

TO: U.S. Environmental Protection Agency & ENERGYSTAR®

November 8, 2011

We are pleased to offer comments today in regard to the ENERGYSTAR® for Windows, Doors, and Skylights Version 6.0 Product Specification Framework Document dated October 2011. We offer these comments on behalf of Lifetime Windows & Doors, inc. in Portland, Oregon. We are an independent window and door sales and Installation Company as well as the developers of “Solar View” windows which are “Passive Solar” window assemblies designed for Heating Dominated Climates.

Our sincere concern is that your proposal for the Northern Climate Zone, eliminating “Trade Offs” that reward higher solar gain goes backwards in measuring the energy efficiency of windows.

PLEASE Don't Go Backwards!

- 1) **The EPA should continue with the established trade-off allowances** and expand them in line with the Phase 2 Draft Criteria **because it is the right public policy position to encourage greater overall energy efficiency** and to encourage manufacturers to consider the full energy impact of windows while avoiding dark windows.
- 2) **Just because manufacturers have not yet used the Northern Trade-offs does not mean it isn't a good policy!** Currently limited availability may reduce immediate energy savings; however, inclusion of the trade-off allowances will promote innovation, and with future tightening of criteria will provide manufacturer flexibility and greater market acceptance of high performance windows.
- 3) **What is the cost of including the Trade-offs?** The minimal impact to maintain the credit seems very limited compared to the immediate impact it will have on our company and the potential future benefit it could have for our country.
- 4) **We have made investments in line with this policy and changing it now will be a great disservice to one of your hard working proactive partner companies!** You are sending the wrong message to companies that have invested in new technologies to incorporate the benefits of higher solar gain for Northern climates.
- 5) Our Company has invested many months and tens of thousands of dollars researching, developing and launching windows which we designed based on this concept of Trade-offs and higher solar gain. **While it may have taken us a while to develop products designed to use this Trade-off, Please don't pull the rug out from under our feet right before we reach the finish line!**
- 6) **Why change direction now?** Changing direction now will penalize those who have invested in the future of efficiency and fail to incentivize the development of more efficient products. **The technology is here, promote it!**

- 7) **Your current proposal**, for the Northern Climate Zone, using a “straight line” U-Factor performance rating with no regard to Solar Heat Gain Co-efficient **will result in too many dark windows that block “Free Light” and don’t allow “Free Passive Solar Energy.”** Manufacturers will use more dark Low-e glass to get more insulation value without regard to the overall effect on energy performance. (We have seen this happening rapidly in our market with the current Triple Pane windows).

- 8) In most windows currently available a lower SHGC corresponds to a lower Visible Transmittance. If 11% of Energy use in buildings is “Lighting” **the amount of “Free” visible light transmitted through windows should matter to ENERGYSTAR®**. By adopting a measurement of performance that recognizes Higher Solar Gain as a value in window performance we believe the additional energy benefit of More Visible Light will be another great benefit to overall energy efficiency.

More SHGC is efficient for the NORTHERN CLIMATE ZONE!

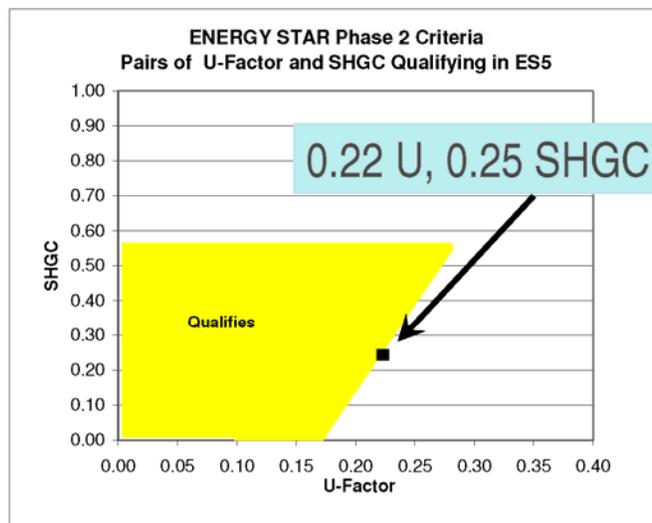
This chart below done for the first Draft Criteria released by the Department of Energy for the Northern Heating Zones is supposed to compare efficiencies of windows based on the Correlation between Solar Heat Gain and U-Factor.

Phase 2, ES5



Phase 2: ES5

U-factor	SHGC
0.28	0.55
0.27	0.50
0.26	0.45
0.25	0.40
0.24	0.35
0.23	0.30
0.22	0.25
0.21	0.20
0.20	0.15
0.19	0.10
0.18	0.05
0.17	0.00
0.16	0.00
0.15	0.00
0.14	0.00
0.13	0.00
0.12	0.00
0.11	0.00
0.10	0.00



Trade-off -0.01 U = +0.05 SHGC

According to this chart a window with a .18 U-factor and a SHGC of .05 performs in the Northern Climate Zone with the “energy equivalency” of another window with a U-factor of .28 when the SHGC is .55.

That is a spread of 10 U-factor points based SOLELY on the difference in Solar Heat Gain. By declining to include SHGC Trade-offs for Northern Climate Zones ENERGYSTAR® is failing to properly measure true energy performance of windows for Northern Climate Zones. By doing so ENERGYSTAR® is giving a free pass to Manufacturers to use more readily available dark Low-e coatings and simultaneously miss the opportunity to properly motivate future development by honoring and recognizing “*overall energy performance*”.

A Straight Line U-Factor Measuring Stick Is a Broken Measuring Stick!

If this math is right, these two windows **do not** have the same energy performance in a Northern Climate Zone! The Current Proposal nullifies the easily measurable difference in energy performance between them.

Window #1	.25 U-factor	.18 SHGC	.34 VT
Window #2	.25 U-factor	.42 SHGC	.52 VT

Window #2 allows 133% more solar gain and 53% more visible light transmittance than window #1 and is currently available and for sale in our market by us at very similar pricing to window #1 by our company! These are measurable, valuable, desirable, and “FREE” energy resources for Heating Dominated Climates which your current proposal fails to include.

Moving forward the EPA should work with the DOE and the NFRC to establish a future path that encourages “total energy savings”.

We have an Idea! **We call it an “E-Factor”**

An “**E-factor**” is the calculated “Energy Equivalency” factor for a window’s energy performance combining the effective U-Factor with the value of the Solar Heat Gain Coefficient to offset winter heating in a Northern Climate Zone by applying the SHGC to the Formula using the Trade-off Calculations developed for the Draft Criteria of Phase 2, for an ES5. Using .30 SHGC as the base case, Trade-offs based on DOE calculation of $-0.01 U = +0.05 SHGC$ for the Northern Climate Zone.

In Summary:

Please don't go backwards in measuring energy efficiency. By eliminating the trade-offs for the Northern Climate Zone you are doing just that. In fact, please expand them by adapting and developing a concept like "E-factors" or another measurement tool which makes it easy to communicate to the public the "Overall Efficiency" of a given window by taking into account the "Total Energy Savings" and not just the U-factor.

Sincerely,



Eric R. Peterson, President
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Carl D. Thompson, Vice President
Lifetime Windows & Doors, Inc.

