



WINDSOR
WINDOWS & DOORS
A Woodgrain Millwork Company

Windsor Windows & Doors
900 South 19th Street
West Des Moines, Iowa 50265
515-223-6660

Date: 3/28/22

To: Douglas W. Anderson
Program Manager, ENERGY STAR Windows, Doors, and Skylights
U.S. Environmental Protection Agency

RE: Energy Star Version 7.0 Draft 2 Specifications

Thank you for the opportunity to comment on Energy Star 7.0 Draft 2 Specification. Windsor Windows & Doors appreciates the efforts and research the EPA has done on developing the draft Version 7.0. Windsor is proud to be an Energy Star Partner and a national manufacturer of energy efficient windows and doors. Our comments on several key components of the proposed Energy Star requirements are outlined below:

U-Factors for North / North Central Too Stringent:

Despite several comments that the proposed U-Factor requirements were too stringent, the EPA did nothing to address this in Draft 2. The Northern Zone proposal remains at a 0.22 U-factor which is significantly lower than the 0.27 in Version 6.0.

Aluminum clad windows are chosen for their strength, durability and architectural appeal. By the EPA's own admission, some products and frame types (aluminum clad windows included) will have difficulty meeting the proposed criteria for the Northern Zone. With the proposed Version 7.0 criteria, almost all clad windows will require triple IG in the Northern and North Central Zones.

Many non-aluminum products meeting Northern and North Central Zones with 2-pane glass configurations will need to have room-side LoE coatings to meet the proposed criteria. As mentioned in our previous letter, this type of glass has the potential to increase condensation and decrease comfort. The EPA has acknowledged this in their response to comments but suggested that it should not create "significant" condensation or comfort issues.

For these reasons, Windsor continues to urge the EPA to set reasonable and rational U-Factors for Energy Star 7.0. We feel that setting the Northern Zone U-Factor at 0.25 would result in significant energy savings while allowing manufacturers to implement across all product lines equitably.

Door Criteria Changes

While we are pleased that the EPA has removed sliding doors from the window criteria, we are disappointed that the door criteria proposed in Draft 2 is now significantly more stringent.

The proposed Draft 2 would change U-Factor requirements for all glass doors from a 0.30 (V6.0) to 0.25 (V7.0). This is a significant reduction from the current standard. On an aluminum clad wood door, it will be extremely difficult to meet a 0.25 U-factor (even with triple I.G.). In addition, tempered glass required by code limits available glass options.

Payback Analysis

The EPA's payback analysis was based primarily on vinyl double-hung windows. While vinyl windows have a high market share, they're not the only window type and material in the marketplace. Windsor suggests that the EPA look at payback scenarios on other window materials and types.

In addition, the EPA's analysis shows as much as 12.3 years payback in the Northern Zone. We feel that paybacks longer than 10 years are not reasonable.

Glass Technology

The EPA mentions that there are new glass technologies in the marketplace now. However, thin triples, vacuum glazing and aerogels are still emerging technologies, and many are not commercially available today or are available with limited capacity. It is our opinion that these technologies will not be readily available by the EPA's proposed implementation date.

To our knowledge, thin triples are not available with a tempered option and cannot satisfy safety glazing standards – particularly for doors. Other emerging glass options have size and weight limitations which can restrict sizes that are offered.

Manufacturers may also be forced to use Krypton gas in lieu of Argon to compensate for smaller cavities. Krypton is significantly higher in cost than argon and may be difficult to source if demand for it soars.

No Allowances for High Altitude and/or Impact Resistant Windows

Allowances for high altitude or impact resistant windows were not included in the draft 2 V7.0. Because of the limited air spaces and the restrictions on gas filling, these types of products are inherently less energy efficient than standard products. In our opinion, it's not practical to have the same Energy Star requirements for these window types. Windsor urges the EPA to reconsider adding these allowances into Energy Star V7.0.

Manufacturer Challenges

Windsor proposes that now is not the right time to make extreme and wholesale changes to the Energy Star program. The current environment that window and door manufacturers face make it extremely difficult to add new glass options, redesign products and introduce material changes to their products. Many manufacturers are operating at capacity already and are focused on servicing customers on existing orders.

Supply chain issues are affecting all areas of our industry. Making product changes could disrupt supply issues even more by creating demand for some materials that are in limited supply today. Despite the EPA's claim that "such constraints are likely temporary", supply chain issues continue to be a major constraint on manufacturers and will take years to completely resolve.

Meeting the proposed guidelines will require significant design changes to many of our product options. This will, in turn, require new equipment or changes to equipment to be able to manufacture our products. Equipment suppliers are at capacity as well. In many cases, lead times on new equipment is 18 months or longer.

Implementation Timeline

The EPA's estimated timeline for Version 7 include a "Final Specification" by June/July of 2022 with an implementation date as early as June of 2023.

These extreme changes in the 7.0 criteria will force many manufacturers such as Windsor to completely redesign and retool our entire clad/wood product offering which will take multiple years and substantial capital investment to accomplish. This all comes at a time where the fenestration industry is over capacity, there are severe supply chain challenges, a shortage of available workforce and equipment suppliers with lead times of 12 – 18 months or longer. The timing of any type of change or improvement to Energy Star needs to take these factors into consideration and extend the implementation date allowing for these dynamics to come back to some measure of normalcy. Any change to the criteria should occur no earlier than June of 2024.

Based on the reasons outlined in this letter, Windsor Windows & Doors urges the EPA to reconsider many aspects of the proposed standards for Energy Star 7.0. We believe that updates to Energy Star needs to be incremental, reasonable, and rational for all window and door types.

Sincerely,



Phil Weber
Design Engineering Manager
Windsor Windows & Doors