

Environment and Climate Advisory Committee Meeting Agenda

Wednesday, May 18, 2022, 5:00 p.m.
Electronic and in Meeting Room G
Lower Level, City Hall

We recognize and respect that New Westminster is on the unceded and unsurrendered land of the Halkomelem speaking peoples. We acknowledge that colonialism has made invisible their histories and connections to the land. As a City, we are learning and building relationships with the people whose lands we are on.

	Pages
1. <u>CALL TO ORDER AND LAND ACKNOWLEDGEMENT</u> The Chair will open the meeting and provide a land acknowledgement.	
2. <u>INTRODUCTIONS AND ICEBREAKERS</u>	
3. <u>CHANGES TO THE AGENDA</u> Additions or deletion of items.	
4. <u>ADOPTION OF MINUTES FROM PREVIOUS MEETINGS</u>	
4.1. Minutes of March 16, 2022	
5. <u>REPORTS AND PRESENTATIONS</u> Staff and guest reports and presentations for information, discussion, and/or action	
5.1. EnCAC Representative on the Community Livability and Social Equity Grants Committee <i>Renee Chadwick</i>	
5.2. eMobility Strategy <i>Meredith Seeton</i>	
5.3. Urban Forest Update - Reforestation and Planting Projects <i>Matthew Pilford</i>	3
6. <u>UNFINISHED BUSINESS FROM PREVIOUS MEETINGS</u>	
6.1. New Homes and Renewable Energy	12

7. STANDING REPORTS AND UPDATES

Regular and ongoing reports from staff or members for information and discussion.

7.1. General Updates

Lynn Roxburgh

8. NEW BUSINESS

Items added to the agenda at the beginning of the meeting.

8.1. High-performance Buildings - Identifying Gaps

Nazli Azimikor

26

9. END OF MEETING

10. UPCOMING MEETINGS

Remaining scheduled meetings, which take place at 5:00 p.m. unless otherwise noted:

- July 20
- November 16

City of New Westminster's Urban Forest: URBEI & Tree Canada National Greening Programs

Spring 2022: Progress Update & Workplan Review

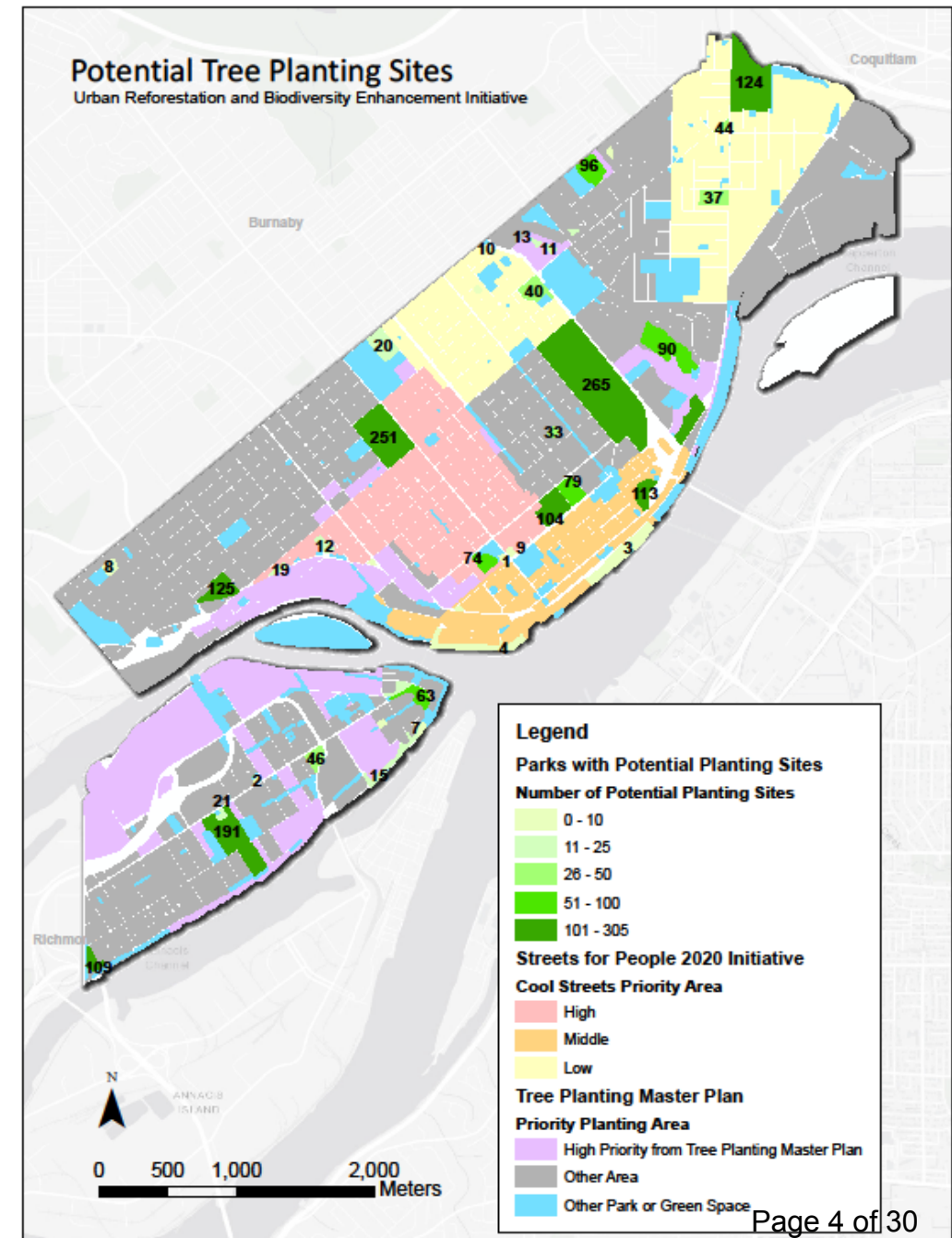


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URBEI

(Urban Reforestation & Biodiversity Enhancement Initiative)

- Planting (Spring 2022)
- Planning, Collect Site Data (Winter 2021/Spring 2022)
- Species Selection and Planting (Fall 2022)



Planting Areas

ACTIONS:

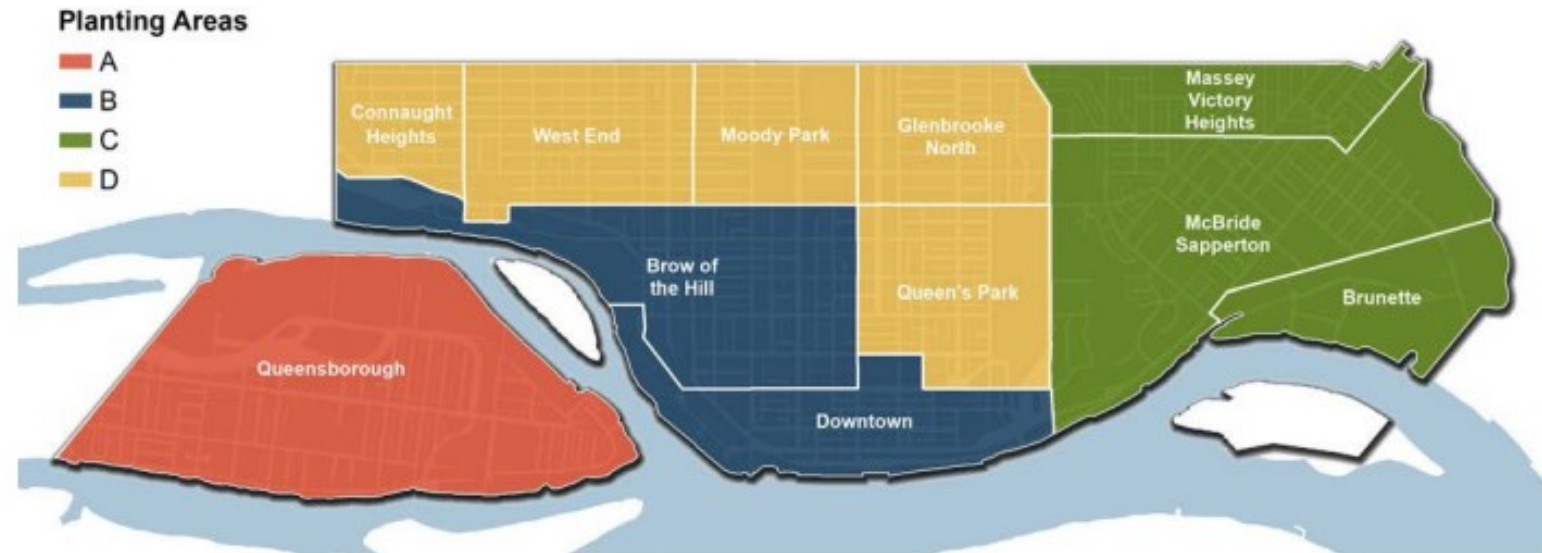
- ▶ Plant at Ryall Park and Thompson's Landing Park (Area A)
- ▶ Collect final data for remaining QB locations (Area A)
- ▶ Collect preliminary data (Areas B, C & D)
- ▶ Finalize planting plans (Areas B, C & D)
- ▶ Source trees
- ▶ Retain contractors and plant (Areas A & B)

Planting Area A - Queensborough

Planting Area B - Brow of the Hill, Downtown

Planting Area C - Massey Victory Heights, McBride Sapperton, Brunette

Planting Area D - Connaught heights, West End, Moody Park, Glenbrooke North, Queens Park



Grimston Park



Port Royal Park

- ▶ Community Use
- ▶ Utility Conflicts

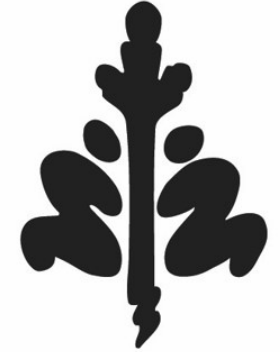


Tree Canada National Greening Program

- ▶ Planting (Spring 2022 & Fall 2022)
- ▶ QP North, QP South, Glenbrooke Ravine & Hume Park
- ▶ 22,830 tree and shrub seedlings

ACTIONS:

- ▶ Queen's Park North & South (completed March 2022)
- ▶ Community response
- ▶ Host site for joint governmental tree planting announcement on Earth Day (April 22, 2022)



TreeCanada
ArbresCanada

Queen's Park North

Planting Zone

1	6
2	7
3	8
4	Overflow A
5	Overflow B



Intergovernmental Announcement

- ▶ Federal, Provincial and Municipal leaders
- ▶ Acute response from the City



ENCAC Questions

- ▶ (NWEF) What's our total canopy coverage currently, and how has tree loss on private property impacted this number?
- ▶ What's the seedling survival rate for trees planted by the City in public parks and open spaces?
- ▶ Does the UFMS include language about the benefits of other plants?



Environment & Climate Advisory Committee Meeting

Energy Step Code: An Overview



NEW WESTMINSTER

Motion

THAT EnCAC encourage New Westminster City Council to adopt a CEEP which includes a plan to create regulations by 2023 in New West for new construction of single family dwellings that require builders to achieve level 5 of the STEP code, the highest standard for building energy efficiency, or if the builder uses a low-carbon (usually electric) system for heat and hot water, the STEP code is relaxed to level 3.

Summary of Committee Discussion

- Some municipalities already incentivize electrification (e.g. District of North Vancouver, West Vancouver and Vancouver).
- Saves expensive retrofit costs and provides better resiliency.
- Considering building envelope and system efficiency is key.
- Energy efficiency measures are key.
- Building Code changes will incorporate a greenhouse gas emissions intensity (GHGi) metric, to regulate fuel selection.
- Support for emerging energy efficiency and emissions reduction technologies is needed.

Climate Action Work Plan

- CAPD operating 70% under capacity; 50% reduction in work load.
- Adding work to the current work plan means other projects put on hold.
- Prioritized completion of the Community Energy and Emissions Plan for 2022.
 - CEEP will help reinforce/set a pathway for meeting climate emergency and seven bold steps targets.
 - BCBC changes are anticipated related to Step Code; delay will allow City to build on these with a more ambitious Step Code.
- If motion supported by the committee, staff will recommend to Council that this work be considered as part of the 2023 work plan.

Next Steps

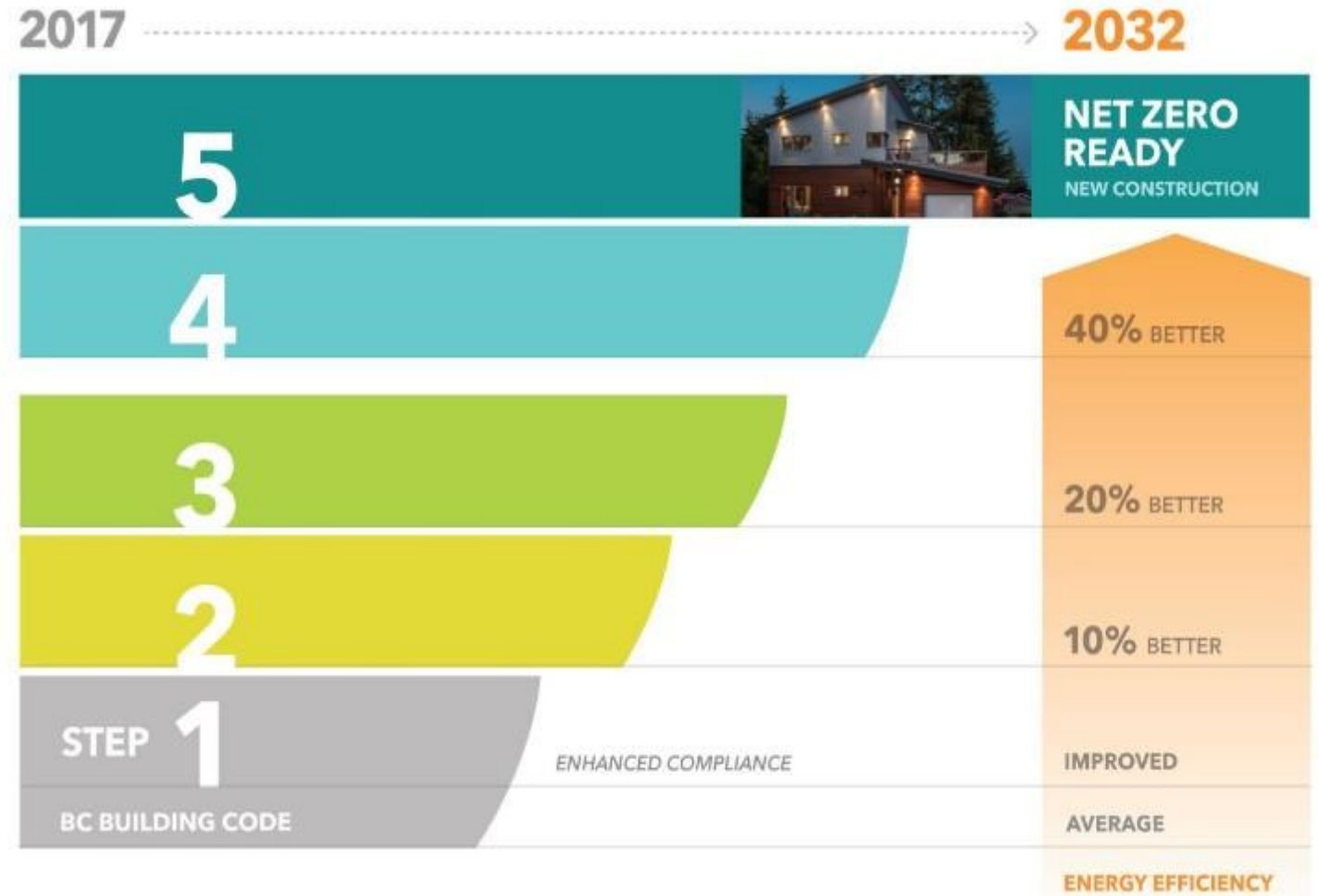
Once a motion is adopted:

- **Staff will assess the feasibility of implementing a two-option Step Code framework (Step 5 OR Step 3 with low carbon energy system).**
- **Report will be presented to Council summarizing the motion and related context.**
- **Council directs staff to undertake next steps.**

What is Energy Step Code?

An energy efficiency compliance path that is designed to drive steady increases in energy efficiency in new construction.

The Step Code has a tiered set of performance metrics that measure the building's heating needs, mechanical system efficiency and airtightness.



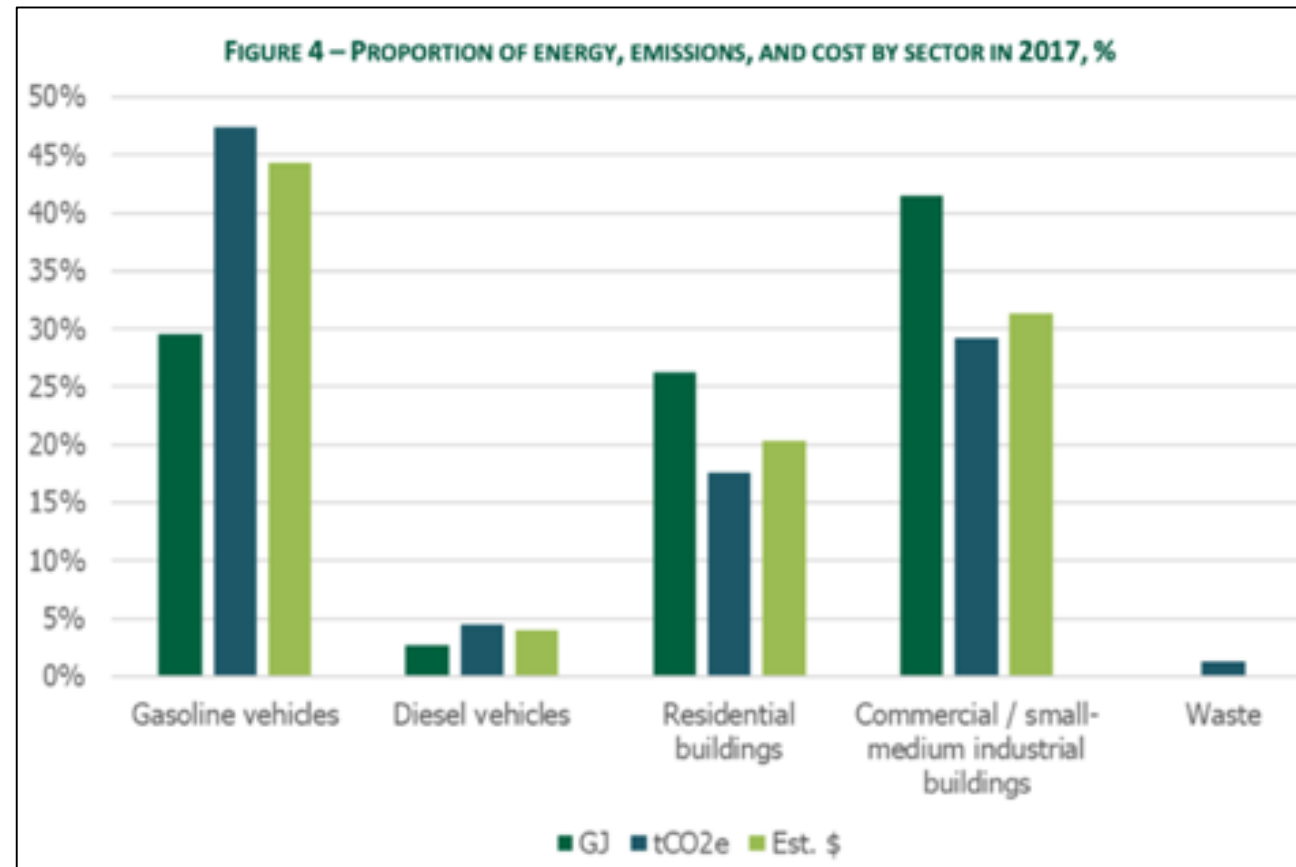
New Westminster's Step Code Requirements

CITY BUILDING BYLAW REQUIREMENT		
	<i>Building Permit applications filed on or after</i>	
Part 9 Residential	March 31, 2019	January 1, 2020
Single Detached and Semi-Detached Homes	Step 1	Step 3
Laneway and Carriage houses	Step 1	Step 2
Triplexes, Townhomes and Stacked Townhomes*	Step 1	Step 3
Part 3 Multi-Unit Residential	March 31, 2019	January 1, 2020
Wood-Frame Residential	N/A	Step 3 [OR] Step 2 with approved Low Carbon Energy System[†]
Concrete Residential		
Hotels/Motels [◊]		
Part 3 Commercial	March 31, 2019	January 1, 2020
Office	N/A	Step 2
Retail / Mercantile (Group D and E Occupancies)		

Key Drivers for Emissions Reductions

Emissions from residential buildings accounted for 18% of the city's total community GHG emissions in 2017.

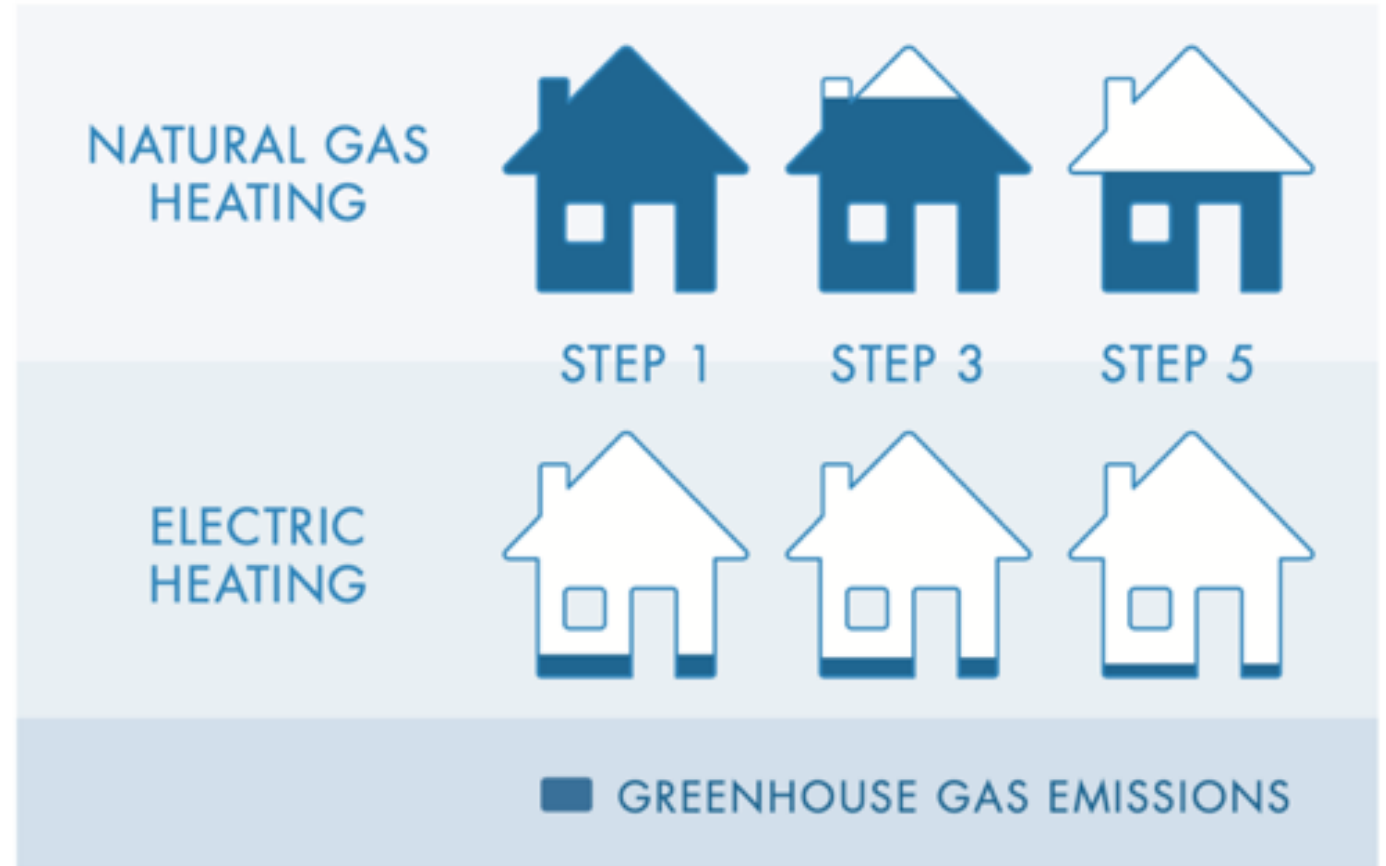
This is largely associated with natural gas consumption for heating residential homes (including single detached and multi-family).



The Case for Electrifying

Buildings with natural gas heating have a higher GHG emissions footprint than lower 'step' buildings that are completely electric (only because power in BC is from Hydro and a full environmental impact is not addressed).

Energy conservation is vitally important to reduce overall consumption and demand.



Adapted from Metro Vancouver original. Data source: BC Housing and the Energy Step Code Council 2018 report.

A Two Option Framework

Building Type	Building Permit Application			
Smaller Part 9 Residential	Late 2018	Early 2020	TBD	TBD
Townhomes & Low-rise Apartments	Step 1	Step 3	Step 5 or Step 3 with LCES	Step 5 or Step 4 with LCES
Single Detached Dwelling, Duplex & Other Residential	Step 1	Step 3	Step 5 or Step 3 with LCES	Step 5 or Step 4 with LCES

- Municipalities do not yet have the ability to regulate fuel source or domestic hot water.
- Two option Step Code framework:
 - supported by provincial policy & Step Code
 - incentivizes builders to adopt low carbon energy systems
 - provides builders with greater flexibility and supports building electrification.

What are other municipalities doing?

Step Code Schedule for Part 9 Buildings (Single Detached Dwellings, Duplexes & Triplexes)

Municipality	2021	2022	2025
West Vancouver	Step 5 <i>OR</i> Step 3 + LCES	Step 5 <i>OR</i> Step 3 + LCES	Step 5 <i>OR</i> Step 4 + LCES
Vancouver	Step 4 <i>OR</i> Step 3 + LCES	Step 5 <i>OR</i> Step 3 + LCES	Step 5 <i>OR</i> Step 4 + LCES
District of North Vancouver	Step 5 <i>OR</i> Step 3 + LCES	Step 5 <i>OR</i> Step 3 + LCES	Step 5 <i>OR</i> Step 4 + LCES

Key Considerations

- Building Code changes will incorporate a greenhouse gas emissions intensity (GHGi) metric to regulate fuel selection. Staff will explore how best to implement in New Westminster.
- High upfront costs for Step 5 can be leveraged to incentivize Step 3 plus low carbon energy system (LCES) option.
- No City procedures in place for processing applications using a LCES.
- Staff and Industry training, and capacity building is needed to advance higher performance buildings.
- Verification and inspection of low carbon energy systems is an industry wide challenge.
- Single detached dwellings are the simplest applications, and provide the City and community a great learning opportunity that can shape future policy.

Discussion

THAT EnCAC encourage New Westminster City Council to adopt a CEEP which includes a plan to create regulations by 2023 in New West for new construction of single family dwellings that require builders to achieve level 5 of the STEP code, the highest standard for building energy efficiency, or if the builder uses a low-carbon (usually electric) system for heat and hot water, the STEP code is relaxed to level 3.



Thank You!

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City of New Westminster

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NEW WESTMINSTER

High-performance buildings - Identifying Gaps

In order to enable and incentivize the construction and occupancy of more high-performance buildings, we need to account for all the forces acting in the market.

At minimum, we need the appropriate technology and procedures as well as the workmanship that would, together, result in increased performance. Our assessment of performance should account for both energy-efficiency as well as durability. If we had to rip out high-performing buildings every 10 years and build new ones, it would be counterproductive. Durability is characterized by longevity, serviceability and long-term suitability.

For example, a window replacement that requires destruction of the building envelope or structural framing is less serviceable than a window replacement that can be done with no disruption to other key building elements. Similarly, a focus on single-family homes in an urban environment that aims to increase high-density housing would be less suitable to long-term urban planning.

For us to get closer to our goals, we need to account for all the different pieces of the puzzle in a systemic manner. Existing gaps can better be identified this way.

One immediate concern is the patchwork of information out there which are disaggregated and scattered. Would we benefit from an effort to aggregate and centralize best practices?

