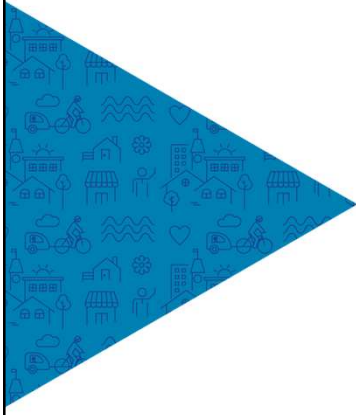


2022

CITY OF VICTORIA | Sustainable Planning and Community Development

# Step Code Acceleration

Reducing Greenhouse Gas Emissions from New Construction



1

## Purpose

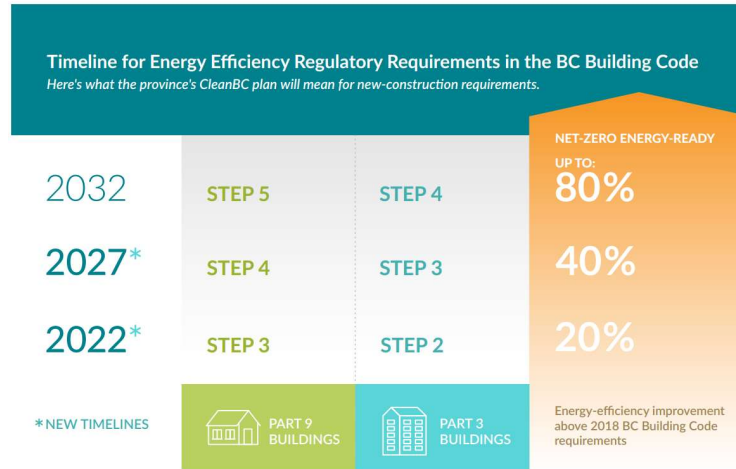
1. Provide Council with a summary of:
  - Regional Step Code engagement process
  - Forthcoming BC carbon pollution standards
2. Seek direction to develop bylaws to adopt carbon pollution standards for new buildings

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## What is Step Code?



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## Step Code in Victoria



**Part 9 Residential Buildings**

**Step 3**

(Step 2 for Laneway houses)



**4-6 Storey MURBs**

**Step 3**



**7+ Storey MURBs, and Commercial buildings**

**Step 2**

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## BC Draft Carbon Pollution Standards

### Draft Carbon Pollution Standards

1. Measure-only (2022)
2. Medium carbon (2024)
3. Low carbon (2027)
4. Zero-carbon ready (2030)

Expected to be added to the BC Building Code in December 2022

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## Council Direction

### Strategic Plan:

Expedite implementation of the BC Energy Step Code to reach upper steps to rapidly reduce emissions from new construction.

### Council directed staff to:

Adopt the strategies and directions contained within the High Impact Initiative: Low Carbon Step Code to meet Climate Leadership Plan objectives, and ensure that new builds at lower 'steps' avoid using fossil fuel heating systems.

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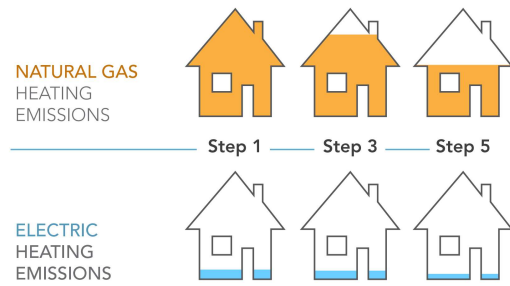


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## Technical Review - Key Conclusions

- All new construction needs to use 100% renewable energy by 2025
- The Step Code can result in buildings that produce significant emissions over their lifetime because it is fuel agnostic
  - Natural gas has 17 times higher global warming potential than electricity

### GREENHOUSE GAS EMISSIONS BY HEATING TYPE



Source: Metro Vancouver Climate 2050 Roadmap: Buildings (Oct. 2021)

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## Technical Review - Key Conclusions

- Costing Analysis:
  - Capital Costs: 7% savings – 2.2% annual cost increase
  - Operating Costs: 0.1% cost savings to a 2.2% capital cost increase
- Analysis shows that fully electric buildings are consistently able to achieve the zero-carbon ready standard for all building types

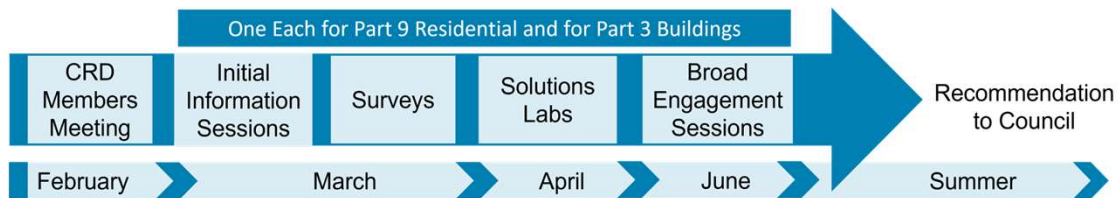
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## Engagement Plan

### 2022 Regional Engagement Timeline



*\*Part 9 residential buildings are residential buildings which are three stories or less, 600m<sup>2</sup> or smaller;  
Part 3 buildings are all buildings larger than three stories and/or larger than 600m<sup>2</sup>.*

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## What We Heard

- Agreement on the need for carbon emission reductions
- Current Step Code requirements do not fundamentally change how buildings are built; accelerating to higher steps could
- Construction costs are a key concern
- Support for focusing regulation on greenhouse gas emissions reduction; efficiency is secondary
- Desire for significant lead time before new regulations come into effect and/or allowance for legacy applications
- Simplicity in messaging, keep policy simple and easy to understand

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## What We Heard

- Labour market challenges a concern
- Housing availability and affordability challenge is a core consideration
- Decarbonizing is technically possible and achievable by industry today
- Consumer understanding is lagging – City should communicate the benefits of decarbonization
- Industry training would support new efficiency and carbon regulations
- Regional consistency remains a priority
- Uncertainty around how renewable natural gas (RNG) will contribute
- BC Hydro grid capacity and connection process – ongoing concern

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## Recommended Approach

- Harmonize local Step Code adoption with Provincial adoption schedule
- Focus local regulation advancement on Carbon Pollution Standard

### Part 9 Residential Buildings

**Move 1:** July 1, 2023  
Low Carbon

**Move 2:** January 1, 2025  
Zero Carbon Ready

### Part 3 Buildings

**Move 1:** July 1, 2024  
Low Carbon

**Move 2:** July 1, 2025  
Zero Carbon Ready

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## Part 9 Carbon Pollution Standards and Step Code to 2032

	Dec. 2022	July 1, 2023	Jan. 1, 2025	Dec. 2027	Dec. 2032
<b>RESIDENTIAL</b> (e.g. single family, duplexes)	Step 3	Step 3 AND <u>Low carbon</u>	Step 3 AND <u>Zero carbon</u>	Step 4 AND Zero carbon	Step 5 AND Zero carbon

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## Part 3 Carbon Pollution Standards and Step Code to 2032

	Dec. 2022	Mar. 1, 2023	July 1, 2024	July 1, 2025	Dec. 2027	Dec. 2032
RESIDENTIAL Between 4 and 6 Storeys	Currently Step 3	Measure and Report GHGi	Step 3 AND <u>Low carbon</u>	Step 3 AND <u>Zero carbon ready</u>	Step 3 AND Zero carbon	Step 4 AND Zero carbon
RESIDENTIAL Over 6 Storeys	Currently Step 2		Step 2 AND <u>Low carbon</u>	Step 2 AND <u>Zero carbon ready</u>	Step 3 AND Zero carbon	Step 4 AND Zero carbon
COMMERCIAL						Step 3 AND Zero carbon
ASSEMBLY/CARE	Not required	Step 1				

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## Recommendation

That Council direct staff to:

- b) Prepare the necessary Building and Plumbing Regulation Bylaw amendments to implement the proposal following the release of the 2022 BC Building Code revision
- c) Explore requiring benchmarking for new and existing Part 3 buildings and home energy labelling for Part 9 buildings
- c) Develop educational communications to build public awareness and understanding of the benefits of decarbonization through electrification.