



October 12, 2012

Gentlemen:

I am writing to you on behalf of the Earthwise Group, the nation's largest alliance of independent vinyl window manufacturers, with 13 members who collectively produce over 500,000 vinyl windows annually.

The three principle performance requirements for windows to be eligible for the Most Efficient program relate to U-Value, Solar Heat Gain Coefficient, and Visible Transmittance. We understand, and have numerous paths to satisfy, the U-Value requirement of .20 in all climate zones. With the exception of some Picture Window configurations, all solutions require triple glazing.

The combined SHGC and VT requirements present serious challenges. The baseline VT number for a typical dual glazed double hung vinyl window with clear/clear glass is in the 60-62 range without grids, and 55-57 with grids. Sliders and casements typically have a higher frame-to-glass ratio, and therefore, lower VT ratings. Adding a third piece of clear glass further reduces these baseline numbers, and still does not meet the U-Value requirement of .20. Incorporating Low E coatings on two of the three pieces of glass, which is required for most paths to the .20 U-Value, will take the VT close to or below the .40 VT threshold. In nearly all cases, the addition of grids will take the VT below the .40 requirement.

The result is that a glass package that will meet the requirements for a non-grid double hung, may not meet the requirements if grids are added, or if a slider or casement is called for. We question whether these variations in performance were taken into consideration in the creation of the Most Efficient criteria.

Further, the program calls for higher SHGC numbers in the Northern Region, and then progressively lowers the SHGC requirements in each step toward more southern regions. While these criteria are appropriate, the plan as written does not call for lower VT numbers as the SHGC requirements are lowered. This feature virtually eliminates the triple silver Low E coatings which deliver the desired lower SHGC for southern regions, because they do cause somewhat lower VT.

The current Energy Star program sets performance requirements for U-Value and Solar Heat Gain Coefficient, but is silent with regard to Visible Transmittance. We suggest that VT relates more to aesthetics than thermal performance, while SHGC is a valid measure of thermal performance. If the goal of the Most Efficient program is to exclude very low SHGC products from the northern zone, then we suggest that requiring a minimum SHGC for that region is a better solution than a minimum VT.

Companies today routinely market products that do not meet the VT requirement of the Most Efficient program, but exceed the U-Value and SHGC criteria, although they represent a small percentage of the market because of their cost. Thermally, many of these products are demonstrably superior to products that can qualify for Most Efficient, and if the present requirements stand, they will no doubt be marketed as superior to Most Efficient. We believe that is an unfavorable outcome for the Energy Star program, which can be averted by either adjusting the VT as SHGC is adjusted, or preferably, by establishing an appropriate SHGC range by climate region.

Respectfully,
Mark Davis
Executive Director