



March 25, 2009

Richard Karney
ENERGY STAR Program
US Department of Energy

Emily Zachery
D&R International

Re: Comments and Recommendations on ENERGY STAR® Windows, Doors and Skylights Revised Draft Criteria and Report dated March 11, 2009.

Dear Rich and Emily:

Thank you for this opportunity to provide Andersen Corporation's (Andersen's) comments and recommendations on the revised draft criteria for proposed changes to the criteria for the Department of Energy's ENERGY STAR® windows program.

While we support many of the changes that DOE has made in the revised draft criteria, we have several comments and recommendations to offer as DOE finalizes the criteria.

Summary of Support and Recommendations regarding the Revised Draft Criteria

We offer the following comments and recommendations regarding the March 11, 2009 draft criteria:

1. Implementation timeline.
 - a. We support the proposed January 1, 2010 earliest effective date.
 - b. We support the March 31, 2010 transition date for products manufactured after that date; the criteria and deadline should NOT apply to products already in the distribution chain.
2. Climate Zone Map:
 - a. We support retention of the four climate zone naming convention.
 - b. We believe the climate zone map proposed by WDMA during the last round of comments is more appropriate in relationship to winter design temperature and heating degree data from the IECC; however, the latest proposed four climate zone map is acceptable as an alternative.

- c. We appreciate the removal of the originally proposed zone 5a and support this revision.

3. Criteria:

- a. We still believe a 0.30 U-Factor is more appropriate for the Northern climate zone as proposed in the WDMA climate zone map, with a 0.32 U-Factor in the North Central zone; as a result, given the configuration of the new North zone, we recommend a 0.32 U-factor maximum with no SHGC trade-offs.
- b. In the alternative to setting the Northern zone U-Factor to 0.32, the baseline SHGC used for the trade-offs in the Northern zone should be reduced.
- c. Table 4 should include all types of doors (i.e. entry doors, patio doors, glass doors, etc.), regardless of whether they are hinged or sliding. Including swinging glass doors and not including sliding glass doors is inconsistent and will cause consumer confusion. We support adoption of the WDMA proposed values (i.e. $> \frac{1}{2}$ lite U-Factor at ≤ 0.34 /SHGC at ≤ 0.30). If DOE does not accept the WDMA recommended $> \frac{1}{2}$ lite U/SHGC criteria, then Andersen recommends that all glass patio doors (sliding and hinged) be grouped with windows in Table 3.
- d. If DOE decides to keep a 0.30 U-factor as the Northern zone requirement, DOE should consider changing the SHGC of 0.27 in the South to 0.30.
- e. Again we believe that Energy Star needs to establish alternative criteria for high altitude and coastal products. We recommend addressing the criteria for these products by allowing a U-Factor add-on of 0.04 to the standard qualification criteria: (i) for products in high altitude regions where breather tubes are used and the air space is filled with air instead of argon or other gas blend, and (ii) for impact resistant rated products as required in hurricane-prone regions of the eastern seaboard. In high altitude and coastal areas, the failure to create this alternative qualifying criteria will limit the availability of Energy Star products in these markets.
- f. We support DOE's proposed criteria for skylights.

4. Additional program changes:

- a. We appreciate DOE's acknowledgement that providing shipment data is private information and its commitment to working with our industry on alternative methods to allow DOE to monitor the success of the program.
- b. We appreciate DOE withdrawing a proposed requirement to add the full CPD number to the NFRC temporary label and your understanding of the operational challenges it would pose.

- c. We maintain our strong recommendation to remove the requirement that the U.S. climate zone map be on the product label.

Rationale for Comments and Recommendations

The supporting rationale for these recommendations follows.

1. Implementation timeline.

- a. **We support the proposed January 1, 2010 earliest effective date.** An implementation date at the beginning of the year is critical for adequate business planning and much appreciated.
- b. **We support the March 31, 2010 transition date for products manufactured after that date; the criteria and deadline should NOT apply to products already in the distribution chain.** With the earliest implementation date of January 1, 2010 and transition end date of March 31st, 2010 it is not reasonable to expect all products in the distribution channel to be converted by March 31st, 2010. Therefore, the March 31st, 2010 deadline should only apply for products manufactured on or after that date only. We strongly request that the transition period read: "All products manufactured after March 31st, 2010 must be qualified and labeled in accordance with Phase 1 criteria."

2. Climate Zone Map:

- a. **We support retention of the four climate zone naming convention.** Retaining the current climate zone naming will assist in marketing and training regarding the new program criteria.
- b. **We believe that the climate zone map proposed by WDMA during the last round of comments is more appropriate in relationship to winter design temperature and heating degree data from the IECC; however, the latest proposed four climate zone map is acceptable as an alternative.** We still believe that the recently proposed WDMA North American climate zone map is the most technically accurate climate zone map based on winter design temperatures and heating degree day information as reflected in the International Energy Conservation Code (IECC). We can support the proposed DOE US climate zone map, but suggest that it should be adopted only if DOE identifies a valid technical reason not to support the proposed WDMA proposed North American climate zone map as substantiated by the IECC.
- c. **We appreciate the removal of the originally proposed zone 5a and support this revision.** We strongly support this position given the complexities that a unique zone 5a would have created.

3. Criteria:

- a. **We still believe a 0.30 U-Factor is more appropriate for the Northern climate zone as proposed in the WDMA climate zone map, with a 0.32 U-Factor in the North Central zone; as a result, given the configuration of the new North zone, we recommend a 0.32 U-factor maximum with no SHGC trade-offs.** The criteria proposed for the North zone, although somewhat understandable given the tax credit criteria, is more problematic. We still believe that a 0.30 U-Factor is more appropriate in the Northern climate zone as shown in the recently proposed WDMA North American climate zone map, with a 0.32 U-Factor for the North Central zone. Given this view, under DOE’s proposed four-zone map, the DOE north zone is predominantly congruent with the North Central Zone on the WDMA map. As a result, we support simpler criteria – 0.32 U-factor and no requirement for SHGC (and no trade-off). Indeed, we are already on record that establishing an SHGC trade-off in this zone is not advisable. By setting the requirement at 0.32, no trade-off would be necessary, as all 0.32 U-factor products would qualify.

- b. **In the alternative to setting the Northern zone U-Factor to 0.32, the baseline SHGC used for the trade-offs in the Northern zone should be reduced.** Andersen supports the WDMA recommendation and rationale for the following Northern zone criteria:

Proposed Northern Zone Criteria:

U-Factor	SHGC
0.30	NR
0.31	≥ 0.20
0.32	≥ 0.25

- c. **Table 4 should include all types of doors (i.e. entry doors, patio doors, glass doors, etc.), regardless of whether they are hinged or sliding. Including swinging glass doors and not including sliding glass doors is inconsistent and will cause consumer confusion. We support adoption of the WDMA proposed values (i.e. > ½ lite U-Factor at ≤ 0.34/SHGC at ≤ 0.30). If DOE does not accept the WDMA recommended > ½ lite U/SGHC criteria, then Andersen recommends that all glass patio doors (sliding and hinged) be grouped with windows in Table 3.** Andersen believes that all doors should be grouped under the same standard for ease of administration and to avoid confusion. We recommend that all doors (i.e. entry, hinged and sliding glass doors) be addressed in Table 4 in the updated draft criteria with the following criteria as

previously recommended: $> \frac{1}{2}$ lite U-Factor ≤ 0.34 and an SHGC of ≤ 0.30 . If DOE does not accept the WDMA recommended $> \frac{1}{2}$ lite U/SHGC criteria, then Andersen recommends that all glass patio doors (sliding and hinged) be grouped with windows in Table 3. One way or another it is important that all glass patio doors (i.e. $> \frac{1}{2}$ lite), sliding and hinged be subject to the same criteria.

- d. **If DOE decides to keep a 0.30 U-factor as the Northern zone requirement, DOE should consider changing the SHGC of 0.27 in the South to 0.30.** The difference between the proposed 0.27 SHGC in the Southern zone and the SHGC criteria of 0.30 in the South-Central zone is minimal. DOE should consider setting the Southern zone SHGC at 0.30 which would set the windows at the same criteria as the doors.
- e. **Again we believe that Energy Star needs to establish alternative criteria for high altitude and coastal products. We recommend addressing these products by allowing a U-Factor add-on of 0.04 to the standard qualification criteria: (i) for products in high altitude regions where breather tubes are used and the air space is filled with air instead of an argon or other gas blend, and (ii) for impact resistant rated products as required in hurricane-prone regions of the eastern seaboard. In high altitude and coastal areas, the failure to create this alternative criteria will limit the availability of ENERGY STAR® products in these markets.** The effect of providing units with breather tubes, which are necessary to equalize the pressure of the insulated glass units in high altitude regions, is that there is air in the insulated glass space instead of an argon gas blend or other gas blends. The net result of using air instead of argon or other gas blends is a slightly higher U-Factor for units with breather tubes. There is no reason that high altitudes should not have ENERGY STAR® products readily available. Given that these products have air only, it would be reasonable to establish a “high altitude allowance” U-Factor adder of 0.04 for windows and doors with breather tubes.

For coastal products with impact resistant glass, a different challenge is created in that laminated glass is commonly used to meet stringent hurricane resistant testing standards. The use of laminated glass reduces the air space and thus increases the U-Factor. A U-Factor adder for coastal impact products of 0.04 would allow coastal products to be ENERGY STAR®.

- d. **We support DOE’s proposed criteria for skylights.** DOE’s proposed criteria is appropriate and we support.

4. Additional program changes:

- a. **We appreciate DOE's acknowledgement that providing shipment data is private information and its commitment to working with our industry on alternative methods to allow DOE to monitor the success of the program.** Shipment data for private manufacturers is sensitive data and we support DOE's acknowledgement of this fact. We will continue to work with WDMA and DOE to address DOE's interests.
- b. **We appreciate DOE withdrawing a proposed requirement to add the full CPD number to the NFRC temporary label and the operational challenges it would pose.** DOE's decision related to the operational difficulties of adding the full CPD number is accurate. We appreciate DOE's understanding.
- c. **We maintain our strong recommendation to remove the requirement that the U.S. climate zone map be on the product label.** We have no objection to stating on the label what climate zones the window is qualified in, but the space on labels becomes more limited every day due to increasing regulatory requirements imposed at a national, state/regional and Canadian level. We do not see any real benefits for the map (U.S. or Canada) on the product label when the purchase decision is already made. The purpose of the label on the product should be to simply confirm that the right product has been delivered.

Thank you for the opportunity to offer our recommendations on ENERGY STAR® windows. Please contact me with any questions or comments you may have at (651) 264-5570 or via email at mark.mikkelson@andersencorp.com. We hope to have an opportunity to meet with DOE and its analysis team in person to review our specific recommendations and answer any questions you may have.

Best regards,



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