Step Code Adoption

Phase 3 Engagement Briefing Note

Charting a Path to Zero Emission Buildings in the Victoria Region

29 May 2022

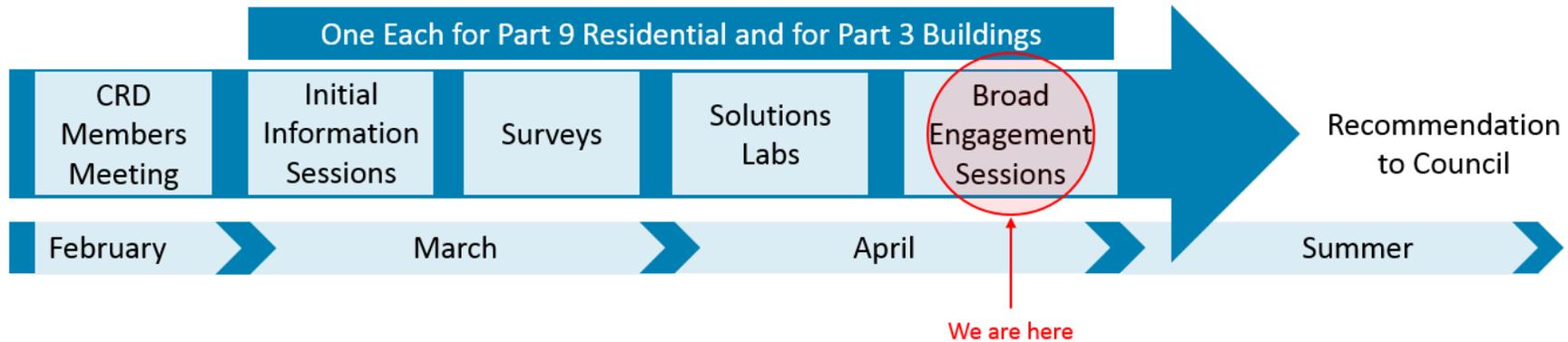
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1.0 Overview & Purpose

The City of Victoria, District of Saanich, and District of Central Saanich, are undertaking engagement with building industry on the upper steps of the BC Energy Step Code and Carbon Pollution Standards for new buildings with the support of the CRD. This work is focused on determining the best way to use the regulatory tools available to reduce operating carbon emissions from new construction. The engagement process and timeline are outlined in Figure 1 below:

Figure 1: Engagement Process & Timelines



This Briefing Note is intended to support the final round of engagement in June 2022 and ensure that those inputting to the process have access to a base level of information on the BC Energy Step Code, the Provincial Carbon Pollution Standards, the engagement undertaken to date and the proposed adoption pathways. While it only provides a short overview of these topics, it includes links to webpages and resources where additional information and details can be found.

2.0 Background

2.1 Victoria Region Step Code Adoption to Date

The City of Victoria, District of Saanich and District of Central Saanich have adopted the BC Energy Step Code, their adopted Steps to date are outlined in Table 1 below. For a more detailed refresher on the BC Energy Step Code for Part 9 buildings, please see energystepcode.ca and the Capital Region Step Code Industry Workshop Information Sessions presentations available here: www.saanich.ca/stepcode.

Table 1: Step Code Adoption in Victoria, Saanich and Central Saanich

Building Type	Compliance Requirement
Part 9 Buildings	Step 3
Part 9 – 111.5 m2 or less*	Step 2
Part 3 – residential wood frame building six stories or less	Step 3
All other Part 3 Buildings	Step 2

*Central Saanich does not have this relaxation for small buildings

2.2 Current Council Direction

Several local governments in the region undertook detailed community greenhouse gas (GHG) emission reduction modelling to inform the development of their climate plans. This modelling clearly shows that a rapid decarbonization of new construction is required to meet our 2030 and 2050 GHG emission reduction targets. Based on this, the Councils in the City of Victoria, District of Saanich and District of Central Saanich have set direction to staff to meet the following targets:

- Highest steps of the BC Energy Step Code by 2025
- 100% renewable energy and/or net-zero carbon in new construction by 2030
- 50% community-wide GHG emission reductions by 2030

The City of Victoria and District of Saanich have also directed staff to:

- Accelerate adoption of net-zero carbon new construction/quickly decarbonize new construction

- Integrate a carbon/GHG emissions cap into Step Code adoption
- Adopt the highest Steps of the Step Code by 2025 (in the City of Victoria this is for most buildings and then 2027 for some part 3 buildings)

These emission reductions need to be achieved using the BC Energy Step Code and the newly drafted Provincial Carbon Pollution Standards (referred to herein as the Carbon Standards). The Carbon Standards are currently under development by the province but are available in draft form, they are expected to be added to the BC Building Code at the end of 2022.

For more detail on local Council direction related to GHG emissions in new construction, please see the following:

- City of Victoria Climate Leadership Plan, 2018, (specifically p24-27), available online here: [City of Victoria Climate Action Plan.pdf](#) and [2019 Climate Action Strategy - Proposed Programs and Initiatives](#) (p. 192-218)
- District of Saanich Climate Plan, 2020 (specifically p24, p51-52), available online here: www.saanich.ca/climateplan and the recent report to Council on this engagement available here: https://saanich.ca.granicus.com/GeneratedAgendaViewer.php?view_id=1&clip_id=609
- District of Central Saanich Climate Leadership Plan, 2020, (specifically p19), available here: [climate_leadership_plan_2020_update2021.pdf \(centralsaanich.ca\)](#)

2.3 Provincial Carbon Pollution Standards

The Carbon Standards which are referenced in this document are based upon the latest Provincial Policy Bulletin, February 2022, and are best summarized as:

- **Measure-only** - requires measurement of a building's emissions *without* reductions, and is intended to build knowledge and capacity;
- **Medium carbon** - in most cases, will require decarbonization of *either* space heating or domestic hot water systems;
- **Low carbon** - in most cases, will require decarbonization of *both* space heating and domestic hot water systems; and
- **Zero-carbon** - in most cases will require decarbonization of all energy uses.

The Carbon Standard thresholds are delineated by specific greenhouse gas emission intensities (GHGi) limits which vary by building occupancy. These metrics are outputs of energy modelling done before and after construction. Details on the Carbon Standards and measurements were presented as part of the information sessions and solutions lab engagement and are available in the engagement briefing notes available at saanich.ca/stepcode.

The proposed pathways outlined in this document assume that the legislation enabling local governments to adopt the Provincial Carbon Pollution Standards is enacted by early 2023 – this legislation is expected to come into effect by the end of 2022.

3.0 Brief Summary of Engagement Feedback to date

Detailed information related to the analysis completed on Step Code compliance processes in the region to date were presented during the first phase of engagement. In addition, a summary of the feedback received from the survey conducted during the first phase of engagement was presented to at the Solutions Labs in May. Presentations with this information are available online at [Saanich.ca/stepcode](https://saanich.ca/stepcode).

A summary of the feedback received to date will be presented as part of the final engagement workshops and a detailed engagement summary will be made available online at [Saanich.ca/stepcode](https://saanich.ca/stepcode). For the purposes of this briefing note, the following key points were made during the first phases of engagement:

- There is agreement on the need for carbon emission reductions;
- There is support for focussing regulation on greenhouse gas emissions reduction, efficiency is secondary;
- Current Step Code level does not fundamentally change how homes are built, accelerating to a higher step could;
- Significant lead time and/or grandfathering before new regulations come into effect is desired – lead time needed varies by building type;
- Construction costs a key concern;
- Simplicity in messaging -- should keep Step Code and GHGi together;
- Education/Training – labor market restrictions a concern;
- The housing availability and affordability challenge is a core consideration that forms a backdrop for this work;
- Decarbonizing is technically possible and the building industry can achieve these goals;
- Consumer understanding is lagging: consumers don't typically understand the benefits of efficiency and decarbonisation;
- Builder training and consumer education would support regulating building efficiency and emissions;
- Regional consistency remains a priority; and
- How the FortisBC grid and RNG will contribute is an open question.

4.0 Proposed Adoption Pathway - Part 9

This section outlines the proposed adoption pathway for Part 9 new construction and includes the draft options presented to the Part 9 solutions lab for context. It has been informed by previous rounds of regional engagement that included information sessions, an industry survey and solutions labs. The final round of engagement seeks input on this proposed pathway prior to finalizing recommendations to Council. The mandate to advance the Step Code and the Carbon Standards is rooted in considerable community and stakeholder engagement conducted as a part the development of Climate Action Plans in the region. The following proposals attempt to balance the feedback from the rounds of engagement and the need to rapidly decarbonize new construction to meet our climate targets.

4.1 Options presented for Engagement to the Part 9 Solutions Lab

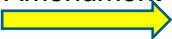
Several implementation options were developed based upon the first phase of industry engagement and these were presented to the Part 9 Solutions Lab for discussion and feedback (Table 2).

Table 2: Options presented to the Part 9 Solutions Lab

		Requirement	Adoption Date
Option 1	Efficiency Pathway	Step 4	June 2023
		Step 5	January 2025
Option 2	Hybrid Efficiency / Low Carbon Pathway	Step 4 <u>OR</u> BCBC Step 3 with Low Carbon Construction*	June 2023
		Step 5 <u>OR</u> BCBC Step 3 with Zero Carbon Construction*	January 2025
Option 3**	Low Carbon Requirement Pathway**	BCBC Step 3 <u>AND</u> Low Carbon Construction*	June 2023
		BCBC Step 3 <u>AND</u> Zero Carbon Construction*	January 2025

4.2 Proposed Adoption Pathway for Part 9 Residential Buildings

Table 3: Proposed pathway for Part 9 adoption

Anticipated Code Amendment 	20% BETTER EFFICIENCY + CARBON OPTIONAL REGULATIONS		MEDIUM CARBON	LOW CARBON + 40% BETTER EFFICIENCY	ZERO CARBON	80% BETTER EFFICIENCY
Part 9	Dec. 2022	July 1, 2023 1 year	Jan. 1, 2025 2.5 years	Dec. 2027	Dec. 2030	Dec. 2032
RESIDENTIAL (Group C)	Step 3	Step 3 (base code) AND Low Carbon	Step 3 (base code) AND Zero Carbon	Step 4 (base code) AND Zero Carbon		Step 5 (base code) AND Zero Carbon

Yellow boxes along the top track the adoption schedule and standards that the Province has committed to. It includes both Step Code adoption and the Carbon Standards adoption. Green boxes highlight proposed municipal changes.

Adoption Rationale

Part 9 Residential buildings are already subject to the Step Code and are required to submit GHGi metrics. **The proposed pathway will not require any further accelerated implementation of the BC Energy Step Code; as of December 2022 it will harmonize with provincial requirements** related to energy efficiency/Step Code that come into effect as part of BC Building Code amendments as outlined above. Instead, this proposed pathway will focus on Carbon Standard requirements (GHGi) only and includes just two moves between now and 2032:

1

July 1, 2023 – Low Carbon Standard Requirement. The first move will in many/most cases require the decarbonization of heating and domestic hot water systems. A building would need to be very efficient to continue to use natural gas for heating and/or hot water under this requirement. This move will be made July 1, 2023, providing 1 year of notice from expected Council approval.

2

Dec 1, 2024 – Zero Carbon Standard Requirement. The second and final move will require all new construction to be built to a zero-carbon standard. It is expected that in many/most cases this will require the decarbonization of heating and domestic hot water systems and appliances such as stoves and fireplaces. This move will be made December 1, 2024, providing 2 ½ years of notice from expected Council approval. This is much shorter than for Part 3 buildings because these are relatively simple buildings that are relatively easy to decarbonize and there are a considerable number of existing Part 9 building that already meet this requirement in the region.

4.3 Examples of other local governments who have already adopted Carbon Standards

While the Province has not yet finalized a Carbon Standard and the legislation is not yet in place for local governments in BC to require it (this is due by the end of 2022), it is important to note that several local governments in BC have already been implementing a Carbon Standard in new developments via an optional drop-down approach for several years. This is where they require new developments to meet a higher Step Code step **OR** achieve a low carbon standard instead. The definitions and metrics that have been used by local governments who have implemented this approach are extremely similar to those being proposed in the forthcoming Provincial Carbon Standard. Examples are included in Table 4.

Table 4: Examples of other Local Governments with Carbon Standards for Part 9 Buildings

	Requirement	*Adoption Date
City of North Vancouver	Step 5 or Step 3 with <u>Low Carbon</u> (3kg/m ² /yr.)	July 2021
City of Richmond	Step 3 or Step 2 with <u>Medium Carbon</u>	Dec 2020
	Step 4 or Step 3 with <u>Low Carbon</u> (3kg/m ² /yr.)	Jan 2022
	Step 5 or Step 3 with <u>Low Carbon</u> (3kg/m ² /yr.)	Jan 2025
District of West Vancouver	Step 5 or Step 3 with <u>Low Carbon</u> (3kg/m ² /yr.)	Feb 2021

*Note: Info as of end of 2021 - some of these are proposed and may not yet be in building bylaw and others now engaging

5.0 Proposed Adoption Pathway - Part 3

This section outlines the proposed adoption pathway for Part 3 new construction and also includes the draft options presented to the Part 3 solutions lab for context. It has been informed by previous rounds of regional engagement that included information sessions, an industry survey and solutions labs. The final round of engagement seeks input on this proposed pathway prior to finalizing recommendations to Council. The mandate to advance the Step Code and the Carbon Standards is rooted in considerable community and stakeholder engagement conducted as a part the development of Climate Action Plans in the region. The following proposals attempt to balance the feedback from the rounds of engagement and the need to rapidly decarbonize new construction in order to meet our climate targets.

5.1 Options presented for Engagement to the Part 3 Solutions Lab

Several implementation options were developed based upon the first phase of industry engagement and these were presented to the Part 9 Solutions Lab for discussion and feedback (Tables 5-7).

Table 5: Options presented to the Part 3 Solutions Lab – Residential Six Storeys or Less

Residential Six Storeys or Less		Requirement	Adoption Date
Option 1	Efficiency Pathway	Step 4	June 2023
Option 2	Hybrid Efficiency / Low Carbon Pathway	Step 4 <u>OR</u> BCBC Step 3 with Low Carbon Construction*	June 2023
		Step 4 <u>OR</u> BCBC Step 3 with Zero Carbon Construction*	January 2025
Option 3**	Low Carbon Requirement Pathway**	BCBC Step 3 <u>AND</u> Low Carbon Construction*	June 2023
		BCBC Step 3 <u>AND</u> Zero Carbon Construction*	January 2025

Table 6: Options presented to the Part 3 Solutions Lab – Residential Seven Storeys +

Residential 7+ Storeys		Requirement	Adoption Date
Option 1	Efficiency Pathway	Step 3	June 2023
		Step 4	January 2027
Option 2	Hybrid Efficiency / Low Carbon Pathway	Step 3 <u>OR</u> BCBC Step 2 with Low Carbon Construction*	June 2023
		Step 3 <u>OR</u> BCBC Step 2 with Zero Carbon Construction*	January 2025
Option 3**	Low Carbon Requirement Pathway**	Step 2 <u>AND</u> Low Carbon Construction*	June 2023
		Step 2 <u>AND</u> Zero Carbon Construction*	January 2025

Table 7: Options presented to the Part 3 Solutions Lab – Commercial

Commercial		Requirement	Adoption Date
Option 1	Efficiency Pathway	Step 3	June 2023
Option 2	Hybrid Efficiency / Low Carbon Pathway	Step 3 <u>OR</u> Step 2 with Low Carbon Construction*	June 2023
		Step 3 <u>OR</u> Step 2 with Zero Carbon Construction*	January 2025
Option 3**	Low Carbon Requirement Pathway**	Step 2 <u>AND</u> Low Carbon Construction*	June 2023
		Step 2 Minimum <u>AND</u> Zero Carbon Construction*	January 2025

5.2 Proposed Adoption Pathway for Part 3 Buildings

Table 8: Proposed pathway for Part 3 adoption

	Anticipated Code Amendment 							
	20% BETTER EFFICIENCY + OPTIONAL CARBON REGULATIONS			MEDIUM CARBON		LOW CARBON + 50% BETTER EFFICIENCY	ZERO CARBON	80% BETTER EFFICIENCY
Part 3	Dec. 2022	Jan 1, 2023 (6 months)	July 1, 2024 (2 Years)	Dec. 2024	July. 1, 2025 (3 years)	Dec. 2027	Dec. 2030	Dec. 2032
RESIDENTIAL (Group C) Between 4 and 6 storey	Currently Step 3	<u>Measure and Report GHGi</u>	Step 3 (base code) AND Low Carbon		Step 3 (base code) AND Zero carbon			Step 4 (base code) AND Zero carbon
RESIDENTIAL (Group C) Over 6 storey	Currently Step 2		Step 2 (base code) AND Low Carbon		Step 2 (base code) AND zero carbon			Step 4 (base code) AND Zero carbon
COMMERCIAL (Office – Group D)	Currently Step 2		Step 2 (base code) AND Low Carbon		Step 2 (base code) AND zero carbon			Step 3 (base code) AND Zero carbon
COMMERCIAL (Group E and Group D other than Office)	Currently Step 2		Step 2 (base code) AND Low Carbon		Step 2 (base code) AND zero carbon (base code)			Step 3 (base code) AND Zero carbon
ASSEMBLY/ CARE (Group A & B)	Not currently required.	Step 1						

Yellow boxes along the top track the adoption schedule and standards that the Province has committed to. It includes both Step Code adoption and the Carbon Standards adoption. Green boxes highlight proposed municipal changes

Adoption Rationale

Beyond the desire for regional consistency, we heard three clear messages from industry through engagement, keep it simple, give us time to plan, and give us options. This proposed pathway strikes a balance between these priorities, and the need to decarbonize new construction. **The proposed pathway will not require any further accelerated implementation of the BC Energy Step Code; and will harmonize with provincial requirements** related to energy efficiency/Step Code that come into effect as part of BC Building Code amendments as outlined in Table 8 above. Instead, this proposed pathway will focus on Carbon Standard requirements (GHGi) only and includes two moves between now and 2032:

1

July 1, 2024 – Low Carbon Standard Requirement. The first move will be a transitional period where developers will need to decarbonize most systems but will be able to use gas for space heat peak loads and as a backup in most cases. This move will be made July 1, 2024, providing 2 years of notice from expected Council approval. This provides an additional year lead-in compared with the proposed option used for the solutions lab engagement given the feedback from the group.

2

July 1, 2025 – Zero Carbon Standard Requirement. The final move will require all new construction to be built to the zero-carbon emissions standard. This will effectively decarbonize all new construction while harmonizing the efficiency standard with the Provincial requirements i.e. we will not be requiring any acceleration of building energy efficiency/Step Code beyond the base building code, only focussing on the carbon standard requirements. This move will be made July 1, 2025, providing 3 years of notice from expected Council approval. This provides an additional 6 month lead-in compared with the proposed option used for the solutions lab engagement.

Reporting

All new construction will be expected to measure and report GHG intensity in the energy models that are currently required. Submitted energy models will be expected to include GHGi's for each occupancy in the building.

Step 1 will also be adopted for Assembly/care occupancies and this will require energy modelling to be submitted for these projects.

5.3 Examples of other local governments who have already adopted Carbon Standards

While the Province has not yet finalized a Carbon Standard and the legislation is not yet in place for local governments in BC to require it (this is due by the end of 2022), it is important to note that several local governments in BC have already been implementing a Carbon Standard in new developments via an optional drop-down approach for several years. This is where they require new developments to meet a higher Step Code step **OR** implement a low carbon standard instead. The definitions and metrics that have been used by local governments who have implemented this approach are extremely similar to those being proposed in the forthcoming Provincial Carbon Standard. Examples are included in Table 9.

Table 9: Examples of other Local Governments with Carbon Standards for Part 3 Buildings

	Building type	Requirement	*Adoption Date
City of Surrey	Part 3 residential	Step 3 or Step 2 with <u>Medium Carbon</u> (6kg/m ² /yr.)	April 2019
City of North Vancouver	Part 3 residential	Step 3 or Step 2 with <u>Low Carbon</u> (3kg/m ² /yr.)	July 2018
City of Burnaby	Part 3 that require rezoning	Step 3 or Step 2 with <u>Medium Carbon</u> (6kg/m ² /yr.)	current
City of New Westminster	Part 3 residential & hotels/motels	Step 3 or Step 2 with <u>Low Carbon</u> (DE or 70% renewable as approved by city)	Jan 2020
City of Richmond	Part 3 residential >6 storeys & hotels/motels	Step 3 or Step 2 with <u>Low Carbon</u> (DE or 70% renewable as approved by city)	Dec 2020
District of West Vancouver	Part 3 residential	Step 4 or Step 2 with <u>Low Carbon</u> (3kg/m ² /yr.)	Feb 2021

*Note: Info as of end of 2021 - some of these are proposed and may not yet be in building bylaw and others now engaging

6.0 Implementation Timeline Summary

The implementation timeline for both Part 9 and Part 3 proposed pathways is summarised in Table 10 below.

Table 10: Proposed Implementation Timeline for Part 9 and Part 3

Date	Part 3/9	Local Government Implementation
Jan 1, 2023	Part 3	Measure & Report GHGi
July 1, 2023	Part 9	Low Carbon Standard
July 1, 2024	Part 3	Low Carbon Standard
Jan 1, 2025	Part 9	Zero Carbon Standard
July 1, 2025	Part 3	Zero Carbon Standard

7.0 Next Steps

This Briefing Note is intended to support the final round of engagement, which consists of two workshops and a survey being held/conducted in June 2022. The purpose of this final round of engagement is to present the proposed long-term plan, or pathway, for Step Code and Carbon Pollution Standard adoption for new development in the City of Victoria, the District of Saanich and the District of Central Saanich. The workshops will provide a brief recap, review the feedback received to date, present the proposed pathways for adoption that are outlined in this briefing note and provide the opportunity for feedback. A follow up survey will allow for further feedback on the proposed pathways for adoption.

Feedback received during this final round of engagement will be used to review and finalize a recommended pathway for adoption to the noted local government Councils, expected in early summer 2022. The information will also be shared with all other local governments and electoral areas in the region through the CRD Climate Inter-Municipal Working Group.