Overview of proposed changes to the NECB 2017 and NBC 2015

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Agenda

- Introduction
- Proposed changes and areas of interest
  - Tiered Codes
  - Envelope measures
  - “Shell” buildings
  - Support for EnerGuide
- Advocating for a transition to absolute energy performance targets
- Public review process
- Discussion

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

Our mission is to create a sustainable environment and better life for all Canadians by making our country a global leader in energy efficiency policy, technology, and jobs.

We conduct rigorous policy analysis; communicate compelling narratives; and convene and mobilize Canada’s dynamic energy efficiency sector.

Efficiency Canada is housed at Carleton University’s Sustainable Energy Research Centre

Support for Model Codes

- Timeline for tiers
- Energy labelling
- Build capacity
- Support compliance
- Transition to absolute performance targets
- Communications and stakeholder councils

Tiered Codes have arrived!

1527 of the NECB proposes 4 Tiers

- Tier 1 equivalent to NECB 2020
- Tiers 2, 3 and 4 are 25%, 50% and 60% better than reference

1617 of the NBC proposes 5 performance Tiers

- Tier 1 similar to the balance of Section 9.36
- Tiers 2-5 similar to ENERGY STAR, R2000 and NZER

1617 also offers a 4 Tier prescriptive path

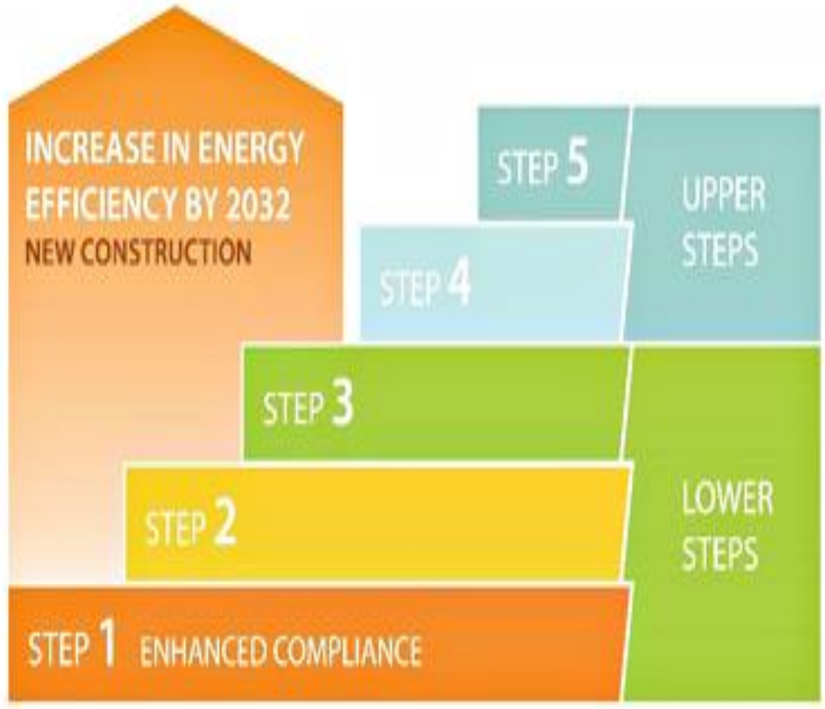

Figure 1: BC Step Code for Part 9 buildings

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Setting the stage:

Strategic supports for the Tiered Code

1. A roadmap for progressive tiers
2. Build capacity
3. Communication materials
4. Clarify NECBs highest tier
5. Phase out prescriptive paths

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NECB Envelope measures

- 1536 reduces U-values for fenestration

- 1537 reduces U-values of the building assembly

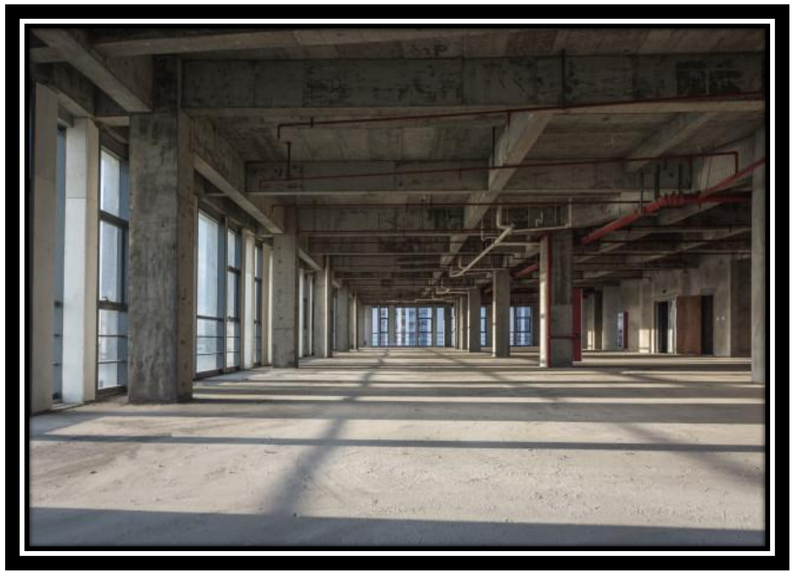
- 1541 reduces the maximum allowable prescriptive fenestration and door to wall ratio (FDWR)

- 1414 introduces air tightness testing procedures and a performance value for whole building

- 1610 introduces requirements on the measurement of airtightness in buildings

Closing the “shell” loophole

- 1409 of the NECB makes clear that a building is not considered complete until it is whole
- Ensures that alterations to and within a “shell” buildings comply with the NECB
- Less confusion for AHJs



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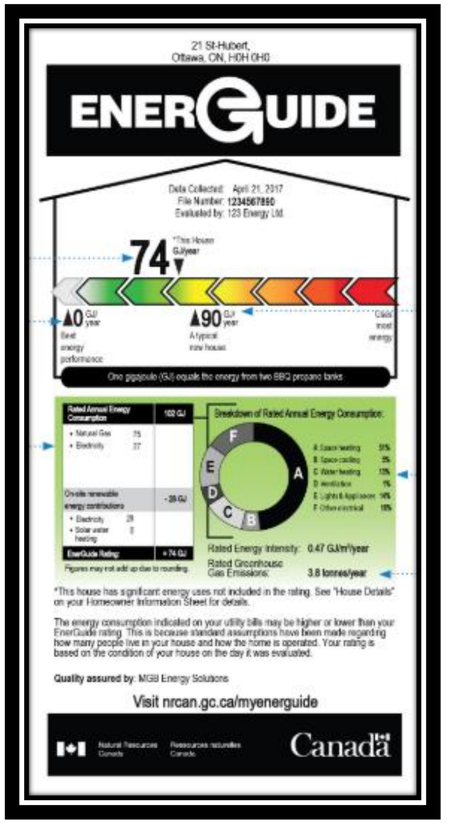
Support for the EnerGuide Rating System (ERS)

1608 aligns NBC Section 9.36.5 with ERS

1620 introduces the ERS as an alternative compliance path NBC Section 9.36.5

Together, these changes:

- Enable performance-based codes, home energy labeling, and housing energy programs
- Streamline efforts for builders and reduces duplication



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Transition towards absolute energy performance targets

Reference approach

- Not suited to a transition to NZER
- Creates confusion amongst industry
- Does not predictably reduce energy use

Absolute approach

- Improves consistency in energy & environmental outcomes
- Incorporates passive measures
- Increased resilience

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The Public Review, not a typical submissions process…

- Only comments directly related to a proposed change
- Must specifically address previously identified issues
- The number of comments is not considered
- Backed with technical reasoning
- Only submitted through the CCBFC comment form

Questions?

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Overview: Proposed Tiers of the 2020 National Energy Code for Buildings (NECB)

- Minimum Tier 1 requirements are equal to the prescriptive provisions of NECB 2020.
- Tier 2-4 energy performance levels can be reached using current technology.
- Tier 4 targets generally meet or exceed ASHRAE targets for NZER.
- Code compliance is based on relative performance or prescriptive criteria

Overview: Proposed Tiers of the 2020 National Building Code (NBC)

- Performance-based with 5 tiers and prescriptive path based on 4 tiers.
- Tier 1 generally equal to Section 9.36. of NBC 2015.
- Tiers 2-5 roughly follow ENERGY STAR, R2000, and CHBA's NZER
- Tier 5 more difficult to reach in cold climate zones and/or homes heated with natural gas