October 29, 2012

To: Environmental Protection Agency

Re: Comments on the Proposed ENERGY STAR Most Efficient 2013 Criteria for Residential Windows Draft 2
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This letter is in regard to the request for comments on the ENERGY STAR Most Efficient 2013 criteria for residential windows. Milgard agrees with the general direction of the EPA to encourage technology development to achieve greater energy efficiency and savings within the US. We would like to provide you with feedback on the Draft 2 Proposed Criteria that was sent to us and to outline what we believe would be the best for the EPA as well as the residential window industry.

Recognition Criteria:

1. Milgard agrees with the requirement for products to be Energy Star qualified according to the latest version of the ENERGY STAR Program Requirements Eligibility Criteria for Windows, Version 5.0.

2. Milgard would recommend changing this requirement to reflect that products must be "tested to the NAFS standard by an independent lab" and not require "certification". This is due to the fact that some products are tested by independent labs to the NAFS standard but sometimes there are other factors that prohibit the certification other than the air, water and structural testing.

3. After discussions with AAMA and other industry leading companies, Milgard would like to propose the following u-factor revisions:

Climate Zone	MOST EFFICIENT Draft 2 Proposed U-factor	Milgard's DRAFT 2 Recommended U-factor
Northern	≤ 0.20	*≤ 0.20 / ≤ 0.22
North-Central	≤ 0.20	≤ 0.22
South-Central	≤ 0.20	≤ 0.25
South	≤ 0.20	≤ 0.30

*≤0.20 *fixed* /≤0.22 *operable*

We recognize the desire of the EPA to promote highly energy efficient windows but we also recognize that there is little benefit for the South-Central and South zones to have a 0.20 u-factor due to the climate variation. The increased cost and payback length for consumers in these zones makes it unrealistic to recommend this level of performance for these zones. We would recommend a graduated level of performance that will still have significant impact to energy savings but will not require extremely low u-factors where they are not necessary.

In addition, Milgard recognizes that there is a difference for fixed and operable window performance and it is more difficult for operable windows to reach the 0.20 u-factor than it is for a fixed window. The addition of even more cost to go from a 0.22 to a 0.20 u-factor is significant but the energy savings is insignificant.

In addition to the u-factor requirements, Milgard would also like to propose the following changes to the SHGC requirements:

Climate Zone	MOST EFFICIENT Draft 2 Proposed SHGC	Milgard's DRAFT 2 Recommended SHGC
Northern	≥ 0.20	Any
North-Central	≤ 0.40	≤ 0.40
South-Central	≤ 0.25	≤ 0.25
South	≤ 0.25	≤ 0.25

Milgard recognizes that the reason for the Northern climate zone SHGC requirement is to avoid dark triple glazed glass. However, we believe that optical clarity and the amount of visible light should be determined by the consumer and the SHGC is not always a good indication of the amount of visible light that the glass allows in. Design features such as grids and a tall frame/sash can have an effect on the whole product VT numbers as well as the SHGC. By forcing the SHGC to be above 0.20 you are eliminating products from qualifying for the Most Efficient criteria that can achieve the u-factor requirement but fail to meet the SHGC due to grids or a tall frame/sash sightline, even though the center of glass VLT is acceptable to consumers.

Recognition Period:

Milgard still believes that the Recognition Period of only one year is too short for residential windows. This does not allow for enough time to develop new technologies to meet the Most Efficient 2014 criteria. Essentially, the Most Efficient program will only be applied to products that already have the technology to achieve the criteria. Unlike other industries that the Most Efficient criteria are used for, window technology evolution is not as rapid and new products are not able to be designed and produced as quickly. The payback period for new models of windows is long and many times is greater than one year. Traditionally, technology in the window industry is cautiously adopted, not because window companies are resistant to change but because it is prudent to test the technology and validate that there are no unexpected consequences. Rapid technology development without proper testing could lead to increased liability and decreased durability or other consequences for the window company or for the consumer. Another concern is that there is no history for the Most Efficient program for residential windows and manufacturers are not able to assume the trend for the next year or even more than one year for the criteria. Without being able to predict the trend Milgard and other manufacturers can only guess and may or may not be able to meet the next year's criteria. There is a much greater gamble with whether a new technology or window model will meet the Most Efficient criteria for the next year and the year after.

<u>Milgard recommends that the EPA produce a roadmap to provide some foresight as to what the criteria will be in the future for the Most Efficient program.</u>

Please let us know if you have any additional questions or would like clarity in any of our responses. Thank you for the opportunity to weigh-in on the Most Efficient 2013 criteria and we look forward to participating in future communication opportunities.

Best regards,

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Milgard Corporate Engineering