COMMENT ON PROPOSED ENERGYSTAR 2014 CRITERIA

In reviewing the proposed changes for the 2014 ENERGYSTAR window performance criteria, I would recommend that the Southern climate zone U-factor be changed from .40 to .50 as this would be more in line with the percentage change in the South-Central climate zone U-factor. Taking the U-factor down to .40 in the Southern zone would exclude aluminum windows as even thermally-broken aluminum windows with low solar gain glazing will be nearly impossible to attain the new .40 U-factor without a substantial increase in glazing costs requiring multiple layers of coated glass.

Aluminum windows typically outperform vinyl and wood windows in air infiltration ratings and low air infiltration rates can reduce heat gain / heat loss thus improving whole window performance. A thermally-broken window with a .03 CFM air infiltration rate and low solar gain glazing will perform nearly identical in total annual heating and cooling costs compared to a vinyl or wood window that has an average air infiltration rate of .15 to .20 CFM and the same low solar gain glazing. It would take 5 of our single hung thermally broken aluminum windows to leak as much air as 1 average single hung vinyl window. This data is charted in the Efficient Windows Collaborative showing various window types of windows with different type glazing and their annual projected energy use based entirely on thermal performance without any air infiltration performance taken into consideration.

It is well known that in hot climates, where solar heat gain is much more important than conductive heat transfer, improving the insulating value of the frame is much less important than using a high performance low solar gain glazing system.

Our company manufactures a thermally-broken aluminum window with low solar gain glass and argon gas fill obtaining a .42 U-factor with a single Low-E in a dual glazed unit. Under the new proposed ES criteria, this window would not qualify for the Southern Climate Zone as .40 would be the new number. To qualify for the Southern Climate Zone (.40 U-factor), we would have to use multiple layers of Low-E glass thus driving up the cost of the window significantly. Two one-hundredths of a U-factor point is equal to only about 10-12 dollars a year ($<1.00/Month) in energy savings on an average 2000 sq. ft. house with 15 windows. At the present time, there is still a healthy demand for our thermally-broken aluminum window. Its durability and superior air infiltration rates make it an especially great choice in warm climates where vinyl windows tend to soften and sag in extreme heat conditions. Excluding aluminum windows by lowering the U-factors to .40 in the Southern Zone will no doubt impact our business and cause a slowdown in aluminum sales with a resultant drop in jobs. I do not think this is the direction our government and its associated agencies want to take. The overall performance between a good thermally broken window with low solar gain glazing and excellent air infiltration rates and a vinyl window with the same low solar gain glazing is nearly the same.
Please reconsider the Southern Climate Zone requirements for U-factor for ENERGYSTAR compliance. There are many jobs at stake as well as companies that would be put in jeopardy as a result. We need to keep America working and use good judgment when it comes to setting requirements for energy efficiency in homes.

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