



11/11/11

Environmental Protection Agency

Attn: Doug Andersen

Re: Energy Star version 6 commentary

EPA Energy Star administration,

After several attempts to show the true savings regarding lowering U-factor in Florida (particularly the southern parts with the largest populations), it is quite apparent that there is little to no true savings by lowering U-factors below 0.60. The climate simply does not support the savings. When comparing the impact of lowering U-factor vs. the impact of lowering Solar Heat Gain in south Florida, SHGC overwhelmingly provides more than twice the efficiency in many areas.

Attached you will find several tables contained on a spreadsheet. The first chart shows calculations performed using the actual U-factor of ten windows in a typical home. The total cost is based only on heat passing through the fenestration and is calculated using heating degree days for those specific regions of Florida. The other charts below show true simulations of a 2000 sq ft home using both Energy Gauge USA software and RESFEN. This exercise involved varying solar heat gain and U-factor, with the ultimate outcome showing a significantly greater savings of SHGC over U-factor.

The supporting documents above speak equally to the idea of one low U-factor and SHGC for doors in all zones. Patio doors have always been treated differently than entry type doors. Their very origins came from over sized casement type windows on balconies and fire-escapes; the concept was quickly adopted in the west but as large sliding type doors (called arcadia doors). These products provide a lifestyle that enhances daylight and provide a large outdoor view; in effect they are still large windows and should fall under the same category as windows.

In summary, it is quite evident that the original performance tradeoff between SHGC and U-factor in the Southern zone had a lot of merit. To truly reward energy efficiency in the south it would make sense to reinstate this type of program and include patio-type (full light) doors. It also provides flexibility to Energy Star homes. It would be in the best interest of the EPA to pursue such a program before the next version of Energy Star Homes.

Lastly, it is in the best interest of all stakeholders involved that version 6 delay until the end of this next IECC code cycle 2016, a lot of changes have just taken place, and it is questionable whether Florida or many other states in the south will be able to adopt the new IECC 2012 code. Thank you for giving us the opportunity to comment on this subject.

Sincerely,

Michael Nau

PGT Industries

941-486-0100 Ext. 21134

mnau@pgtindustries.com