



November 18th, 2011.

E.P.A.

ENERGY STAR[®] Program Manager

Royal Building Products appreciates the opportunity to provide comments and suggestions in regards to the new proposed revision of the ENERGY STAR[®] for Windows, Doors, and Skylights Program, Version 6.0.

We also would like to thank your organisation and staff for taking the time to inform and provide better understanding of the objectives and motivation of the new 2013 Proposed Qualification Criteria.

Royal Building Products represents approximately 8% of the manufacturers participating in the NFRC Program. Our customers, all window and sliding glass door manufacturers, have provided considerable feedback with regards to the new proposed criteria, and the summary is as follows:

General Comments:

- We encourage the revision for new qualification criteria and more tightened performance levels for windows and sliding glass doors. The % of certified NFRC products that qualify into the ENERGY STAR[®] program is very significant. We do believe that ENERGY STAR[®] products should identify superior energy performance products with tighten qualification criteria.
- Qualification criteria are more stringent which is OK and necessary; the simplification in climate zone is also positive for the real customer that wants to identify the right ENERGY STAR[®] product for his specific location.

Comments on Qualification Criteria for 2013:

Structural Requirements and Air Leakage results:

Structural requirements

- We do understand the challenge that could rise in the industry by requiring a NAFS structural certification for every participating product. We strongly believe that, to set up the table for the next revision, EPA should require some form or representation of structural testing within the ENERGY STAR[®] program without going through the complete structural certification process.
- We do believe you should add the CSA references as a certification entity along with those mentioned in your document.

Air Leakage requirement:

- Even if the impact on a thermal performance is very little, the Air Leakage performance will affect the integrity of the window concept, as well as protect the consumers. We believe that Air Leakage has the same impact on comfort/discomfort as the SHGC, especially in the Northern region.
 - o Not so many manufacturers tested their products under NFRC 400 as it has a limited reach compared to other structural standards; they would prefer to have their products tested under complete standards like NAFS.
 - o There is a location on the NFRC temporary label for air leakage results to appear, and the protocol stipulates that all numbers need to be on the NFRC-CAR document prior to being transferred to the temporary label.
 - o The AAMA and WDMA permanent label reference is limited in our industry and should be extended to all recognized entities (Ex: NAMI, Keystone, etc...)
 - o The temporary label provides a performance number about air leakage results compared to a permanent label where the overall results of a product is shown. Referencing the permanent label for air leakage results will create extra work for the building inspector or others to confirm that the minimum air leakage requirements is achieved on the product.

Impact-Resistant Products:

- Even if the purpose of an Impact product is different on a structural comparison, we don't see the difference in any product when it is for thermal performance requirement and we support the decision of "not proposing a separate set of criteria for impact-resistant products".
- Therefore, our analysis and researches have shown that many affordable IMPACT-products were able to qualify in the southern zones with the right IGU packages.

Installation Procedures:

- Installation procedures and guidance are a requirement for every product that is certified through an Inspection Agency under the NFRC standards. The installation procedures are required to be installed on every individual product and made available to the installers and customers. We do believe that this aspect should only be reinforced by the Inspection Agency.
- EPA has a great opportunity to ensure availability of proper manufacturer installation procedures. For example, requiring proof of an installation certification program from the participant manufacturer could represent a good platform to start with.

Proposed Revision to Product Criteria: *Windows*

- The maximum U-Factor to be set between 0,25 and 0,27 for the Northern zone is quite challenging to understand. There is a direct relation between the U-Factor rising considerably and different types of Low-E with a higher SHGC located on surface #3.
- We strongly believe that new U-Factor maximum for the Northern zone will eliminate very performing double glazed products from the market; even if you promote a higher level of SHGC in colder climate, the maximum U-Factor will not allow manufacturers to use those types of Low-E on surface #3 of a double glazed unit. The average range U-value would be around 0,30.
- The numbers provided in the CPD analysis concerning the Equivalent Energy Performance criteria is surprising to us and would need to be revised. Within any average, warmedge spacer configuration, for example the SUN400 - Comfort EP-S - Ti-PS - Cardinal 180 - Guardian 75/68, just to mention those ones all located on surface #3, will not qualify on a typical Argon fill double glazed Single Hung window product.
- With this proposal, the easiest way to qualify within the new criteria is to have a double glazed IGU with a low SHGC Low-E located on surface #2 and an average warmedge spacer, and automatically products will qualify in 3 climate zones and some of them might be able to qualify into all 4 zones with only one IGU combination.
 - o Ex: PVC Single Hung Double Glazed – Argon filled with Superspacer and a Cardinal Low-E366 on surface #2 will have the following performance:
 - U Value: 0,27 SHGC: 0,20
 - **Product Qualifies for Miami as well as for Minneapolis.**

Condensation Resistance: *Additional Qualification Criteria*

- The Condensation resistance factor should be brought on the table as different types of Low-E coating products, located on surface #4 on a double glazed IGU, are emerging on the market.
 - o The direct effect of this application brings down the U-Factor results by cooling down the temperature surface of the inside pane.
 - o Therefore, it brings down the CR factor (based on NFRC 500) below 50 and could create serious damage, discomfort and some misunderstanding of the thermal properties of a certified product for the consumers.
 - Ref: High Performance Window Volume Purchase Program.
- We propose that a minimum CR factor should be considered during the Criteria and Analysis Report timeline of this new proposal.

Proposed Revision to Product Criteria: *Doors*

- The challenge that will face the Sliding Glass Door with the proposed new criteria will have to be settled by a triple glazed IGU.
- If the U-Factor maximum requirement doesn't go below 0,30, some PVC Sliding Glass Doors should be able to qualify into the new proposed criteria.
- We do believe that if the Sliding Glass Door stays within the door criteria, separate CPD data concerning the Sliding Glass Door only should be provided by EPA for further analysis and review.

Others:

- The aspect of Lifecycle Analysis and other Environmental Declarations about window and door products should be kept alive for further analysis and further discussions into the ENERGY STAR[®] program.

Royal Building Products is involved in most major North American window industry organisations and we are looking forward to partnering with the E.P.A. by providing expertise and input in the improvement and availability of energy efficient products.

Sincerely,

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