



# Energy Step Code

## BC's Transition to Net Zero Energy Ready New Buildings

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Building and Safety Standards Branch

Climate Action Leadership Symposium – November 22, 2016



Office of Housing and  
Construction Standards



# Leadership and Innovation in BC

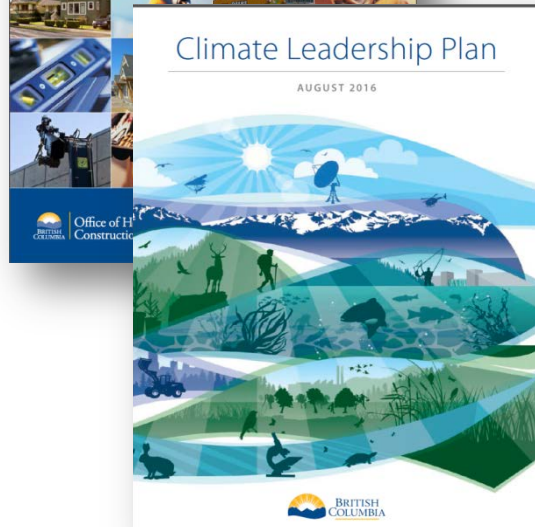
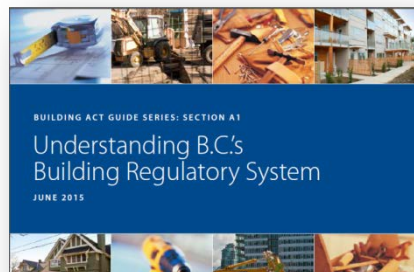


**Brock Commons UBC**  
Photo: Acton Ostry  
Architects





# Context



## Building Act

- Consistency, Competency & Innovation
- December 2017 – end of ‘local building requirements’
- New tools and opportunities

## Climate Leadership Plan

- ‘Net zero ready’ by 2032
- ‘Stretch Codes’ for local governments to implement
- Refresh the Climate Action Charter



# Energy Efficiency Working Group



NGOs

Utilities

Local  
Governments

Province

Developers  
& Builders

Professionals  
& Trades





# Energy Step Code – Overview



## Current state:

- Range of programs and approaches to improve efficiency in each community
- Inconsistency
- Not compatible with the Building Act

## Common issues:

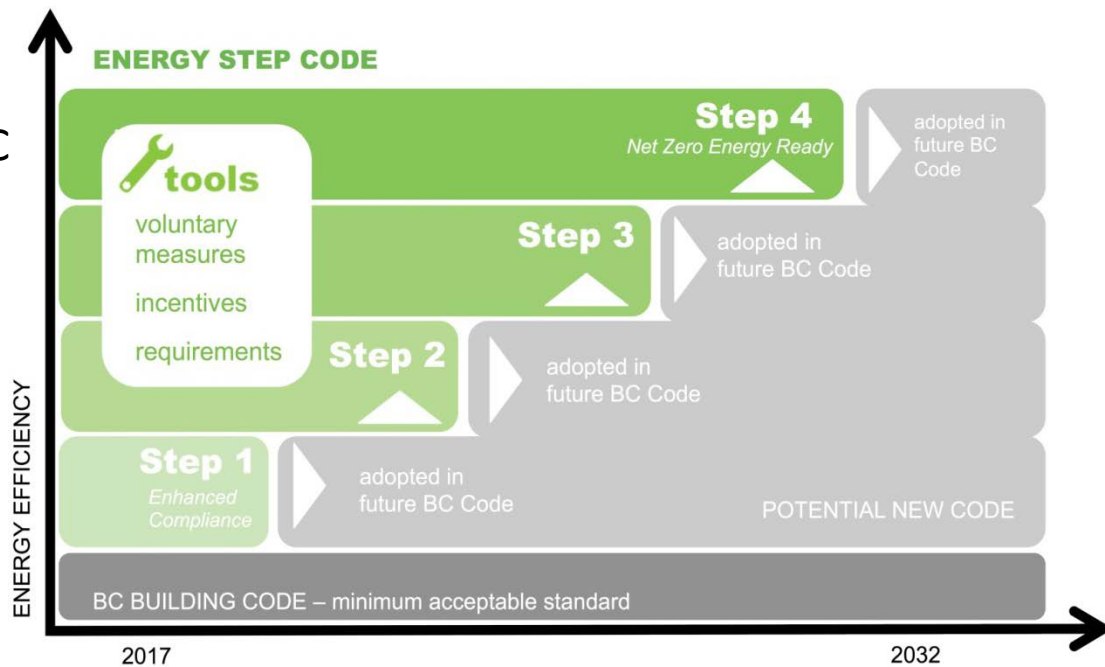
- 'Points' vs. Performance
- The occupant paradox



# Energy Step Code – Overview

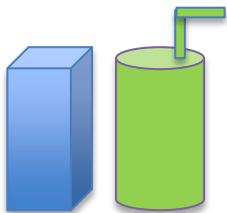
## Recommendation:

- Single 'Step Code' for all of BC
- Flexible to the needs and capacity of all communities and industry
  - Performance
  - Efficiency, not Carbon
- Steps to Net Zero buildings by 2032





# Metrics – What Gets Measured (Pt. 9)

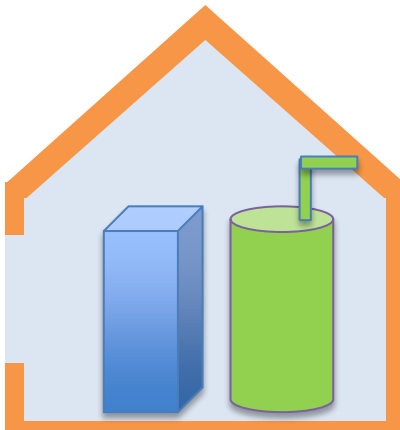


Mechanical Energy:

ERS Reference  
House

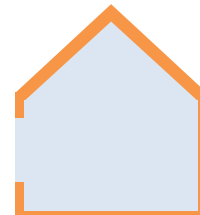
OR

Mechanical  
EUI



Envelope:

Thermal Energy  
Demand Intensity



OR

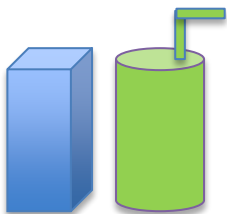
Peak Thermal  
Load

AND

Air Tightness



## Metrics – What Gets Measured (Pt. 3)



Mechanical Energy:

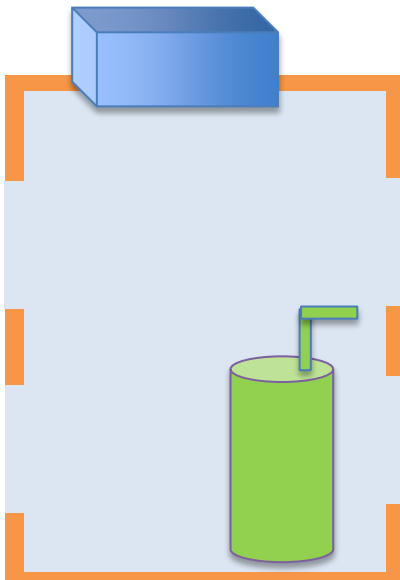
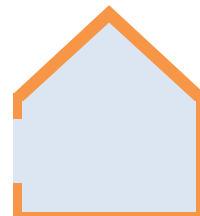
Total EUI

Envelope:

Thermal Energy  
Demand Intensity

AND

Air Tightness







# Proposed Implementation

## Step Code Regulation (December 2016)

Step Code – Purely  
Technical Regulation



**Immediately available  
for voluntary incentive  
programs or builders  
to optionally build to.**

**Opt-in  
Process**



## Opt-in Regulation (December 2017)

List of communities  
and steps they may  
reference in bylaw



**Approved local governments  
will be able to 'require', in  
bylaw, that builders build to a  
particular performance step.**



# Public Sector Leadership



## Opportunity for the Public Sector

- Cost/benefit
- Benefits Beyond the Building
- Institutional & Unique Occupancies
- Community Scale Innovation
- Relationship to GHGs





# Questions?

Building and Safety Standards Branch

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Office of Housing and  
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