



**WMA Comments**  
**ENERGY STAR for Windows, Doors, and Skylights**  
**Version 7.0 Draft 2 Specification**

**Respectfully Submitted by World Millwork Alliance (WMA)**  
**April 4, 2022**

WMA welcomes the opportunity to comment on certain aspects of ENERGY STAR Version 7.0 Residential Window, Door, and Skylight Draft 2 Specification released February 14, 2022 by the U.S. Environmental Protection Agency (EPA). Thank you for extending WMA's timeframe for comment.

The comments below specifically address EPA's proposed change to lower the U-factor for all > ½-lite doors to ≤ 0.25 from a ≤ 0.28 U-factor proposed for swinging doors in the Draft 1 Specification.

***Proposed U-Factor for All > ½-lite Doors in All ENERGY STAR Climate Zones***

**Comment:** The EPA states in Draft 2 that the reason for dropping the U-factor to ≤ 0.25 for all > ½-lite doors from Draft 1's ≤ 0.28 U-factor for swinging doors was because of EPA's decision to bring sliding glass doors back in with the swinging door criteria based on stakeholder comments to Draft 1 that claimed the windows criteria was too aggressive for sliding glass doors to meet.

WMA believes that this proposal is therefore arbitrary and not based on any further specified cost-benefit and/or market share analysis and is simply based on EPA's rationale of there being "the opportunity to gain some additional performance improvement" for "full glass doors."

In its Criteria Analysis Report, EPA stated that swinging doors represent a much smaller amount of surface area of a house than windows, and therefore have a lesser impact on household energy use than windows. EPA also stated in its criteria analysis that it is difficult to analyze swinging doors because there are many unique glazing design and frame options available, including different shapes that are not clearly differentiated in the NFRC CPD. Therefore, the EPA stated that it based its Draft 1 criteria for swinging doors on broad performance distributions to evaluate product availability. In doing so, EPA concluded that the Draft 1 proposed criteria for swinging doors would reduce energy costs for consumers in all climate zones, and though the energy savings are small, they would add up to 1.16 trillion Btu on a national level and this would differentiate higher performing products more effectively than the current Version 6.0 criteria. WMA appreciates the thoughtful considerations EPA exemplified in this analysis.

Version 6.0 U-factor criterion for > ½-lite doors in all climate zones is ≤ 0.30. Based on the criteria analysis for Version 7.0 as referenced above, a change to a U-factor of ≤ 0.28 for > ½-lite doors is reasonable. However, to move the criterion to ≤ 0.25 as proposed in Draft 2, will significantly impact the ability of current ENERGY STAR door partners to continue to qualify. To begin with, it significantly lowers product availability in comparison to Version 6. As highlighted in Table 1 below, the percentage of simulated full glass door options in the NFRC Certified Products Directory (CPD) that would meet the Draft 2 ≤ 0.25 U-factor criterion averages to be approximately 9.5%, which is a very low percentage of options in the database. As EPA is aware, these represent simulated options in the CPD and does not reflect actual current product availability which WMA suspects would be lower. It might be prudent for EPA to identify those full glass products currently in the FenStar program as a way to gauge actual product availability.

**Table 1. - NFRC CPD Data (pulled 3/22) for Exterior Swinging Double Doors (DDFR)[Full Lite]; Sliding Glass Doors (DDSG); Exterior Swinging Doors (EDSL) [Single/Full Lite]; and Exterior Swinging Doors (EDSL) [Single/ ¾ Lite]**

<b>DDFR</b>					
		ENERGY STAR v6		ENERGY STAR v7	
	All Options*	Qualified	% of Total	Qualified	% of Total
# of Options	235564	73834	31.3%	21214	9.0%
# of Manufacturers	36	31	86.1%	19	52.8%
# of Product Lines	137	119	86.9%	69	50.4%
<b>DDSG</b>					
		ENERGY STAR v6		ENERGY STAR v7	
	All Options*	Qualified	% of Total	Qualified	% of Total
# of Options	485915	161868	33.3%	36296	7.5%
# of Manufacturers	293	247	84.3%	185	63.1%
# of Product Lines	670	514	76.7%	385	57.5%
<b>EDSL (Full Lite)</b>					
		ENERGY STAR v6		ENERGY STAR v7	
	All Options*	Qualified	% of Total	Qualified	% of Total
# of Options	1246375	801034	64.3%	152305	12.2%
# of Manufacturers	150	141	94.0%	134	89.3%
# of Product Lines	138	123	89.1%	96	69.6%
<b>EDSL (3/4 Lite)</b>					
		ENERGY STAR v6		ENERGY STAR v7	
	All Options*	Qualified	% of Total	Qualified	% of Total
# of Options	1398058	1161425	83.1%	587398	42.0%
# of Manufacturers	147	135	91.8%	131	89.1%
# of Product Lines	133	103	77.4%	87	65.4%
*Only "No Grids" Options were included					

Furthermore, it should also be noted that the proposed ≤ 0.25 U-factor for all > ½-lite doors in all climate zones is more stringent than the proposed overall U-Factor criteria for windows. If

swinging doors represent a much smaller amount of surface area of a house than windows, and therefore have a lesser impact on household energy use than windows, as reflected in EPA's criteria analysis, then it seems unreasonable to specify more stringency.

Lastly, WMA is concerned that the additional costs involved in producing  $> \frac{1}{2}$ -lite doors that would meet the proposed  $\leq 0.25$  U-factor would inevitably be passed on to the consumer and would outweigh the energy savings gained, especially during this time of supply shortages and inflationary concerns; in other words, no cost-benefit. EPA stated in its Discussion Guide from 2019 that consumers should recover their investment in increased energy efficiency through utility bill savings within a reasonable timeframe, and that one of the ways to do that is by focusing on lowest-cost options for improving performance. The incremental energy savings gained going to a  $\leq 0.25$  from a  $\leq 0.28$  U-factor would not balance out with the high costs involved in adding specialty glazing options to meet the proposed  $\leq 0.25$  U-factor rating.

**Recommendation:** WMA recommends that EPA go back to the  $\leq 0.28$  U-factor criterion for  $> \frac{1}{2}$ -lite doors as proposed in the Draft 1 Specification given the low market share of these door options at the  $\leq 0.25$  U-factor rating; the negligible energy savings that the  $\leq 0.25$  U-factor would offer a consumer in comparison to the high cost of purchasing such products; and the fact that in EPA's own criteria analysis, swinging doors represent a much smaller amount of surface area of a house than windows and therefore have a lesser impact on household energy use than windows and so should not be subjected to a more stringent requirement. If EPA is looking to lower the U-Factor rating for sliding glass doors, it may wish to reconsider placing sliding glass doors back in their own category and develop criteria that focuses on the specific attributes of these products as opposed to trying to pigeonhole them as windows or swinging doors.