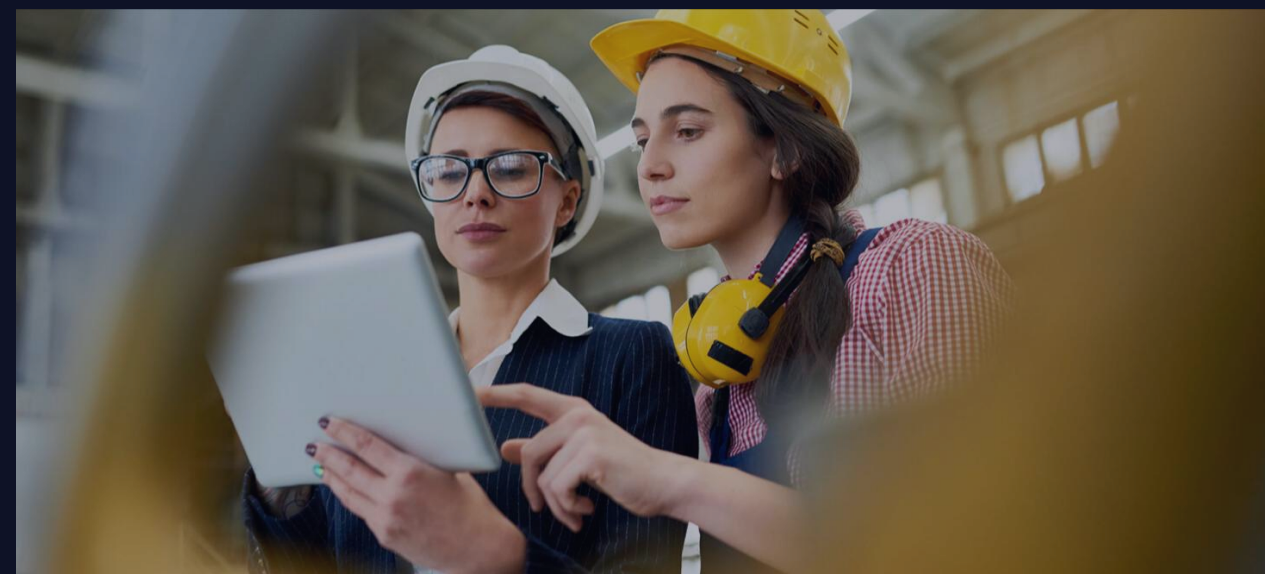




Alterations to Existing Buildings... Code Progress?

Betsy Agar, Director of Buildings Policy

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Efficiency Canada is the national voice for an
energy efficient economy.

We envision a future where Canada uses energy
efficiency to its **fullest potential**.





Our expertise

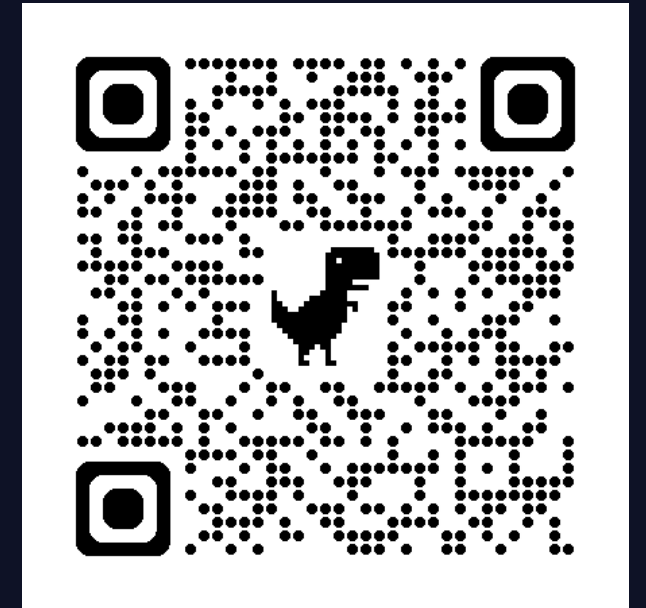
- Research and identify effective energy efficiency policies
- Communicate the benefits and significance of investing in energy efficiency
- Mobilize the energy efficiency community for collective action and change



Key Efficiency Canada contributions

2018 –now

- Provincial Scorecard
- Policy Database
- Energy Trailblazer Program
- Canada Home Energy Justice Conference
- Ally Network and communities of practice
- And more!



Code Trivia!

Are you smarter than... my Google search?



Code Trivia!

Are you smarter than... my Google search?

1. What does CBHCC stand for?	Canadian Board for Harmonized Construction Codes
2. What does it replace?	Canadian Commission on Building and Fire Codes (CCBFC)
3. What Canadian agreement prompted the new CBHCC code system management?	Canadian Free Trade Agreement (CFTA)
4. What kicked off the Alterations to Existing Buildings Code?	Pan-Canadian Framework on Clean Growth and Climate Change (PCF)
5. What year was AEB supposed to be released?	2022

...it's a little late



Today's topics

National

BC status

Hot take

Discussion

Text questions: 604-655-2932





NMCC AEB

‘Retrofit Code Committee’

2025 Focus

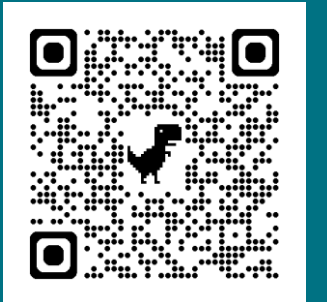
- What’s in
 - Practical
- What’s out
 - Restrictive





AEB

‘Retrofit Code’



- What’s in
 - Energy efficiency
 - Replacement triggers
- What’s out
 - Embodied carbon
 - Future weather files





NBC

Part 9 impacts

- What's in
 - Relaxations
- What's out
 - Regressions





BC Energy Code for Existing Buildings

- 2018 CleanBC
- Engagement, election
- 2020 National AEB report
- 2022 CBHCC
- Engagement, election
- 2025 wait and see what the feds do





Retrofit code hot take

What is it good for?

Why should I care?

- Empower a sophisticated industry
- Equip with consistent guidance
- Give sense of security in planning
- Point to government supports

Next public meeting: May 12

Questions: 604-655-2932



Discussion

NMCC-AEB



Case study 2 — Replace windows and upgrade cladding

Case study 14 — Replace hot water tanks



Case study 2

Replace windows and upgrade cladding

- 1960's house
- Retrofit plan:
 - Windows:
 - Replace existing U-4.0 windows with \leq U-1.6
 - Cladding:
 - Replace existing vinyl with wood siding
 - Insulation:
 - wood siding may qualify if applied to sheathing with no air space
 - Air sealing:
 - Sprayed polyurethane foam around rough opening
 - Existing air barrier assumed to be in good condition.
 - If deteriorated, then opportunity to replace



Case study 2

Replace windows and upgrade cladding

1. Trigger: System upgrade
2. Exemption / alteration: Minor alteration
3. Principles to determine relaxations:

- | | |
|---|---|
| X Principle 1: performance gap | ✓ Principle 6: Allowing a degree of flexibility |
| X Insulation | ✓ Windows |
| ✓ R-eff > R-nom with spray foam, new windows | X Insulation |
| ✓ Principle 2: life safety and overall building performance level | X Air barrier |
| ✓ Gypsum | X Vapour retarder/barrier |
| X Insulation to NBC2015 | ☐ Principle 7: Recognize heritage elements |
| ☐ Principle 3: Avoiding negative | ✓ Principle 8: Complementary voluntary policies |
| ☐ Principle 4: Cannot be left in an unsafe state | ✓ Voluntary incentives to do more |
| ☐ Principle 5: Reasonable, pragmatic, effective | |



Case study 14

Replace hot water tanks to reduce energy consumption

- 2010's residential building
- Retrofit plan:
 - Replace several electric hot water tanks (service water heaters)
 - New hot water tanks will have similar capacity as the hot water tanks they are replacing.
 - The electrical services for the hot water tanks are not being replaced.



Case study 14

Replace windows and upgrade cladding

1. Trigger: System upgrade
2. Exemption / alteration: Minor alteration
3. Principles to determine relaxations:
 - ☐ ~~Principle 1: performance gap~~
 - ☐ ~~Principle 2: life safety and overall building performance level~~
 - X Principle 3: Avoiding negative
 - X Pipe / heat trap insulation
 - ☐ ~~Principle 4: Cannot be left in an unsafe state~~
 - ☐ ~~Principle 5: Reasonable, pragmatic, effective~~
 - ☐ ~~Principle 6: Allowing a degree of flexibility~~
 - ☐ ~~Principle 7: Recognize heritage elements~~
 - ✓ Principle 8: Regulatory and voluntary complementary
 - ✓ Voluntary incentives to do more



Connect with me

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Join Efficiency Canada's ally program!



Questions? Text: 604-655-2932

