



Potential Changes to Ontario's Building Code
Summer and Fall 2017 Consultation:
Houses

Purpose

- To provide information on proposed changes to the Building Code for new Houses as described in the Overview Summary Document entitled “[Potential Changes to Ontario’s Building Code: Summer and Fall 2017 Consultation](#)”.
- To respond to questions of clarification and technical issues.

Context – Climate Change Action Plan

- “... the government intends to update the Building Code with long-term energy efficiency targets for new **net zero carbon emission** small buildings that will come into effect by 2030 at the latest, and consult on initial changes that will be effective by 2020. Ontario will consult on how to best achieve these targets through Building Code improvements.”

Source: [Climate Change Action Plan June 2016](#)

Energy Efficiency and Ontario's Building Code

- Energy efficiency requirements have been included in Ontario's Building Code since its inception in 1975, and have been enhanced in each subsequent edition.
- Ontario's Building Code is objective-based.
- Energy efficiency has been an objective since 2006.
- Since then, the Building Code has set “stretch codes” for intended future levels of performance improvement years before the energy efficiency requirements come into effect.
 - Requirements included in the 2006 edition of the Building Code came into effect in 2012. As a result, a new house built in 2012 consumed 60 per cent of the energy of an equivalent 2005 house.
 - Requirements in the 2012 edition of the Building Code further improved energy efficiency. These requirement came into effect in 2017. As a result, a new house built in 2017 will consume 50 per cent of the energy of an equivalent 2005 house.
- This makes Ontario's Building Code one of the most advanced energy efficiency regulations in North America.

Next Edition of Ontario's Building Code: Consultations

- The ministry is currently seeking input on proposed requirements to reduce greenhouse gas (GHG) emissions in the building sector through changes to the Building Code in support of the government's Climate Change Action Plan.
- Proposals are detailed in the Overview Summary Document "[Potential Changes to Ontario's Building Code: Summer and Fall 2017 Consultation](#)".
 - Note: 22 of the 25 code change proposals related to Climate Change Action Plan commitments.
- Proposals include:
 - higher energy efficiency performance levels for houses and large buildings in the next Code cycle
 - requirements for EV charging in multi-unit residential buildings
 - energy efficiency requirements for renovations in houses and large buildings
 - requirements that support climate change adaptation (hurricane straps)
- The deadline for providing feedback is **September 29, 2017**.

Building Code Change Implementation Timelines: Proposed to come into effect January 1, 2019

Proposals include:

- energy efficiency requirements for renovations
- electrical vehicle charging in new multi-unit residential buildings
- green building standards and green roofs
- referencing a new standard for grey-water reuse
- water conservation
- solar-ready roofs
- hurricane straps in new houses
- option to meet air tightness targets in exchange for credits in large buildings
- other technical proposals

Building Code Change Implementation Timelines: Proposed to come into effect 2020

Proposals include:

- Energy efficiency requirements for **houses**:
 - continuous insulation
 - triple-pane windows and sliding doors
 - air leakage testing
 - further limitations to building envelope trade-offs
- Energy efficiency requirements for **large buildings**:
 - removal of insulation exceptions to reduce thermal bridging effects

Building Code Change Implementation Timelines: Proposed to come into effect 2022

Proposals include:

- 20 per cent decrease in energy **consumed by houses**:
 - air tightness requirement
 - improved wall insulation
 - under-slab insulation
 - more energy efficient triple-pane windows and sliding doors
 - eliminating building envelope trade-offs
 - enhanced mechanical equipment efficiency

Building Code Change Implementation Timelines: Proposed to come into effect 2022

Proposals include:

- 20 per cent decrease in energy **consumed by large building types**:
 - mandatory air tightness testing without concern for results
 - further limitations to building envelope trade-offs
 - expansion of heat or energy recovery requirements to apartment buildings

Proposed Requirements for Houses: Effective 2019

Key points

- Allows building construction industry to continue to make adjustments to the changes that came into effect January 1, 2017.
- Housekeeping and removal of redundant building code requirements
 - Building Code's "Supplementary Standard SB-12 – Energy Efficiency Requirements for Housing" will remain unchanged and will be relabeled as "SB-12A".
- Obsolete provisions in Part 12 of the Building Code will be replaced as follows:
 - Provisions titled "Energy Efficiency Design Before January 1, 2017" will be replaced with the title "Energy Efficiency Design after December 31, 2018".
 - Remove reference to Federal government's redundant energy efficiency rating scale (i.e. EnerGuide 80).

[Link for proposal # 2-CC-B-12-02-01 with Code Reference Div. B, 12.2.1.1.](#)

Proposed Requirements for Houses: Effective 2020

Key points

- Facilitates up-take of building construction products and practices needed to reduce GHG emissions from new house construction.
- Helps prepare building construction industry to meet increasingly stringent energy efficiency standards for new homes in the future.
- Energy efficiency performance improvement:
 - Mandatory continuous insulation in all walls in new house construction regardless of the chosen compliance path (prescriptive/performance), see SB-12A.
 - Mandatory triple-pane windows and sliding doors (U-value of 1.4).
 - Mandatory air-tightness testing (results to be posted next to electrical panel).
 - Reducing trade-offs between building envelope and mechanical components from 25% to 10% for builders that adopt the performance-based compliance approach.

[Link for proposal # 2-CC-B-12-02-03 with Code Reference Div. B, 12.2.1.3.](#)

Proposed Requirements for Houses: Effective 2022

Key points

- Significant energy efficiency performance improvement of 20% approx. over 2020 energy efficiency performance levels.
- Obsolete provisions in Part 12 of the Building Code will be replaced with up to date provisions:
 - Replace provisions titled “Energy Efficiency Design After December 31, 2018” with provisions titled as “Energy Efficiency Design After December 31, 2021”.
- Building Code’s “Supplementary Standard SB-12A – Energy Efficiency Requirements for Housing” will include more stringent measures and will be relabeled as “SB-12B”.
- Mandating air-tightness targets:
 - 2.0 air changes per hour (detached houses).
 - 2.5 air changes per hour (attached houses).

Proposed Requirements for Houses: Effective 2022

Key points

- Higher insulation levels throughout the house including:
 - Mandatory continuous insulation, in exposed floor assemblies (e.g. above an unheated garage space).
 - Mandatory under-slab insulation.
- More energy efficient windows and sliding doors.
- More energy efficient mechanical equipment with an increase in minimum standards for all types of equipment e.g. furnaces, boilers, water heaters.
- Eliminating building envelope trade-offs between building envelope and mechanical components for builders that adopt the performance-based compliance approach.

[Link for proposal # 2-CC-B-12-02-05 with Code Reference Div. B, 12.2.1.2. and 12.2.1.5.](#)

Green Construction Requirements

- To support the goals of the Climate Change Action Plan the government committed to:
 - Consider legislative amendments that would set the stage for municipalities to pass by-laws to reduce building emissions where relevant technical standards exist in the Building Code but are not mandatory.
- On May 31, 2017, the Ontario Legislature passed Bill 68: Modernizing Ontario's Municipal Legislation Act 2017.
 - 97.1 (1) Without limiting sections 9, 10 and 11, those sections authorize a local municipality to pass a by-law respecting the protection or conservation of the environment that requires buildings to be constructed in accordance with provisions of the building code under the *Building Code Act, 1992*, that are prescribed under that Act, subject to such conditions and limits as may be prescribed under that Act.

Green Construction Requirements

- Bill 68 amended the *Municipal Act, 2001*, the *City of Toronto Act, 2006*, and the *Building Code Act, 1992*, to establish authority for municipalities to pass by-laws requiring green construction practices but only if the following criteria are met:
 1. The by-law must be in respect of the protection or conservation of the environment.
 2. The by-law can require that buildings must be constructed in accordance with certain Building Code technical requirements.
 3. Power would not be able to be exercised until Building Code has been amended to list **specific** Code provisions for this purpose – a “Green Pick List”.
See: [Proposal 2-CC-A-01-04-01](#) .
 4. The by-law power is subject to any conditions and limits on the power that are specified in the Building Code.
 5. Power may only be exercised by single and lower-tier municipalities.

Green Construction Requirements

- The ministry is proposing to establish this “Green Pick List” in: [Proposal 2-CC-A-01-04-01](#).
- At this time, only green and white roofs (vegetative and reflective roofs) are on the proposed list.
- The changes in the *Municipal Act, 2001*, are also added to applicable law in the Building Code to enable an exception to Section 35.1 (the “supercedence” clause) of the *Building Code Act, 1992*.

Provide Feedback

- Consultation period for proposed changes to the Building Code consultation will conclude **September 29, 2017**.
- Feedback on the content of the proposed Building Code changes should be submitted by completing the online comment form.
- Comments on the proposed Building Code changes and discussion items can also be sent by mail to:

2017 Next Edition Building Code Consultation
c/o Building and Development Branch
Ministry of Municipal Affairs
16th – 777 Bay Street
Toronto ON M5G 2E5

Provide Feedback

- Technical Advisory Committees will meet after the consultation period closes to review comments and provide advice to the ministry.
- See Section 5 of the: “[Overview Summary Document - Potential Changes to Ontario’s Building Code: Summer and Fall 2017 Consultation](#)” for more details.
- Comments or questions of clarification can be submitted to:
 - by email: buildingcode.consultation@ontario.ca
 - by phone: 416-585-6666.