



November 13, 2008

Department of Energy

I am responding to the new Energy Star criteria changes coming into effect January 1, 2009. I have read the draft from the August 2008 revision and agree that what you are trying to achieve is necessary. But, consideration should be taken since the purpose of skylights and TDDs is to let in the maximum amount of visible light though a relatively small aperture and light the maximum amount of square footage. Also consideration should be taken to account for their ability to minimize or eliminate the use of electricity for lighting during daylight hours.

Solar Industries, Inc. is one of the largest manufacturers of domed, flat glass, and tubular skylights in the United States. We have been manufacturing our skylight lines since 1979.

Skylights are already energy efficient as they let outside light into a space without the use of electricity. If I am not mistaken, this is what Energy Star is all about, *saving energy*.

Listed below are some of our concerns and, in our opinion discrepancies, we have noted in the new codes.

- 1. On May 16, 2008 the original DOE proposed changes were issued and we at Solar Industries felt the criteria reasonable and obtainable at only a moderate cost increase to the end user while still obtaining a 10-15 percent improvement over the proposed 2009 IECC criteria.**
- 2. Skylight criteria seem to be harsher than the window and door criteria you are proposing. The statement on page 2 contradicts the Phase 2 criteria. We also noticed that the SHGC on the doors does not change in Phase 2, this seems inappropriate. The low SHGC in Phase 2 with today's glazing technologies will lower the visible light 10 to 50% making skylights less efficient and effective to the end user. With this substantial decrease in visible light, it will take more or larger skylights to get comparable lighting as today, this will negate the effects which you are trying to accomplish and increase costs. With lower lighting performance and higher costs, skylights could be omitted from a project.**
- 3. You are omitting TDDs from the criteria. TDDs are amongst the most energy efficient skylighting products available today. We feel that the current NFRC test method should be used until the new method is approved and adopted. Consideration should be taken as to the TDDs relatively small aperture area and**

high visible light efficiency. If skylights are 2% of the fenestration market and TDDs are approximately 10% of that 2% then TDDs are 2 tenths of 1% of the market. We do not see how using the current NFRC test method would change energy usage one way or the other. TDDs should not be excluded from this program.

4. It does not appear that visible light transmittance is being preserved. High visible light transmittance is the key to maximizing the significant *lighting energy savings* skylights are proven to provide.
5. The analysis of the data collected for skylights seems much less complete than that collected for windows. This data collection is critical for proper representation of skylights.
6. The skylights cost used for improved efficiency in this study appear understated and unrealistic.
7. The Phase 1 U-Factors for skylights in Table 36 conflict with Phase 1 Table B-13.
8. You have stated that over half of today's skylights already qualify for the Phase 1 code change. The data used to come to this conclusion would be interesting to see. Has each model been counted or each model and each glazing options? Also in today's skylight market there are many skylight models that do not qualify now and are not listed. By not including these skylights in your analysis, this greatly increases the percentage of qualifying skylights, thus skewing the results.
9. If D & R International, LTD. and Lawrence Berkeley National Laboratories conducted interviews with many of the nations skylight manufacturers, we are concerned that Solar Industries was omitted from the research. As stated in the introduction of this letter, we are one of the largest skylight manufacturers in the United States. We were not given any opportunities to state the facts from our side of the equation.

Thank you for your time in hearing our concerns with the new Energy Code criteria. We are always available to discuss anything that may help to resolve any issues that may arise. Please do not hesitate to call me at 520-790-8989.

Thank you,

Carl Shelton
Solar Industries, Inc.
November 13, 2008