

BC Energy Efficiency Act Regulations for Windows, Glazing, Doors and Skylights

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Questions and Answers from Industry and the Public

Here are the responses to the questions sent to MEMPR between February 6 and April 10, 2009. These are sorted into two sections – “windows” and “doors and glazing for doors” below.

Windows

- 1. Compliance and Enforcement:** Can we get an update on progress in having previous regulations such as CSA testing compliance enforced? The tailgate operators now have a further advantage as they will ignore these new requirements as well as the existing ones. As I am sure you are aware business is dismal and the companies playing by the rules are being put at a further disadvantage at the worst possible time.
 - The Ministry will be developing an enforcement strategy for windows and doors in 2009.
 - An easy to understand enforcement bulletin will be developed in April 2009 and sent to all industry players by email and mail in late May 2009.
 - In addition, the Ministry will host a workshop on enforcement issues in the summer of 2009 with all window and door manufacturers and industry players to finalize the procedures for dealing with non-compliant manufacturers, distributors and builders.
 - In the meantime, if anybody is aware of non-compliant manufacturers, distributors and/or builders, please contact: Erik.Kaye@gov.bc.ca for immediate investigation.
- 2. Aluminium Windows:** I'm trying to gather as much information as possible on the future of aluminum sliding windows in high rise applications. Obviously, these window products will require testing, but I can't seem to determine if they will be permissible &/or what ratings will be allowed. I believe vinyl windows will never meet wind load requirements and there are literally thousands of high rise buildings with existing sliding windows that need to be upgraded. Any information on this topic would be greatly appreciated.
 - The regulations for high-rise windows will take effect on January 1, 2011. They are differentiated by the type of material.
 - The regulation for “Metal framed curtain wall, windows wall or storefront, with or without thermal break” is a maximum U-value of 2.57 W/m²/K.

- We are assuming that replacements for aluminum sliding windows are captured under this category.
 - The windows are exempt from the regulation if the building is compliant with ASHRAE 90.1 (2004 or 2007) Energy Standard for Buildings Except Low-Rise Residential Buildings.
 - For low-rise applications (less than 5 stories), the same regulation takes effect on June 1, 2009. This will be strengthened to 2.0 W/m²/K effective January 1, 2011.
3. **Aluminium Windows:** There is ambiguity on the *Energy Efficiency Act* website, with regard to aluminum windows. In one document, aluminum windows are not mentioned and in another document, it is noted that the proposed U-value maximum is 2.57 W/m²/K effective June 1, 2009 and 2.0 W/m²/K effective January 1, 2011. Can you please review and advise, as those we have directed to the on-line version of the act are now coming back to tell us they cannot find the information on line, and the pdf files that we are sending out do not contain the data either?
- The correct information is that the maximum U-value is 2.57 W/m²/K effective June 1, 2009 and 2.0 W/m²/K effective January 1, 2011.
 - You can direct customers to the Powerpoint presentation document noted at the beginning of this Q&A document.
 - The Ministry will also be posting a revised “Information Circular” on the regulation that will provide an official document to show your customers. This will be available in the coming week at the following website:
<http://www.empr.gov.bc.ca/EAED/EnergyEfficiency/Pages/EEAct.aspx>
 - Until this site is updated, please ignore following document, as that is out of date:
“IC08-04: Energy Efficiency Standards - Windows, Doors and Skylights”
4. **Aluminium Windows:** I live in a 4 story wood frame condo building which needs to undergo restoration for water issues. We need to replace the windows which we currently have double pane aluminum windows. We have two quotes from our construction tenders to replace the windows with double pane aluminum the same as we have now and triple pane aluminum. No one seems to know if the triple pane is now code effective Jan 1, 2009 or if the law is to take effect June 1, 2009. Can you answer the question?
- The effective date is for products manufactured after June 1, 2009.
5. **Aluminium Windows:** Regarding low rise (4 storey) buildings during rehabilitation, the Owners wish to install new aluminum windows to replace old units. Most aluminum window manufacturers cannot meet the new requirement in force since Jan 1, 2009. To meet the requirements, some manufacturers windows must be fabricated with higher costing triple glazing. Is there any update as to when the amendments will be official?
- The regulation was official as of March 13, 2009.
 - Metal windows manufactured after June 1, 2009 must have a U-value \leq 2.57 W/ (m².k)
 - Effective January 1, 2011, they must have a U-value \leq 2.0 W/ (m².k)

6. **Aluminium Windows:** We are in beginning stages of a rehab to our building this year. We have been dealing with an issue about window U-value rating. On page 8 of your report – Proposed standards for windows in low-rise buildings and skylights” Metal: U-value ≤ 2.57 W/ (m².k) effective June 1, 2009, U-value ≤ 2.0 W/ (m².k) effective January 1, 2011. My question is what U-value rating does our building fall under 2.57 or 2.0 if we rehab our building this year?
- Products manufactured after June 1, 2009 must be a U-value of 2.57.
7. **Building Permits:** I have a contractor that is saying that because he had his building permit prior to the *BC Energy Act* change that he is exempt from the 2.0 U value requirement. Is this correct?
- This is not correct. The *BC Energy Efficiency Act* applies to products manufactured after the effective date of March 1, 2009 for vinyl and fibreglass windows, June 1, 2009 for aluminium products and January 1, 2011 for wood frame products.
8. **Decorative Glass:** We would like to know if Grills are considered in the *BC Energy Efficiency Act*.
- If grills are a decorative feature within a sealed insulating glass unit and they are synonymous with “iron inserts”, then they are exempted from the regulation.
 - If they are not synonymous with “iron inserts”, then window assembly needs to meet the energy efficiency requirements.
9. **Developers:** I work for a developer in the lower mainland and have been hearing conflicting information about Low-E windows and when they are required. Our latest project is a 3 storey townhouse complex and is under way and I was wondering if you could let me know if we need to have Low-E windows installed.
- Windows installed in new, 3-storey construction need to meet the new regulated standards.
 - A low-E coating is a common way to meet the new standards.
10. **Exemptions:** My interpretation of the standard for energy efficiency is that the shed windows we sell for garages and the blinds between the glass patio doors are exempt from the 2.0 requirement.
- Shed windows for garages are exempt if they do not separate a heated space from a non-heated space. If they separate a heated from non-heated space, then they are subject to the regulation.
 - Doors are not subject to the 2.0 W/m²/K standard. Products with blinds contained in a sealed insulating glass unit are considered “decorative” and exempt from the prescriptive requirements for door glazing.
11. **Hotels:** Do windows for Hotels need to meet the requirements of the new BC Energy Act introduced January 1 of this year? Would windows for a Hotel be considered residential windows?
- All windows for hotels need to meet the requirements, differing slightly depending on whether the building is low-rise (less than 600m² of floor space) or high-rise.

12. Incentives, PST Exemptions and Programs: In looking at some communication being forwarded to me from our sales people, I'm not sure I'm clear on current tax exemptions for buying ENERGY STAR windows.

I understand that a consumer can save the PST until March 31st on Energy Star windows, is that correct? What happens after March 31st?

Will the consumer be paying PST or is there going to be another program? Is there a GST savings program in place too?

I've also been told of a \$30 or \$40 dollar rebate of some sort for buying windows that are one energy star zone better than the zone in which the windows will be installed. Can you offer me any guidance on that?

The BC Hydro website makes a bold statement of "Never Pay PST on Energy Star Windows". What am I missing here?

- The Provincial Sales Tax Exemption for ENERGY STAR qualified windows, doors and skylights was extended to March 31, 2011 under the 2009 Balanced Budget regulations. For more details see the following document on the internet:
http://www.sbr.gov.bc.ca/documents_library/bulletins/sst_011.pdf
- The LiveSmart BC: Efficiency Incentive Program provides a rebate of \$20-\$30 for ENERGY STAR windows, doors and skylights, matched by an additional \$30 from Natural Resources Canada through the ecoENERGY program. See the following website for more information:
<http://www.livesmartbc.ca/rebates>
- The BC Hydro program is promoting the PST exemption, but this exemption is currently scheduled to end on March 31, 2011:
http://www.bchydro.com/rebates_savings/windows_offers.html
- There is no GST exemption for windows.

13. Installation Issues: Recently we were advised by our dealer that there has been a change to the regulations with regards to new window installations and the application of jamb extensions. According to our dealer, a window is to be fully installed and sealed before the jamb extension is applied. It sounds like a good idea but we have not been able to find more information on this subject. Do you know any information on this, or can you please direct me to someplace or someone who does.

- This issue does not appear to be relevant to the BC *Energy Efficiency Act* provisions. They focus exclusively on the manufacturing of fenestration products, not the installation of them.
- I suggest you seek advice regarding the BC Building Code provisions on window installations.

14. Installation Issues: Now that we have energy efficient windows mandated for the province, we need to look at installation, or insulation, issues. To have a window that is warmer, but allow cold air to circulate back behind the inside pane of the sealed unit is highly conducive to destroying the original benefit. It is not done in the north, as the windows' interior would be a complete sheet of ice, and it is only done at the sill in the interior, but, is common place in the lower mainland. A bead of caulking at the windows interior, in place of insulation, either batt or

spray-foam, is wholly insufficient in an energy efficient effort. Aside from common practice, it is also part of the HPO guidelines for installation, and a practice that is spreading, although the concept of allowing water into the cavity and providing a path out is counterproductive when energy efficiency is a key. I think that this is the next logical area that needs to be reviewed and mandated if the province is serious about energy savings. It is a shame to mandate high quality windows, yet negate their value through inferior applications.

- The Ministry is not in a position to directly address window and door installation methods. These are currently regulated by the BC Building Code, and further addressed by the Homeowners Protection Office.
- The Ministry is also aware of CSA Standard A440.4-07: "Window door and skylight installation" which will be referenced in the 2010 National Building Code. At this time the Ministry believes that window and door installation will be adequately addressed in the next building code cycle.

15. **Labelling:** Can you review our labels please to make sure they will meet the guidelines for temporary labels. They are 8.5 x 11". We also affix the permanent XXXX (CERTIFICATION ORGANIZATION) label. We want to blend our CSA, instructions, and U-Value labels together to cut down on paper and labour.

- The removable label is required for products manufactured after June 1, 2009.
- Both removable and permanent labels must meet the requirements of the certification agencies that verify the product U-value.
- Please direct your labeling questions to them.

16. **Labelling:** It would be worth clarifying or putting the requirements for permanent labels within an appropriate template for window manufacturers to use. The label you had from before had some extra information, which doesn't appear to be needed (Production date, Structural A440 tests, file number). We are working with XXXX (CERTIFICATION ORGANIZATION) for our temporary and permanent labels, and apparently XXXX (NAME REMOVED) is the first company that has brought the new regulations up to them. We are proposing to produce a clear permanent label which has the following information. Our clients do not want a large gold-foil label with everything spelled out visible on the frame. We will be putting the clear label in the corner of the glass.

NFRC and XXXX are noted by Wordmarks. XXXX produces the labels and we buy them. Let us know what you think, or if you have a template you would like followed. I have found some conflicting information in your various presentations, which has also confused XXXX a bit.

- Both removable and permanent labels must meet the requirements of the certification agencies that verify the product U-value.
- Please direct your labeling questions to them.

17. **Labelling for Skylights:** I was just reviewing your recent presentation of the following requirement. Can you advise if there will be a standard format of label that will need to adhered

to and follow? “Effective June 1, 2009, removable label with verified average U-value in metric units, or separate labels with U-values of individual components”.

- There is no standard label required at this time.
- However, as noted in item #13 above, the WDMA-BC is working on a standardized label that could be considered in the future.

18. **Old Contracts:** We have a customer with a project which received its permit in Sept of 2008 - which we now are going ahead with - unfortunately the customer did not provide for the cost needed to now meet the Act - there are 2 bldgs involved with a total of 94 windows and delivery will be made mid March - my question - is there any exemption mechanism in place to handle this circumstance and if so what do you require from us to put it in effect.

- At this time, there is no exemption for products that received a building permit before the effective date of the regulation, but for manufacturing after the effective date.
- The Ministry aimed to provide significant notice on the regulation in order to prevent this sort of situation from occurring. Note that the regulation for windows was first announced in 2006, with an effective date of January 1, 2009.

19. **Test Standards:** As a manufacturer of vinyl and thermally broken aluminum windows we support any positive improvements and new technologies that make our product better and more efficient. At the same time we find it hard to understand why is it that our industry and the Government are more concerned with the U-value of the windows and not the whole picture of the energy loss and gain which is happening through the window surface. To the very best of our knowledge most of the ENERGY STAR windows sold in British Columbia deliver the same or slightly higher hydro bill as the basic double glazed clear annealed version. Future proposed regulations are not in favor of the energy saving option as well.

- The Ministry hosted a teleconference in the fall of 2008 with aluminium window manufacturers to discuss the implications of pursuing a U-value path for promoting energy efficiency, versus the “Energy Rating” (ER) method that was developed in Canada, and which I believe you are referring to. During these discussions, the Ministry received contradictory information regarding the merits of the ER method for application in coastal regions. It is noted that the ENERGY STAR program requires a maximum U-value when proponents are following the ER path. BC Hydro has also stated a position of supporting the U-value path. As such, the Ministry is maintaining a position of referencing a U-value for its energy efficiency standards.

20. **Test Standards:** There were questions about AAMA 507 for commercial glazing compliance. Despite what some have claimed, AAMA 507 is based on NFRC technical procedures, gives the same results, and is compliant with ASHRAE 90.1 as long as an independent accredited lab is used. It’s just a different way of packaging the same information that fits the custom nature of the commercial industry better.

- The International Code Council (ICC) has rejected the use of AAMA 507 as an alternative to NFRC for energy performance of windows:
<http://www.usgmn.com/newsNFRC20080220.htm>
- The Ministry will consider adopting AAMA 507 if the ICC takes a different position

Doors and Glazing for Doors

Note: there is a difference between the *Energy Efficiency Act* regulations for doors and the Provincial Sales Tax exemption for ENERGY STAR doors. The former are required for all doors sold in BC after June 1, 2009, while the latter are optional, in order to access the PST exemption.

21. **Decorative glazing exemptions:** It is my belief the decorative glazing exemption given to doorlites is designed to cover products similar to the attached. Technically the attached decorative glass unit is not "stained" nor have "iron inserts". It is also common for decorative glazing to include beveled, etched, frosted, stained glass with brass, nickel, platinum finished coming.
 - The exemption for decorative glazing in the regulation is very specific to those with "stained glass, iron inserts or blinds".
 - All other products must comply with the regulation for low-E, 90% argon and spacers bars other than non-thermally broken aluminium box spacer bars, effective June 1, 2009.
22. **Labelling:** Rather than specifics of the sealed unit being on a removable label, would it be acceptable to have wording such as "low e, argon filled, ss/bar" (stainless steel bar) stamped on the bar? This would avoid the necessity of printing labels and having our people remember to tag the units. On site this stamp would always be visible.
 - Note that the label for glazing for doors must be permanent, not removable.
 - The Ministry supports your suggestion of including the text on the spacer bar.
 - Note that a third-party certification organization must approve the content of the text.
23. **ENERGY STAR:** When does the ENERGY STAR program for doors take effect? Is the ENERGY STAR label to be applied to parts and components or a completed unit?
 - For details on the Provincial Sales Tax exemption for ENERGY STAR qualified products, please see: http://www.sbr.gov.bc.ca/documents_library/bulletins/sst_011.pdf
 - The ENERGY STAR requirements apply to the completed unit.
 - The ENERGY STAR program is voluntary
 - See the guidelines for ENERGY STAR doors at:
<http://oee.nrcan.gc.ca/residential/business/manufacturers/specifications/index.cfm?attr=4>
24. **Certification for Prehangers:** Will the completed unit have to be assembled in a certified prehanging shop or will just the components have to meet requirements and not the shop. As a prehanging shop what costs are associated with certification if they are required? We have been

a prehanger for over 20 years will we be able to continue hanging exterior units after the regulations take effect ?

- The *Energy Efficiency Act* regulations do not require certification at the pre-hanger level. The door slab and the door glazing purchased by the pre-hanger need to be certified and labelled as meeting the prescriptive standards.
- Pre-hangers will be able to continue operating after the regulations take effect.

25. **Effective Date:** After the door criteria goes into effect June 1 2009, Can a Manufacturer offer for sale any door panel and/or door lite if it is manufactured before the effective date?

- Only products manufactured after the date are subject to the regulation.

26. **Effective Date:** With the current economic down turn do you see this program being set off for the short term due to the cost associated with certification?

- The regulations for doors passed on March 13, 2009 and will take effect on June 1, 2009.

27. **Installation Issues:** How will you control the perfect energystar rated unit leaving a shop and being installed incorrectly basically rendering the unit non- energystar rated after installation?

- The Ministry is not in a position to directly address window and door installation methods. These are currently regulated by the BC Building Code, and further addressed by the Homeowners Protection Office.
- The Ministry is also aware of CSA Standard A440.4-07: "Window door and skylight installation" which will be referenced in the 2010 National Building Code. At this time the Ministry believes that window and door installation will be adequately addressed in the next building code cycle.

28. **Labelling:** Do I need labels for wood windows before Jan 1. 2011? Do I need labels for my solid panel wood doors on June 1, 2009? Do I need labels on my wood doors if there are sealed units in them by June 1. 2009 or Jan 1 2011? Is there a size requirement for the permanent label for the wood windows and doors?

- There is no label requirement for wood windows and door slabs before January 1, 2011.
- Wood windows will require a label for products manufactured after January 1, 2011.
- A future regulation may specify the energy efficiency standard and labelling requirement for wood slabs.
- There is no size requirement for labels.
- Effective June 1, 2009, third party labels are required to demonstrate that the prescriptive door slab and glass requirements are met.

29. **Standards for Glazing for Doors:** Are the prescriptive standards to be met by simply installing Low E, 90% argon with a compatible edge sealant system and spacer bars other than non-thermally broken aluminum spacer bars.

- Yes.