



## ENERGY STAR Initiative For Residential Windows, Doors and Skylights New Technical Specification Announcement

### Executive Summary

Over the past sixteen months Natural Resources Canada (NRCan) has conducted a consultation process with Participants and key stakeholders to develop a new version of the technical specification for ENERGY STAR qualified windows, doors and skylights sold in Canada. NRCan would like to publicly thank everyone who has taken the time to work with us or submit comments over the past 16 months. The results of the consultation process are as follows:

1. The effective date for the new specification is **June 1, 2010**.
2. All qualification levels for each product become more stringent.
3. Window models must meet a minimum ER requirement on the U-factor compliance path.
4. There is a new separate qualification table for doors.
5. Full structural testing is a requirement for windows, sliding glass doors and skylights. Certification for structural testing is not a requirement.
6. Insulating Glass Units are certified for durability effective **September 1, 2010**.
7. Mandatory labelling is effective **June 1, 2010**. This is a change from the previous date of September 1, 2009.
8. A transitional labelling strategy is being developed to help manufacturers adjust their labelling to the new specification.
9. All existing participants will be asked to sign a new Administrative Arrangement with NRCan before **June 1, 2010**.

### Effective Date

- The effective date for the new specification is **June 1, 2010**. On that date all models posted on the NRCan website will be qualified to the new specification.

NRCan will not be accepting any model submissions between May 1 and June 1, 2010. All models posted as of April 30th will remain posted for use by the web search engines until June 1st. After June 1st, this data will be archived and posted on the website in Excel spreadsheets until September 2010.

### Qualification Tables

Effective **June 1, 2010**:

- The qualification levels for all of the products will become more stringent by eliminating the current level for Zone A and moving the remaining qualification levels up one zone. New levels have for Zone D have been created.



- Windows will have a minimum Energy Ratings (ER) on the U-factor compliance path for each zone. The ER minimum for each zone is approximately 0.22 Solar Heat Gain Coefficient (SHGC) or less for each zone.
- All doors will have a separate qualification table. No minimum ER or SHGC levels on the U-factor compliance path have been set for doors due to the fact that many doors have variable amounts of glazing or no glazing at all.

The maximum U-factor on the ER compliance path will remain 2.00 w/m<sup>2</sup> for all zones for both windows and doors. The U-factors in imperial units will remain in the qualification tables at the request of manufacturers who certify through the U.S. National Fenestration Rating Council (NFRC) certification program.

<b>Windows</b>					
Zone	Heating Degree-Day Range	Compliance Paths			
		Energy Rating (ER)	or	U-Factor	
		Minimum ER (dimensionless) Maximum U-Factor 2.00 W/m <sup>2</sup> •K (0.35 Btu/h•ft. <sup>2</sup> •°F)		Maximum U-Factor W/m <sup>2</sup> •K (Btu/h•ft. <sup>2</sup> •°F)	Minimum ER (dimensionless)
A	<= 3500	21	or	1.80 (0.32)	13
B	> 3500 to <= 5500	25	or	1.60 (0.28)	17
C	> 5500 to <= 8000	29	or	1.40 (0.25)	21
D	> 8000	34	or	1.20 (0.21)	25

<b>Doors</b>					
Zone	Heating Degree-Day Range	Compliance Paths			
		Energy Rating (ER)	or	U-Factor	
		Minimum ER (dimensionless) Maximum U-Factor 2.00 W/m <sup>2</sup> •K (0.35 Btu/h•ft. <sup>2</sup> •°F)		Maximum U-Factor W/m <sup>2</sup> •K (Btu/h•ft. <sup>2</sup> •°F)	Minimum ER (dimensionless)
A	<= 3500	21	or	1.80 (0.32)	N/A
B	> 3500 to <= 5500	25	or	1.60 (0.28)	N/A
C	> 5500 to <= 8000	29	or	1.40 (0.25)	N/A
D	> 8000	34	or	1.20 (0.21)	N/A

<b>Skylights*</b>		
Zone	Heating Degree-Day Range	Maximum U-Factor W/m <sup>2</sup> •K (Btu/h•ft. <sup>2</sup> •°F)
A	<= 3500	2.80 (0.50)
B	> 3500 to <= 5500	2.60 (0.46)
C	> 5500 to <= 8000	2.40 (0.42)
D	> 8000	2.20 (0.39)

\*includes Tubular Skylights

## Testing

Effective **June 1, 2010**:

- All window, sliding glass door and skylight models registered for ENERGY STAR will be required to be fully tested to at least one of the structural standards listed in the new specification. Existing test results will be accepted if the model has been tested to one of the listed standards. Extruder and other third party test results will be accepted as long as the tests were done by an independent accredited testing laboratory. Swinging doors, door sidelites and door transoms will be exempt from the structural testing requirement.

The listed standards will initially include the CSA-A440-00, the AAMA/WDMA 101/I.S.2, the AAMA/WDMA/CSA 101/I.S.2/A440, the CGSB 82.1 and 82.5 standards. Retesting for structural performance may be necessary as older standards are phased out. Energy performance testing or simulation to either the CSA or NFRC standards will continue to be required for all product models. Retesting of registered models for energy performance will not be required due to the specification change although manufacturers may wish to modify and retest models to obtain a better qualification.

## Certification

Effective **September 1, 2010**:

- The certification of insulating glass units (IGU) to either the CGSB or ASTM standards for IGU durability will be required.

The date of September 1, 2010 has been chosen to allow industry more time to adapt to this requirement. The current requirement for the certification of all window, door and skylight models for their energy performance to either the CSA or NFRC standards will remain.

## Mandatory Labelling

Effective **June 1, 2010**:

- All production models registered with NRCan must be labelled with a Fenestration Qualification Label (FQL) and the label(s) required by the agency who certified the models.

There were many comments from industry which indicated that the September 1, 2009 deadline for mandatory labelling was too soon and that it made more sense to coordinate the labelling effective date with the effective date of the new technical specification. However, NRCan strongly advises manufacturers to at least begin labelling with the Fenestration Qualification Label (FQL) as per the existing guidelines as soon as possible to support of the many grant and incentive programs now available.

Manufacturers should also contact the agencies who certify their product models for guidance on how to meet their certification labelling requirements.

### Transitional Labelling

- NRCan is currently developing a labelling strategy that will distinguish models labelled under the current specification and models labelled under the new specification by specifying an 'Effective Until' date on the label.

Labels with an 'Effective Until' date will be developed for manufacturers who need time to adjust their labelling routines to the new specification. The 'Effective Until' date will appear on the qualification labels placed on models that show ENERGY STAR qualification to the current specification but that were labelled after the June 1, 2010 effective date. These labels should be available by the fall of this year. The 'Effective Until' date has been tentatively set as September 1, 2010.

### New Administrative Arrangement

In the next few months, NRCan will be asking all current participating manufacturers to complete, sign and submit an updated Administrative Arrangement. All current arrangements will expire by June 1, 2010. Manufacturers that do not sign a new agreement will be delisted from the program. NRCan will notify manufacturers when the new arrangement is available on the website for downloading.

### Phase Two

In the initial part of the consultation process, NRCan proposed more stringent levels in a Phase Two to be implemented in a 3 to 4 year time frame. This was in response to numerous comments from industry that they would like to know well in advance of any specification changes for planning purposes. NRCan has decided to continue its research and analysis into the viability of a Phase Two criteria change and will keep the industry informed throughout the process.

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