Bertine Stelzer
Program Manager
BC Hydro

Co-Chair
Energy Step Code Capacity Building and Communications Sub-Committee
TWO PROVINCIAL INITIATIVES SET THE STAGE

Building Act
- Consistency, Competency & Innovation
- December 2017 marks the end of local building requirements in bylaws.

Climate Leadership Plan
- Establishes a target that all new construction will be net-zero ready by 2032.
CHANGING THE BUILDING CODE...
CHANGING THE BUILDING CODE… BARRIERS

• Complex systems
• Many stakeholders
• Different standards
ENERGY EFFICIENCY WORKING GROUP

PROVINCIAL GOV.

BUILDERS & DEVELOPERS

TRADES & PROFESSIONALS

LOCAL GOVERNMENTS

NGOs

UTILITIES
City of Vancouver

2014
One certified Passive House

2019
4,240 residences
80 projects*
Step 4 Home at same market price as “Code built” home
City of Nanaimo

2018

Passive House certified Indigenous Housing
CHANGING THE BUILDING CODE… ROADMAPPING
CHANGING THE BUILDING CODE... BACKCASTING
STEPS AND BUILDING ARCHETYPES

UPPER STEPS

<table>
<thead>
<tr>
<th>PART 3 Residential</th>
<th>PART 3 Wood Frame Residential</th>
<th>PART 3 Concrete Residential</th>
<th>PART 3 Commercial</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEPS 4, 5</td>
<td>STEP 4</td>
<td>STEPS 3, 4</td>
<td>STEP 3</td>
</tr>
</tbody>
</table>

LOWER STEPS

| STEPS 2, 3         | STEPS 2, 3                    | STEP 2                      | STEP 2            |

STEP 1

| STEP 1            | STEP 1                        | STEP 1                      | STEP 1            |

BC BUILDING CODE

ENERGY EFFICIENCY
BC ENERGY STEP CODE: PART 9 BUILDINGS
WHAT DOES IT MEASURE?

Performance Requirements For:

✓ Building envelope

Losses
- Air tightness
- Insulation

Gains
- Solar gain
- People and equipment

"Units of heat energy required for constant temperature after losses and gains (ignores equipment efficiency)."
WHAT DOES IT MEASURE?

Performance Requirements For:
✓ Building envelope
✓ Equipment and systems

Energy Use
• Heat
• Water heating
• Ventilation
• Lights and plug loads
  (large buildings only)
WHAT DOES IT MEASURE?

Performance Requirements For:

✓ Building envelope
✓ Equipment and systems
✓ Post-construction testing
  • Airtightness
PERFORMANCE COMPLIANCE

Energy modeling

Air-Tightness Testing

No Prescriptive Requirements
CONTINUED IMPLEMENTATION SUPPORT
ENABLE LOCAL GOVERNMENT LEADERSHIP
BUILD INDUSTRY CAPACITY
ENABLE COMPLIANCE
How do we do?

Local government uptake… within one year

- As of March 2022 – 52 Local Governments have implemented the BC Energy Step Code into their Building Bylaws
- Approximately 85% of new construction in BC
- 92% of licensed builders in BC are aware of the BC Energy Step Code
- 78% of licensed builders in BC have built housing that meets one of the steps of the BC Energy Step Code

Source: BC Housing Licensed Residential Builder Survey 2021
WHAT’S NEXT?

• **Implementing Step 3 Province Wide**
  • Step 3 Performance level (20% better) will be mandatory as of 2022
  
• **Zero Emissions Buildings**
  • Introduce a Carbon Pollution Standard into the BC Building Code
  • Opt-in regulation for local governments starting 2022