

150 Laurier Avenue W.
Suite 500
Ottawa, Ontario
K1P 5J4

T. 613 230 3060
F. 613 232 8214
E. chba@chba.ca
W. www.chba.ca

Canadian
Home Builders'
Association



Association canadienne
des constructeurs
d'habitations

RED ALERT

To: CHBA Builder and Developer Members
Local HBA Presidents and Executive Officers
Provincial HBA Presidents and Executive Officers

cc: CHBA Board of Directors

From: John Kenward, Chief Operating Officer

Date: July 12, 2010

Re: **National Energy Code for Buildings**

If you build large buildings, the new National Energy Code for Buildings (NECB) could have a **big impact on your business**. This new Code will affect new apartment buildings over 4 stories in height as well as larger commercial buildings. It does not affect houses or other Part 9 buildings.

Over the last year, the CHBA has intervened vigorously as the new NECB was being developed. We have expressed a high level of concern over many aspects of what is being proposed, and the lack of a proper analysis and data that would allow our industry to understand what the construction and cost impacts will be. **These concerns have not been addressed**, so these impacts remain unclear.

In October 2010, there will be a public consultation period on the new NECB. This may be **the last opportunity to improve the clarity and practicality of the new Code**. Comments coming directly from builders and developers, who can best determine how they will be affected, **will make a substantial and significant difference**. The CHBA is encouraging members to review the proposed NECB as soon as it is released, and let the Canadian Commission on Building and Fire Codes (CCBFC) know how it will **affect you and your customers**.

The CHBA will advise you when the consultation documents become available. A brief description of the main features of the new NECB is attached.

Reviewing the new Code is a large undertaking that will require significant time and effort. This RED ALERT is being issued now so that you can plan for this work. You may wish to begin by:

- Assembling a team to handle various sections of the new Code (Envelope, HVAC, Electrical).
- Taking stock of your current practices.

The CHBA is very concerned that the estimated cost impacts resulting from the proposed new NECB are unrealistic. Builders are in the best position to determine if this is the case – **you know what it costs to build today.**

Please note: A draft version of the new Code **is currently being reviewed by your provincial government department responsible for building regulations.** Provincial governments have the constitutional authority for building regulation. Your provincial government is represented on the Canadian Commission on Building and Fire Codes (CCBFC) through the Provincial/Territorial Policy Advisory Committee on Codes (PTPACC). A list of provincial representatives can be found [HERE](#).

While we wait for the public consultation process to begin, you may wish to contact your provincial PTPACC representative to express concern that, to date, our industry has **not been provided with clear and meaningful information on the cost impacts of the proposed new NECB.**

I will write again when the start date for the consultation is announced. In the meantime, if you have questions, please contact Don Johnston, Senior Director of Technology & Policy, at johnston@chba.ca .

The National Energy Code for Buildings (NECB) Outline of Proposed Requirements

Depending on location, midrise apartments designed to the new NECB will be 15% to 20% more energy efficient than if they had been designed to meet the current (1997) version of the NECB and 10% to 15% more efficient than if designed to ASHRAE 90.1 (2007).

The new Code will cover building envelopes, HVAC systems and Electrical systems including Lighting. A set of prescriptive requirements is the foundation of the new Code, while a performance compliance path allows alternative means to match these prescriptive requirements for the subject building. There will also be a capacity for trade-offs within each component (eg. between wall and roof insulation) that is not supposed to require complex modelling.

The new Code will use 6 climate zones and within each, there will be one set of requirements for all buildings regardless of occupancy, fuel source or construction system. Like ASHRAE 90.1, the Code uses a maximum window to wall area ratio to set a target efficiency level for building envelopes but unlike ASHRAE, the ratio varies with climate zone. The performance compliance path will offer some relief not available in the prescriptive path, although high prescriptive HVAC and electrical requirements may limit flexibility.

The following table provides the draft effective thermal transmittance requirements for building envelopes (expressed in metric U-value). Zone 4 corresponds to Victoria BC, Zone 5 includes Windsor ON, Zone 6 is Toronto ON, Zone 7A is Calgary & Edmonton AB, 7B is Fort McMurray, Zone 8 is Yellowknife.

Proposed Approach

| | Heating Degree-Days of Building Location ⁽¹⁾ , Celsius degree-days | | | | | |
|---|---|-------------------------|-------------------------|--------------------------|--------------------------|----------------------|
| | Zone 4: < 3000 | Zone 5: 3000 to 3999 | Zone 6: 4000 to 4999 | Zone 7A: 5000 to 5999 | Zone 7B: 6000 to 6999 | Zone 8: ≥ to 7000 |
| Maximum Overall Thermal Transmittance (W/m²K) | | | | | | |
| In Contact With the Ground | | | | | | |
| Walls | 0.568 | 0.379 | 0.284 | 0.284 | 0.284 | 0.210 |
| Roofs | 0.568 | 0.379 | 0.284 | 0.284 | 0.284 | 0.210 |
| Floors ¹ | 0.757 for 1.2 m | 0.757 for 1.2 m | 0.757 for 1.2 m | 0.757 for 1.2 m | 0.757 for 1.2 m | 0.379 full area |
| Above-Ground Component | | | | | | |
| Walls | 0.315 | 0.278 | 0.247 | 0.210 | 0.210 | 0.183 |
| Roofs | 0.227 | 0.183 | 0.183 | 0.162 | 0.162 | 0.142 |
| Floors | 0.227 | 0.183 | 0.183 | 0.162 | 0.162 | 0.142 |
| Fenestration ² | 2.4 | 2.2 | 2.2 | 2.2 | 2.2 | 1.6 |
| Doors ³ | 2.4 | 2.2 | 2.2 | 2.2 | 2.2 | 1.6 |