



November 18, 2011

To: Environmental Protection Agency

Re: Comments on ENERGY STAR® for Windows, Doors and Skylights
Version 6.0 Product Specification Framework Document

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This letter is in regard to the request for comments on the ENERGY STAR for Windows, Doors and Skylights, Version 6.0 Product Specification Framework Document. Milgard appreciates and fully supports the goal of the EPA to raise the bar for ENERGY STAR to preserve the brand and to encourage energy efficiency through technology and innovation. We would like to provide you with feedback on the Framework Document that was sent to us and to outline what we believe would be the best for the EPA as well as the window, door and skylight industry.

First we would like to address the Program Elements Considered for Adoption in Section II:

- a. **Structural Requirements:** Milgard tests most of our products to the NAFS-08 standard and we are a member of AAMA. However, we do not believe that this should be a requirement for ENERGY STAR. While we test most of our products per the NAFS standard, some are not certified due to a component that is not certified by AAMA. For example, our fiberglass windows and doors are fully tested to the AAMA standard but a paint standard for pultrusion was recently approved by AAMA. We are now going through the process of material certification. Until the material certification is complete these products are not considered certified by AAMA. These products meet the test standards set by NAFS but, because they do not have full certification, have a silver permanent label so that they can carry the NFRC label and meet the ENERGY STAR qualifications. If structural certification is a requirement these products would not qualify for ENERGY STAR. In addition, we do not understand what structural requirements have to do with energy performance. We are required by NFRC to print thermal results on the NFRC label as the product is built. There is a separate organization that certifies the structural results unrelated to energy performance.
- b. **Products Installed at High-Altitude:** Milgard ships products to high altitude and understands the suggestion for some sort of alternative or allowances but does not support this as part of the ENERGY STAR program. This is a relatively small percentage of products in our industry and there are and will be technologies that allow us to produce products that meet the ENERGY STAR qualifications as presented.
- c. **Impact-Resistant Products:** Milgard does not support the proposal of a separate set of criteria for impact-resistant products. While the impact market is a very small part of our business, we have products that can and do qualify for ENERGY STAR while being impact-resistant.
- d. **Daylighting:** Daylighting has had a lot of discussion at the NFRC meetings in the past year and it is Milgard's belief that the VT rating should not be part of the ENERGY STAR qualification. Daylighting has a direct influence on energy consumption but the relationship between daylighting and energy saved is not clear and is not ready for this program.

- e. **Lifecycle Analysis:** Milgard supports using materials and components that reduce Green House Gas emissions but we do not see the direct correlation between lifecycle analysis and windows, doors and skylights at this time. No rating system exists in our industry to determine what level is good versus bad and we believe that this would need to be developed first. There would also need to be extensive education for our customers to understand what the LCA is, what the measurement is, what is good versus bad, etc.

Section III:

- a. **ENERGY STAR Climate Zones:** There was extensive discussion during the Version 5.0 revision process but it was not clear to us why the Pacific Northwest region (specifically Seattle and Portland areas) would be classified as the same region as North Dakota and Minnesota. While the latitude of these areas may be the same, the climate is very different and do not require the same energy efficiency as other areas in the Northern Climate Zone. An original proposal by the DOE suggested that the western parts of Washington and Oregon be different from the Northern Climate Zone but was later scrapped without much explanation. The building codes in the PNW region may have supported the changes to Version 5.0 but the Version 6.0 revisions would require a U-factor far below building codes and is not necessary for the climate for energy savings.

Section IV:

- a. **Air Leakage:** Milgard supports the requirement of air leakage for ENERGY STAR qualification. In addition, we support using the NAFS (AAMA) method and test results for this program. However, it is unclear to us how this can be standardized for the entire industry. NAFS does not require that all products tested are the same size so you could have Company A testing a very large window while Company B tested a small window. Results can vary due to the square footage averaging out the air infiltration on a large window while the small window might have a worse value because of less square footage. This would need further investigation and a standard size or some additional guidelines may need to be implemented. Currently, most of Milgard's products are NAFS (AAMA) tested but not all are certified as mentioned in Section II.a. We do not support using the NFRC air infiltration standard as we have not tested any of our products to that standard and this would create an excessive financial and resource burden on Milgard and the industry to complete this testing. NFRC does not allow for the NAFS air infiltration values to be printed on the NFRC temporary label so there would need to be some changes to their documents for allowance of this rating. The same would be true for the NFRC Certified Products Directory. The timeline for this may be more than the time allotted for the Version 6.0 to be implemented due to the length of time it takes for documents to be revised at NFRC and the CPD to be changed.
- b. **Installation Instructions:** Milgard understands the necessity for the building industry to install products per standard instructions to assure energy efficiency. However, currently, there are limited "industry standard" instructions and until additional instructions for alternative installation methods can be developed the burden will fall on the manufacturers to develop them. This can lead to non-standard practices and some may be energy efficient while others may not be and some will have adequate detail while others may be lacking. AAMA is working on additional installation instruction methods and until they are complete Milgard is suggesting that this not be considered for the Version 6.0 criteria. Milgard currently references the AAMA 2400 and 2410 installation instructions on our window labels as well as on our website and we make the instructions available on our website.

Section V:

- a. **Windows:** Milgard agrees with the range of U-factors and SHGC values suggested in the proposed criteria. However, we would suggest that you keep in mind the cost of a 0.25 versus a 0.27 u-factor. The 0.27 U-factor is achievable using dual glazing and argon with a warm edge spacer in many products but the 0.25 u-factor may require triple glazing or an interior surface Low-E product which will cause the cost of the products to increase and the payback period for a customer to increase. A larger rebate incentive might be necessary for a customer to consider purchasing these products. In addition, a 0.25 U-factor would probably not be necessary for areas like the Seattle and Portland areas as they have a more temperate climate. Milgard does not have any concerns regarding removing the Equivalent Energy Performance criteria for the Northern Zone. We agree that it added a level of complication that was not necessary.
- b. **Doors:** The U-factor requirements range for doors seem appropriate. However, we are concerned about the SHGC requirement being the same for all zones (especially the >1/2 lite). We have two issues with the SHGC. First, in the Northern Climate Zone a higher SHGC is more energy efficient. Second, with such a low SHGC, there may be cases where a low SHGC Low-e is required to achieve the rating and the windows would only need a moderate SHGC Low-e product resulting in non-matching glazing. In order to match the glazing, the windows would need to use the low SHGC Low-e resulting in even less energy efficiency.
- c. **Skylights:** Milgard agrees with the U-factor requirements for the skylights. The argument against the SHGC being the same for all zones does not hold true for skylights. Doors and windows are often on the same side of a house and the glass would need to match. However, the skylights are not usually near windows and are at an angle to the windows so it is less obvious if the glass does not match.

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 Version 6.0 Framework Document and we look forward to participating in future communication opportunities.

Best regards,



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