

August 10, 2022

Douglas W. Anderson
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Dear Doug and others responsible for the U.S. ENERGY STAR program:

On behalf of the Fenestration and Glazing Industry Alliance (FGIA), we are providing feedback on the proposed ENERGY STAR 7.0 final draft for Residential Windows, Doors, and Skylights Specification requirements. FGIA represents more than 350 member companies who manufacture and market windows, doors and skylights and the components that go into them for residential and commercial applications. Many of FGIA's members are ENERGY STAR partners who label millions of products every year with the ENERGY STAR label.

FGIA supports EPA's efforts to improve the integrity of reporting of data associated with the ENERGY STAR for windows, doors, and skylights program. As part of that effort, FGIA members support the move by EPA to require window, door and skylight manufacturers participating in the ENERGY STAR program to provide unit shipment data annually. In fact, as we have discussed with ENERGY STAR officials, FGIA looks forward to serving as a data aggregator, working in partnership with EPA to offer that data compilation service, as program participants will have the choice to either report annual unit shipment data to FGIA or to EPA's data contractor.

However, FGIA believes the following items remain unresolved in the final draft, **as only one of the nine changes recommended by FGIA, was adopted by EPA** in the latest specification. In fact, in addition to the industry response by FGIA, the eight window manufacturers who individually provided public comments on the ENERGY STAR 7.0 draft 2 specification also asked for changes, which remain largely unresolved.

Therefore, we appreciate your consideration in particular in revising the specification before it is finalized as follows. [See our March 28, 2022, public comments on the draft 2 specification](#) for further specifics on unresolved items.

FGIA encourages EPA to:

- 1) Launch the new 7.0 specification at the start of the year, January 1, 2024, rather than mid-year, for better synchronization of product specifications, current and historical data, alignment with federal tax credits for consumers, and to allow adequate implementation time for manufacturers.**

Consumers often apply for federal tax credits after purchasing ENERGY STAR-certified products. Launching the new specification on January 1 makes it much easier for consumers to correlate tax credits for ENERGY STAR purchases with their tax return filings. A proposed 2023 during the year rollout would occur at a time when the vast majority of consumers have already made choices for new construction projects and replacement applications to be completed in 2023. Therefore, FGIA members recommend that the new 7.0 specification implementation date goes into effect on January 1, 2024.

Fenestration manufacturers are investing in significant product re-designs and the associated testing to meet the next version of ENERGY STAR. If fenestration performance numbers are off by as little as 0.01 for either U-factor or SHGC, it could mean compliance in one climate zone versus another or could result in a product that fails to comply with ENERGY STAR Version 7.0 altogether.

The National Fenestration Rating Council (NFRC) made a change to the modeling procedure of a component to a certain type of IG spacer widely used in fenestration products to achieve the current ENERGY STAR specification. As a result of the changed modeling procedure, NFRC has announced it will allow about a year to re-simulate those products. Pending the outcome of that re-simulation, the results may impact the U-factor for the many products that include that particular spacer. Therefore, does that or might that change the data analysis used by EPA to develop the proposed ENERGY STAR 7.0 specification? If that re-simulation would change the analysis, it provides further support for FGIA's comments elsewhere in this letter, to delay the implementation for the 7.0 windows, doors and skylights specification to allow fenestration manufacturers the necessary time to procure materials, redesign and update designs — particularly for the Northern Zone — and to update their product specifications, testing, manufacturing, training, sales, marketing and customer support materials to reflect the latest product U-factors.

Historically, new ENERGY STAR specifications for fenestration products have launched at the beginning of a calendar year. To provide the most relevant, consistent, and accurate data, timing the new specification at the start of a calendar year will align ENERGY STAR reporting periods to make comparable comparisons of ENERGY STAR market share from year-to-year and specification to specification. That's vitally important.

Data collection and data integrity are both keys to tracking the results of the ENERGY STAR program in saving energy and in America's progress in working toward net zero emissions reduction goals. If the new 7.0 specification is rolled out mid-year, it can distort the data and present a greater challenge to accurately track data to compare various specifications and their market share.

To align manufacturer and EPA data, FGIA suggests that EPA implements the new 7.0 specification for windows, doors, and skylights on January 1, 2024, rather than at any point during 2023. Since providing unit shipment data will be a requirement for the new ENERGY STAR 7.0 program, it will be essential for manufacturers to have the necessary time to fully prepare before the program is implemented, to help support data integrity.

Plus, manufacturers need ample time to reconfigure their showroom displays, point-of-purchase materials, IT systems for procurement, manufacturing, shipping, sales, marketing, and customer support. Launching the new specification January 1, 2024, will allow the necessary time for that. In addition, a January 1, 2024, launch will allow products with the new 7.0 specification to be manufactured, shipped, and marketed at the **start** of a selling season, rather than in the midst of it, which adds unnecessary complexity for consumers, manufacturers, distributors, dealers and other retailers.

2) Revise the North-Central Zone U-factor for windows from 0.25 to 0.26 to align with the least stringent U-factor in the Northern Zone to eliminate the disconnect and confusion for consumers in the current proposed specification.

In the latest specification, there is still a disconnect with windows in the Northern versus the North-Central Zones with the U-factor at 0.25 in the North-Central Zone. Windows can still qualify for ENERGY STAR in the Northern Zone at 0.26. That disconnect can be confusing for consumers. The net impact of that disconnect is for example, that a less stringent U-factor could be required in Alaska, than Topeka, Kansas. FGIA recommends that instead of the current proposed 0.25 U-factor for the North-Central Zone, to use a 0.26, to also align with the least stringent U-factor in the Northern Zone.

If EPA does not make the change in the U-factor to 0.26 as outlined above, FGIA requests that EPA lower SHGC requirements as stated in [FGIA's March 28, 2022, public comments](#).

FGIA also asks EPA to increase the U-factor for > ½-lite doors in the North and North-Central Zones from the proposed 0.25 to 0.26 for consistency with the above recommendation.

In addition, in the latest specification, there's still a need to strike out "and sliding glass doors" under the windows section as highlighted in yellow and shown below.

ENERGY STAR Certification Criteria for Residential Windows, Doors, and Skylights				
Windows				
Climate Zone	U-Factor ¹	SHGC ²		
Northern	≤ 0.22	≥ 0.17	Prescriptive	
	= 0.23	≥ 0.35	Equivalent Energy Performance	
	= 0.24	≥ 0.35		
	= 0.25	≥ 0.40		
	= 0.26	≥ 0.40		
North-Central	≤ 0.25	≤ 0.40		
South-Central	≤ 0.28	≤ 0.23		
Southern	≤ 0.32	≤ 0.23		
7 Air Leakage for windows and sliding glass doors ≤ 0.3 cfm/ft ²				
8 0.3 cfm/ft ²				
9 ¹ Btu/h ft ² ·°F				
0 ² Solar Heat Gain Coefficient				
1				
2				
263 Swinging and Sliding Glass Doors				
Glazing Level	U-Factor ¹	SHGC ²		
Opaque	≤ 0.17	No Rating		
≤ ½-Lite	≤ 0.23	≤ 0.23		
> ½-Lite	≤ 0.25	Northern & North-Central	≤ 0.40	
	≤ 0.28	Southern & South-Central	≤ 0.23	
264 Air Leakage for Sliding Doors ≤ 0.3 cfm/ft ²				
265 Air Leakage for Swinging Doors ≤ 0.5 cfm/ft ²				
266				
267				
Skylights				
Climate Zone	U-Factor ¹	SHGC ²		
Northern	≤ 0.45	Any		
North-Central				
South-Central	≤ 0.50	≤ 0.25		
Southern				

- 3) For greatest potential energy savings, it's important to consider a home's orientation for each elevation for:
- Calculation of energy savings.
 - Product selection by consumers.
 - FGIA and EPA data analysis and communication.

It's essential to consider occupant comfort and propose a specification that doesn't create unintended consequences and further energy consumption when homes and occupants overheat and therefore, need to use fans and air conditioners that consume more energy to cool their homes more often.

Effective passive solar design demands effective building envelope design from the start. To achieve effective passive solar design and meaningful potential energy savings, much more is required than simply installing windows with high SHGC. The performance path is considered in addressing a structure's energy performance in building codes. Orientation of a home or other building also makes a difference in energy consumption and occupant comfort. Again, FGIA members ask if either of those factors were considered by EPA in the draft specification for windows, doors, and skylights?

4) Move IECC Climate Zone 5 into the North-Central Zone for a more realistic alignment in climate conditions.

IECC Climate Zone 5 is 75 percent of the ENERGY STAR Northern Zone alone, and when it is left in the Northern Zone, it distorts the data. This sends a conflicting message to consumers. The proposed specification now presents greater challenges for the North-Central Zone to achieve, depending on the glazing and window package chosen.

If EPA followed code precedent in analysis, the climate zone would adjust. We believe that the ENERGY STAR specification should take both cost and carbon reduction into account. Therefore, we reassert that the final specification should move Climate Zone 5 into the North-Central Zone.

5) Reassert and proactively communicate that ENERGY STAR is a voluntary, aspirational, "above code" program, and is not intended to be adopted into energy codes.

Therefore, efforts to align energy code language to ENERGY STAR specifications are misguided. It's essential that EPA reassert that ENERGY STAR is intended to be **above** code, **not at** code.

6) Require North American Fenestration Standard (NAFS) certification for windows, sliding doors, and skylights, for greater product quality assurance and safety in ENERGY STAR Version 7.0.

The North American Fenestration Standard AAMA/WDMA/CSA 101/I.S.2/A440 (NAFS) certification is required for the ENERGY STAR Most Efficient Program for windows and sliding doors, and therefore should also be required for ENERGY STAR Version 7.0.

In conclusion

FGIA members recognize that millions of inefficient (single- and double-pane clear) windows, doors, and skylights in existing U.S. housing stock need to be replaced with more energy-efficient options to help America achieve energy savings, net-zero energy, and reduced greenhouse gas emissions (GHGs) goals.

As longtime industry leaders providing the millions of finished windows, doors, and skylights, along with the components and expertise that has helped stimulate demand for the ENERGY STAR brand across all markets, FGIA members appreciate our continued partnership with EPA and ENERGY STAR to help advance the program and its adoption by Americans.

FGIA looks forward to working directly with EPA, as the new 7.0 specification is rolled out, and to directly inform future specification development, both for the ENERGY STAR, and ENERGY STAR Most Efficient program.

If you have questions about the information provided by FGIA, or to discuss it further with our stakeholders, please email me at kkrafka@fgiaonline.org.

Sincerely,



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